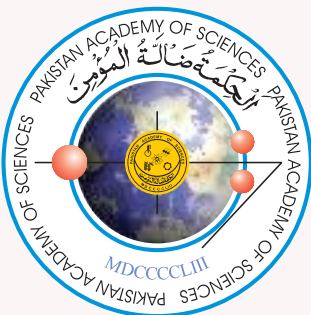


# YEAR BOOK

## 2016–2017

PAKISTAN ACADEMY  
OF SCIENCES







# YEAR BOOK 2016-2017

Pakistan Academy of Sciences  
2018

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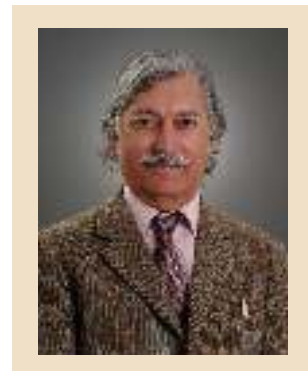
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## FOREWORD

### Dr M Qasim Jan President



Like the previous five years, the Pakistan Academy of Sciences (PAS) remained very active during 2016 and 2017. Internationally it pursued a number of initiatives with other academies, and nationally it got engaged in many activities, including hosting of a large number of conferences. The academy signed MoUs with Latvian Academy of Sciences, Bulgarian Academy of Sciences, International Silk Road Academy of Sciences (Xiamen, China), and renewed its MoU with the Royal Society of Edinburgh. It also signed MoU with Regional Information Centre for S&T, Iran, and both sides agreed that a branch office of this Centre would be opened in the PAS. In total, the PAS has signed 19 MoUs.

The Academy was visited by delegations (including those of Belarus Academy of Sciences, Chinese Academy of Sciences, US National Academy of Sciences, and US National Science Foundation), Federal Ministers (for Planning, Education, S&T, and Climate Change), and foreign envoys and individuals in connection with matters of mutual interest. A 6-member delegation of the Chinese Academy of Sciences (CAS), led by its DG Bureau of International Collaboration, Mr Jinghua Cao, visited the PAS on 31 May, 2016, to discuss the modalities for co-organizing the CAS spearheaded “National Scientific and Research Organizations Summit Forum on the Belt and Road Initiative” in Beijing in Nov 2016. The PAS-CAS hosted jointly in Islamabad an important meeting of the working group of regional academies on 16 July, 2017, titled “International Science Forum of the National Scientific Organizations on the Belt and Road Initiative” for the establishment of the Alliance of International Science Organizations in the Belt and Road Region (ANSO). Apart from PAS and CAS, the meeting was attended by delegates of the Academies of Sciences of Hungary, Iran, Mongolia, Nepal, Russia, Sri Lanka, and ICIMOD-Kathmandu. This meeting was an important step to substantialize the “Beijing Declaration” and make ANSO a viable and sustainable international organization. The CAS delegation was headed by their Vice President, Prof Zhang Jie.

During 2016-17, the Academy provided support to 12 research projects of its Fellows and Members. It held 10 conferences independently or jointly, in addition to providing support to another 11 convened by its Fellows in Islamabad, Karachi, Lahore and Quetta. These included: International conference of the Asian countries in collaboration with AASSA on “Challenges in Water Security to Meet the Growing Food Requirement”, 19-21 Jan, 2016; 90<sup>th</sup> birthday memorial for Prof Abdus Salam (Pakistan’s only Nobel Laureate in Science, and a deceased Fellow of the PAS) on 29 Jan,



2016; “Present, Past and Future of Science”, Feb 2016; “International Workshop of Science Editors”, Nov 2016; CPEC-related joint conference with CAS “Natural Hazard Risk Assessment and Mitigation”, July 2017; and “Faculty Development”, Aug 2017. Under One Health Program, PAS-US NSF jointly held international conferences in Dubai (1-5 Mar, 2016), PAS (30 Mar, 2017), and Thailand (24-28 July, 2017). Prof Anwar Nasim and Prof Zabta Khan Shinwari participated in the Thailand conference where a 2-year Fellowship for five Pakistani young investigators was announced.

The 1<sup>st</sup> conference of the representatives of 22 national science academies across Commonwealth (including PAS) was held in Singapore on 15 June, 2017. Prof ZK Shinwari discussed the prospects of mutual collaboration with Prof Jean Francois Bach and Prof Lena Pierre of French Academy of Sciences (Paris, 11-15 Sep, 2017). He also represented PAS in the Association of Academies and Societies of Sciences in Asia (AASSA)-National Academy of S&T, Philippines meeting in Manila (21-23 Sep, 2017). The Academy provided support to 11 Fellows for participation in international conferences. A number of Fellows also obtained full outside coverage to participate in international events, including the Nov 2016 TWAS meeting in Kigali, Rwanda (Prof R Hussain, and MQ Jan), and Nov 2017 meeting of the Islamic World Academy of Sciences (IAS) in Konya, Turkey (Profs Anwar Nasim, NM Butt, R. Hussain, Shaukat Hameed Khan and ZK Shinwari).

A significant step taken by the PAS was the inauguration of the Quetta Chapter on 20 April, 2016 by the Provincial Minister for S&T in the company of the PAS Secretary General (Prof ZK Shinwari) and Secretary Local Chapter (Prof Masoom Yasinzai). With this, the PAS now operates four regional centres at Karachi, Lahore, Peshawar and Quetta. The Quetta chapter would focus on promotion and popularization of science in Balochistan, the largest province of Pakistan. The inauguration of the Chapter was accompanied by a seminar on “Making Pakistan Science Conscious”.

Fellows of the Academy continue rendering admirable contributions to Science, Technology and Education. In the recently compiled PCST Directory of Active Scientists of Pakistan, the PAS Fellows occupy top slots in most of the disciplines. Several Fellows received local and international honours and awards during 2016-17 (Prof Wasim Ahmad and Prof M Ashraf: *Hilal-i-Imtiaz*; Prof NM Butt: elected as Vice President of IAS; Prof Iqbal Chaudhary: Adjunct Distinguished Professor at Univ of Putra, Jordan; Prof Rabia Hussain: re-elected Vice President, TWAS; Prof MQ Jan: re-elected Chair, TWAS Independent Expert Committee in Earth, Astronomy and Space Sciences for 2016-19, and Co-Chair of Solar Radiation Management Governance Initiative (SRMGI) of the Royal Society-TWAS-Environment Defense Fund; Prof Atta-Ur-Rahman: appointed Co-Chair of UN Committee on STI, elected as Foreign Member CAS; Dr A Rashid received J Benton Jones Award, and IPNI Science Award; Prof ZK Shinwari: elected as Fellow of the IAS, Treasure AASSA, Member UNESCO World Committee on Ethics of Science & Technology; Prof Suhail Zubairy: Changjiang Distinguished Chair Professorship). Among our Foreign Fellows, Prof Chunli Bai was inducted as Foreign Honorary Member of the American Academy of Arts & Sciences; Prof SN Kharin received Ragnar Holm Scientific Achievement Award; and Prof RJ Peterson became the Vice Chair of Forum on International Physics.

The Academy has an important agenda to follow in the coming years. The Government of Pakistan has bestowed a consultative and advisory status to the Academy on policy matters of national and international importance in Science and Technology. Unfortunately, however, we have not pursued this effectively. In the coming years, the Academy would initiate serious efforts in having



a meaningful dialogue with the GoP to explore the possibilities of lending advice and services in critically important areas in S&T and Education. Resource constraint has been a hindrance in the vigorous pursuit of expanded scientific activities, so efforts would be made to convince the Government that strengthening the Academy would be in the interest of S&T in Pakistan. Some of our bilateral understandings with other Academies have remained dormant and it is time to activate these MoUs to achieve the stipulated goals through mutual cooperation. We also need to hold popular lectures for public awareness and reaching out to young scientists.

The Academy has become a dynamic institution, commanding national respect and international recognition. We have the potential to do better with the continued support and contribution of our distinguished Fellows.





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## 1. INTRODUCTION

It is generally recognized that any progressive country, which aspires to occupy a befitting Place in the comity of nations, encourages the establishment of a supreme scientific organization, usually designated as the “Academy of Sciences” devoted to the promotion of science and its applications for the general welfare of humanity. While these organizations may not carry out actual researches, they do provide a forum for the advancement of scientific research, popularization of science, motivation of scientists and technologists, and encouraging and promoting studies in new areas of S&T.

As utmost importance is attached to the membership of such an academy, only scientists of the highest merit, who have made outstanding contributions to the advancement of scientific knowledge, are elected its Fellows. The Academy is regarded, by the public and the government, as a repository of the highest scientific talent available in the country, and is generally supported and consulted in all matters relating to scientific education, research and development.

The idea of establishing Pakistan Academy of Sciences was mooted in November 1947 at the 1st National Educational Conference held in Karachi. Subsequently, nine eminent scientists were elected as Founding Fellows of the proposed Academy. One of the Founding Fellows, Dr. M. Raziuddin Siddiqi, has drafted Charter of the Academy which was approved. The Pakistan Academy of Sciences was inaugurated by the then Prime Minister of Pakistan, Khwaja Nazimuddin, on 16th February 1953 during 5th Pakistan Science Conference in Lahore. On 19th February 1953, the Founding Fellows elected Prof. M. Afzal Hussain as President and Dr. M. Raziuddin Siddiqi as Secretary of the Academy.

The Academy is a non-governmental and non-political supreme scientific body of distinguished scientists in the country. The Government of Pakistan has given the consultative and advisory status to the Academy “on all problems relating to the development of scientific efforts in the country”, and “generally on such matters of national and international importance in the field of science as may be referred to the Academy”. The affairs of the Academy are regulated by its Charter and Bye-Laws approved by the Fellows.

The Academy is governed by a Council that includes its President, two Vice Presidents, Secretary General, Associate Secretary General and Treasurer. At present, there are 83 Fellows, 29 Foreign Fellows, and 17 Members, who have been elected by the General Body. The President of Pakistan Academy of Sciences for the term 2015–2017 was Dr. Anwar Nasim, *SI*. The President of the Academy for the term 2018-2020 is Prof. Dr. M. Qasim Jan, *HI, SI, TI*.



## 2. OFFICE BEARERS OF THE ACADEMY

### 2.1. Founding Fellows (February 16, 1953)

- |    |                           |    |                       |
|----|---------------------------|----|-----------------------|
| 1. | Prof. M. Afzal Hussain    | 6. | Dr. M Sharif          |
| 2. | Dr. Nazir Ahmad           | 7. | Dr. M. Qudart-i-Khuda |
| 3. | Dr. Bashir Ahmad          | 8. | Dr. Hamid Khan Bhatti |
| 4. | Dr. Salimuzzaman Siddiqui | 9. | Dr. M. Ishaque        |
| 5. | Dr. M. Raziuddin Siddiqi  |    |                       |

### 2.2. Former Presidents

- |     |  |                      |
|-----|--|----------------------|
| 1.  | Prof. M. Afzal Hussain                               | 19.02.53 to 10.01.56 |
| 2.  | Dr. Nazir Ahmad                                      | 10.01.56 to 21.01.61 |
| 3.  | Prof. Dr. M. Raziuddin Siddiqi, <i>HI, SI</i>        | 12.01.61 to 14.11.67 |
| 4.  | Prof. Dr. Salimuzzaman Siddiqui, <i>FRS, HI, SI</i>  | 14.11.67 to 20.12.69 |
| 5.  | Prof. Dr. M. Qudrat-i-Khuda                          | 20.12.69 to 13.03.72 |
| 6.  | Prof. Dr. H.K. Bhatti                                | 13.03.72 to 08.01.74 |
| 7.  | Ch. M. Afzal   | 08.01.74 to 20.04.78 |
| 8.  | Prof. Dr. M.A. Kazi                                  | 20.04.78 to 22.10.84 |
| 9.  | Prof. Dr. M. Raziuddin Siddiqi, <i>HI, SI</i>        | 22.10.84 to 02.12.86 |
| 10. | Prof. Dr. M.A. Kazi                                  | 02.12.86 to 07.07.88 |
| 11. | Prof. Dr. M.D. Shami, <i>SI</i>                      | 07.07.88 to 16.12.92 |
| 12. | Dr. Amir Muhammed                                    | 16.12.92 to 31.12.96 |
| 13. | Dr. A.Q. Khan, <i>NI &amp; Bar, HI</i>               | 01.01.97 to 31.12.02 |
| 14. | Prof. Dr. Atta-ur-Rahman, <i>FRS, NI, HI, SI, TI</i> | 01.01.03 to 31.12.06 |
| 15. | Dr. Ishfaq Ahmad, <i>NI, HI, SI</i>                  | 01.01.07 to 31.12.10 |
| 16. | Prof. Dr. Atta-ur-Rehman, <i>FRS, NI, HI, SI, TI</i> | 01.01.11 to 31.12.14 |

### 2.3 Former Secretaries General

- |     |  |                      |
|-----|--|----------------------|
| 1.  | Prof. Dr. M. Raziuddin Siddiqi, <i>HI, SI</i>          | 17.03.79 to 22.10.84 |
| 2.  | Prof. Dr. M.D. Shami, <i>SI</i>                        | 22.10.84 to 07.07.88 |
| 3.  | Prof. Dr. M.M. Qurashi, <i>SI</i>                      | 07.07.88 to 16.12.92 |
| 4.  | Prof. Dr. M.D. Shami, <i>SI</i>                        | 16.12.92 to 31.12.96 |
| 5.  | Prof. Dr. Iftikhar A. Malik, <i>HI (M), SI (M), SI</i> | 01.01.97 to 31.12.98 |
| 6.  | Prof. Dr. M.D. Shami, <i>SI</i>                        | 01.01.99 to 31.12.02 |
| 7.  | Prof. Dr. Khalid Mahmood Khan, <i>SI</i>               | 01.01.03 to 31.12.06 |
| 8.  | Prof. Dr. Iftikhar A. Malik, <i>HI (M), SI (M), SI</i> | 01.01.07 to 27.05.08 |
| 9.  | Prof Dr. M. Qasim Jan, <i>HI, SI, TI</i>               | 13.06.08 to 31.12.10 |
| 10. | Prof. Dr. G. A. Miana, <i>SI</i>                       | 01.01.11 to 31.12.12 |
| 11. | Dr. Anwar Nasim, <i>SI</i>                             | 01.01.13 to 31.12.14 |

### 2.4. Former Secretaries

- |    |   |                      |
|----|---|----------------------|
| 1. | Dr. M. Raziuddin Siddiqi, <i>HI, SI</i> | 19.02.53 to 12.01.61 |
| 2. | Dr. M.O. Ghani                          | 12.01.61 to 14.11.67 |
| 3. | Dr. S.D. Chaudhri                       | 14.11.67 to 20.12.69 |
| 4. | Dr. M. Raziuddin Siddiqi, <i>HI, SI</i> | 20.12.69 to 17.03.79 |

## 2.5 The 2018-2020 Council of the Academy



Prof. Dr. M. Qasim Jan  
*HI, SI, TI*  
President



Prof. Dr. Kauser A. Malik  
*HI, SI, TI*  
Vice President



Prof. Dr. M. Ajmal Khan  
*SI*  
Vice President



Dr. Anwar Nasim  
*SI*  
Past President



Prof. Dr. M. Aslam Baig  
*HI, SI, TI*  
Secretary General



Prof. Dr. A. R. Shakoori  
*TI*  
Associate Secretary General



Prof. Dr. G. A. Miana  
*SI*  
Treasurer



Prof. Dr. Asghari Maqsood  
*SI*  
Member



Prof. Dr. M. Waheed Akhtar  
*TI*  
Member



Prof. Dr. Saqib Ali  
Member



Prof. Dr. Viqar Uddin Ahmad  
*HI, SI*  
Member



Prof. Dr. Khalid M. Khan  
*SI, TI*  
Secretary, Karachi Chapter



Prof. Dr. Iqrar Ahmed Khan  
*SI*  
Secretary, Lahore Chapter



Prof. Dr. M. Asif Khan  
*TI*  
Secretary, Peshawar Chapter



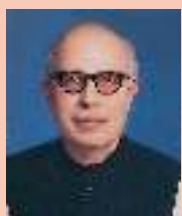
Prof. Dr. Masoom Yasinzaï  
Secretary, Quetta Chapter



Dr. Muhammad Iqbal  
*SI, TI*  
Member (MoST)



Prof. Dr. Zabta K. Shinwari  
*SI, TI*  
Member (MoE)



Prof. Dr. M. D. Shami  
*SI*  
Member (HEC)



## 2.6 The 2015-2017 Council of the Academy



Dr. Anwar Nasim,  
*SI*  
President



Prof. Dr. Khalid Mahmood Khan,  
*SI*  
Vice President



Prof. Dr. Mohammad Qaiser,  
Vice President



Prof. Dr. Atta-ur-Rahman,  
*FRS, NI, HI, SI, TI*  
Past President



Prof. Dr. Zabta K. Shinwari,  
*SI, TI*  
Secretary General



Dr. Muhammad Iqbal,  
*SI, TI*  
Associate Secretary General



Prof. Dr. M. D. Shami,  
*SI*  
Treasurer



Prof. Dr. Bina Shaheen Siddiqui,  
*SI, TI*  
Member



Dr. N. M. Butt,  
*SI*  
Member



Prof. Dr. Muhammad Ashraf,  
*SI*  
Member



Prof. Dr. M. Perwaiz Iqbal,  
*SI*  
Member



Prof. Dr. Anwar ul Hassan Gilani,  
*SI*  
Member (MoST)



Prof. Dr. Rumina Hasan  
Secretary, Karachi Chapter



Prof. Dr. Ikram ul Haq,  
*SI*  
Secretary, Lahore Chapter



Khan Bahadur Marwat  
Secretary, Peshawar Chapter



Prof. Dr. Masoom Yasinzai,  
Secretary, Quetta Chapter  
& Member (MoE)

### 3. SOME SALIENT HISTORICAL GLIMPSES

#### Inaugural Ceremony of the Pakistan Academy of Sciences in 1953



Left to Right: Dr. M. Sharif, Dr. H.K. Bhatti, Dr. M. Ishaq, Dr. M. Raziuddin Siddiqi, Hon. Khawaja Nazimuddin (Prime Minister of the Islamic Republic of Pakistan), Dr. Bashir Ahmed, Prof. M. Afzal Hussain, Dr. Nazir Ahmed, Dr. Salimuzzaman Siddiqui.



Hon. Khawaja Nazimuddin addressing the scientists during inauguration of the Academy (1953).



Dr. Nazir Ahmed speaking at National Convention of Senior Scientists organized by PAS in Swat (August 27, 1965).

L-R: Dr. M. Raziuddin Siddiqi, President Mohammad Ayub Khan, Prince Aurangzeb, Prof. Abdus Salam.



President Mohammad Ayub Khan addressing the National Convention of Senior Scientists in Swat organized by PAS (August 27, 1965).



President of Pakistan, General Zia-ul-Haq addressing the scientists during Silver Jubilee Celebrations of the Academy in Islamabad (1978).



Dr. M. A. Kazi, President of the Academy, laying Foundation Stone of the Academy's Building in Islamabad (1979).



Dr. M. Raziuddin Siddiqi, Secretary General, delivering his Welcome Speech at the Foundation Laying Ceremony of the Academy's Building in Islamabad (1979).



Members of First Delegation of the Chinese Academy of Sciences with President and Fellows of the Pakistan Academy of Sciences.



Dr. A.Q. Khan and Prof. Dr. Atta-ur-Rahman inaugurating Science Exhibition at the Pakistan Academy of Sciences. Prof. Dr. M.D. Shami and Dr. S. Riaz Ali Shah are also present.



The PAS-organized ceremony in Islamabad to celebrate the Award of FRS to Prof. Dr. Atta-ur-Rahman (2006).

L-R: Prof. Dr. Khalid Mahmood Khan, Secretary General PAS; Chaudhry Nauroze Shakoore, Minister for Science & Technology; General Parvez Musharraf, President of Pakistan; Lt. Gen. Khalid Maqbool, Governor Punjab; Prof. Dr. Atta-ur-Rahman, President PAS.



Members of the delegation of the Indian National Science Academy (INSA) with the President and members of the Council of the Academy in Islamabad (January 2012).



Members of the delegation of the Chinese Academy of Sciences led by its President, Dr. Chunli Bai, with the President and members of the Council of the Academy (July 2012).



Participants of PAS-organized National Science Conference at University of Karachi on 1 May, 2014.



Participants of the Workshop on “Policy Makers and Practioners’ Awareness on Dual-Use Education” with Chief Guest, Prof. Ahsan Iqbal, at PAS Headquarters on 30 March, 2015.



President of Turkish Academy of Sciences, Prof. Dr. Ahmet Cevet Asar, and President of Pakistan Academy of Sciences, Dr. Anwar Nasim, signing Agreement for Scientific Cooperation in Islamabad in the presence of Prime Minister of Pakistan, Mian Muhammad Nawaz Sharif, and Prime Minister of Turkey, Mr. Ahmet Davutoglu on 17 February, 2015.



Participants of the Brainstorming Session with Belarusian delegation led by Presidium of National Academy of Sciences of Belarus, Acad. Vladimir G. Gusakov, President of Pakistan Academy of Sciences, Dr. Anwar Nasim, and Education Minister of Belarus, Mr. Zhuravkov Mikhail, at PAS Headquarters in Islamabad in July 2015.



Heads of scientific organizations based in Islamabad with PAS office bearers at PAS Headquarters on 9 July 2016: Front Row (L-R): Prof. Zabta K. Shinwari, Prof. Anwar-ul-Hassan Gilani, Dr. Anwar Nasim, Prof. M.D. Shami, Dr. Iftikhar Ahmad, Dr. Imtinan Elahi Qureshi; Back Row (L-R): Dr. Manzoor H. Soomro, Prof. M. Qasim Jan, Dr. Shaukat Hameed Khan, Dr. Muhammad Ashraf and Dr. Abdul Rashid.



Participants of the Workshop on "Past, Present and Future of Science" with Dr. A.Q. Khan, Prof. M.D. Shami, Prof. Khalid M. Khan, Prof. Anwar-ul-Hassan Gilani and Prof. Zabta K. Shinwari at PAS Headquarter on 17 February, 2016.



Participants of “Regional Workshop on Bio-safety and Bio security in Life Sciences Research”, April 26 -28, 2016, organized in Islamabad by the Commission on Science and Technology for Sustainable Development in the South (COMSATS), Islamic Educational, Scientific and Cultural Organization (ISESCO), and Pakistan Academy of Sciences (PAS)



Prof. Ahsan Iqbal, Federal Minister for Planning and Development, Mrs Saira Afzal Tarar, Minister of State for National Health Services, Ms. Mariam Aurangzeb, Minister of State for Information, Prof. Zabta Khan Shinwari, Secretary General, Pakistan Academy of Sciences, Prof. Dr. Zulfiqar A. Bhutta, Fellow of Pakistan Academy of Sciences at National Consultative Workshop on “Science Community and Pakistan’s Challenges of Health and Nutrition in the context of Sustainable Development Goals” March 6–7, 2017, organized by Pakistan Academy of Sciences in collaboration with Aga Khan University (Karachi), World Health Organization, and Ministry of National Health Services



Participants of the Workshop “One-Health Fellowship”, 30th March, 2017, with the Chief Guest, Engr. M. Baligh-ur-Rahman, Federal Minister of Education and Professional Training



Participants of International Conference on “CPEC Natural Hazards Risk Assessment and Mitigation” and “Silk Road Disaster Risk Reduction” 17-18 July, 2017, organized by Pakistan Academy of Sciences in collaboration with Chinese Academy of Sciences. Prof. Dr. M. Asif Khan, Vice Chancellor, Karakoram International University and Prof. Dr. Zabta Shinwari, Secretary General, PAS were the chief organizers of the event



## 4. CHARTER OF THE PAKISTAN ACADEMY OF SCIENCES

### Preamble

The Fellows of the Pakistan Academy of Sciences, assembled at a General Body Meeting on the 17th day of the month of March in the Year 1979, approved and adopted the CHARTER for the management and conduct of the affairs of the Academy. The updated version of the CHARTER, as amended by the General Body from time to time, is as under:

### 4.1. Short Title

This Charter may be called the “Charter” of the Pakistan Academy of Sciences, here-in-after called the “Charter”.

### 4.2. Commencement

It shall come into force at once.

### 4.3. Definitions

In this Charter, unless there is anything repugnant to the Context,

- i. “Academy” means the “Pakistan Academy of Sciences” as re-organized under this Charter.
- ii. “Bye-Laws” means the Bye-Laws as passed by the Council and approved by General Body of the Academy from time to time.
- iii. “Council” means the Executive Body of Academy as laid down in clause 6 of this Charter.
- iv. “Fellow” means a Founding Fellow or a Fellow of the Academy elected under clause 5 (A)(ii) of this Charter or Para 17 of the Bye-Laws for the Election of new Fellows.
- v. (a) Member means a Member of the Academy nominated under clause 5 (A)(iii)(a) & (b) of this Charter.
- vi. (b) “\*Foreign Fellow” means a citizen of a foreign country nominated as a Fellow of the Academy under clause 5 (A) (iv) of this Charter.
- vii. (\* As amended by the G.B. in its meeting held on December 8, 1998)
- viii. “Government” means the Federal Government of the Islamic Republic of Pakistan.
- ix. “General Body” means the Body consisting of the Fellows of the Academy.
- x. “President”, “Vice-Presidents”, “Secretary General”, “Treasurer”, “Associate Secretary-General”, “Secretaries”, mean respectively the President, Vice Presidents, Secretary General, Treasurer, Associate Secretary General and Secretaries of the Academy, as laid down in clause 6 of this Charter.

### 4.4. Aims and Objectives

The aims and objectives of the Academy shall be:

- i. to promote higher studies and research on pure and applied sciences in Pakistan and to disseminate scientific knowledge;

- ii. to formulate standards of scientific effort and achievement in Pakistan and to recognize outstanding contributions to the advancement of science;
- iii. to publish and assist in the publication of Scientific Proceedings, Journals, Transactions, Monographs, Books and other scientific literature;
- iv. to establish and maintain association and relations between Pakistani scientists and the international groups, meetings and unions of scientists, and between Pakistani scientific activities and the activities of scientists in other countries;
- v. to award grants, scholarships, fellowships, prizes and medals for scientific research;
- vi. to undertake such scientific work of national or international importance as the Academy may be called upon to perform by the Government;
- vii. to have the advisory and consultative status with the Ministries and Divisions of Government dealing with scientific and technical matters, and to represent internationally the scientific work of Pakistan;
- viii. to secure and administer funds, endowments and other grants for the promotion and development of scientific research or projects of a scientific nature, and for the attainment of the aims and objectives of the Academy;
- ix. to correlate and assist in correlating the efforts of other scientific bodies;
- x. to do all other lawful things that the Academy may consider conducive to, or necessary for, the attainment of its aims and objectives.

#### 4.5. Membership

- 5(A) The Academy shall comprise of Founding Fellows, Fellows, Members and Foreign Fellows, as described here under:
- i) Founding Fellows shall be persons borne on the Register of the Academy as Fellows immediately prior to the coming in force of this Charter, whose names and photographs are given in the Annexure-I to this Charter;
  - ii) Fellows shall be Pakistani scientists eminent for their original contribution to science, who are elected according to the procedure laid down in the Bye-Laws. Not more than five Fellows may be elected in any one year until the total number of Fellows reaches the limit of one hundred (100);
  - iii) a) Members shall be Pakistani scientists who have made substantial contributions to science, and who are nominated according to the procedure laid down in the Bye-Laws;  
(b) Not more than ten (10) Members may be elected in first year, and not more than three Members may be nominated in any subsequent year until the total number reaches the limit of fifty (50);
  - iv) Foreign Fellows shall be scientists who are nationals of countries other than Pakistan, and who are eminent for their contributions to science, and who are elected according to the procedure laid down in the Bye-Laws. Not more than three Foreign Fellows may be elected in any one year until the total number of Foreign Fellows reaches the limit of thirty (30);



5(B) Procedures for the election of Fellows, Members and Foreign Fellows shall be laid down in the Bye-Laws.

#### 4.6. Administration

- (A) The administration, direction and management of the affairs of the Academy shall be entrusted to a Council comprising of the following office-bearers and other members:
- i. President;
  - ii. Two Vice-Presidents;
  - iii. Secretary General;
  - iv. Treasurer;
  - v. Associate Secretary-General;
  - vi. Four Secretaries (one for each Province);
  - vii. Four other members from amongst the Fellows of the Academy elected by the General Body;
  - viii. One member from amongst the Fellows of the Academy nominated by the Ministry of Education;
  - ix. One member from amongst the Fellows of the Academy nominated by the Ministry of Science and Technology;
  - x. \*One member from amongst the Fellows of the Academy nominated by the Higher Education Commission;

***(\*As decided by G.B. in its meeting held on November 1, 2017)***

- xi. Immediate past President to be a “member” of the Council for one term.
- (B) \*The term of office of the Office Bearers and other members of the Council shall be three (3) years. The retiring office bearers and other members in future shall then not be eligible for re-election to any position of the Council for the subsequent three-year term.

***(\*As amended by G.B. in its meeting held on November 25, 2013)***

- (C) The Quorum for meetings of the Council shall be fifty per cent of its members, fractions to be ignored.
- (D) The procedure for the election of Office Bearers and other members of the Council shall be laid down in the Bye-Laws.
- (E) If the name of one Fellow has been proposed for more than one office, he shall be required to choose only one office for which he agrees to be a candidate.

#### 4.7. Rights and Privileges of Fellows, Members and Foreign Fellows

- 7(A) Fellows, Members and Foreign Fellows shall be entitled to the following rights and privileges:
- i. to have personal access to the Library of the Academy and to take out books and journals from the Library, subject to such Regulations as may be prescribed by

the Council;

- ii. to receive gratis copies of the Proceedings and Transactions of the Academy, and of such other publications as the Council may decide from time to time, and to purchase other publications of the Academy at the price decided by the Council;
- iii. to offer papers and communications to be read at the Meetings of the Academy;
- iv. to serve on any committees and other bodies appointed by the Council and the General Body;
- v. to be present and participate in the deliberations at all General Body meetings, provided that the Members and Foreign Fellows shall not be entitled to vote; Fellows shall have the right to vote at all General Body meetings;
- vi. Fellows shall be entitled to propose and recommend candidates for Foreign Fellowship, Fellowship, and Gold Medals of the Academy;

**\*7(B)**

- i. The Fellowship, Membership and Foreign Fellowship of the Academy, being a recognition of the merit of eminence of the distinguished scientists and a token of honour, shall involve no regular subscription to be paid by them. The General Body may, however, on the recommendation of the Council, determine an amount to be paid by a newly elected Fellow on the occasion of his induction. The Fellows may be required to give donations;
- ii. Any Fellow, Member or Foreign Fellow may withdraw from the Academy by conveying his wish to do so by a letter addressed to the Secretary General of the Academy. Provided that if a Fellow, who had resigned from the Fellowship previously, expresses his desire in writing that he would like to withdraw his resignation, the General Body, on the recommendation of the Council, may allow him to do so;
- iii. Fellows, Members and Foreign Fellows who have withdrawn from the Academy, shall be eligible for re-election.

**\*7(C)**

- i. If it comes direct to the notice of the President or the Secretary General of the Academy or it is brought to their notice by a Fellow of the Academy or through the media that a Fellow, a Foreign Fellow or a Member of the Academy has willfully violated the rules or decisions of the Academy or of the Council or the conduct of the Fellow, Foreign Fellow or Member is violative of the Charter or injurious to the interest of the Academy or he/she commits willful breach of order at any meeting of the Academy or has committed or persisted in such disobedience or breach of order, the Academy through the President / Secretary General can take suo moto action.
- ii. In such a situation, the Secretary General shall write to the Fellow, Foreign Fellow or Member that a complaint has been received against him or her. The Secretary General shall ask the Fellow, Foreign Fellow or Member to clarify his or her position in person or in writing. If the Secretary General, after consultation with the President of the Academy, feels that the explanation is inadequate or unsatisfactory, he shall bring it to the notice of the Council. If the Council



determines by a simple majority vote (through secret ballot) that the Fellow should not remain on the rolls, he/she will be asked to resign. If he or she fails to do so within one month, the Council shall inform the Fellow in writing of its intention to remove the Fellow, Foreign Fellow or Member.

- iii. After intimation to the Fellow, Foreign Fellow or Member, the matter shall be placed at a General Body meeting. If two-third of the Fellows present vote through secret ballot for the removal of the Fellow, Foreign Fellow or Member, provided this number is not less than fifty percent (50%) of the existing number of Fellows, the President shall declare that the person's name be removed from the Register of the Fellows, Foreign Fellows or Members and at the same time pronounce that: " Dr./Prof. ----- " ceases to be a Fellow, Foreign Fellow or Member of the Pakistan Academy of Sciences with immediate effect".  
**(\* As decided by G.B. in its meeting held on December 13, 2002)**

#### 4.8. Functions and Powers of the General Body

- 8(A) The functions and powers of the General Body shall be:
- i. to approve Bye-Laws of the Academy, which shall not be inconsistent with this Charter;
  - ii. to approve annual programme and budget of the Academy;
  - iii. to sanction the creation, extension, curtailment or abolition of any of the organizations, institutions, committees and posts, paid or otherwise, established and/or maintained by the Academy;
  - iv. to elect Fellows, Members and Foreign Fellows of the Academy;
  - v. to elect Council of the Academy;
  - vi. to consider the reports submitted by the Council and issue directions for further work of the Academy;
  - vii. subject to other provisions in this Charter, to exercise generally the residuary powers so far as the affairs of the Academy are concerned;
  - viii. to frame Rules governing the procedure to be followed at the General Body meetings.
- 8(B) The Quorum of meetings of the General Body shall be one-third of the total number of Fellows, fractions to be ignored.

#### 4.9. Functions and Powers of the Council

The functions and powers of the Council shall be:

- i. to manage the property, income, concerns and affairs of the Academy, and for this purpose, to make, with the approval of the General Body, such Bye-Laws as may be necessary for the good administration of the Academy, provided that such Bye-Laws shall not be inconsistent with any provision of this Charter;
- ii. to formulate the annual programme and budget of the Academy and of the institutions maintained by it;
- iii. to direct and control the publication of Proceedings, Journals, Transactions, Monographs and other works published by the Academy, and to appoint an Editor-

in-Chief and Editorial Board for this purpose for a term of 4 years, renewable for one more term;

- iv. to control the libraries, laboratories, museums, research institutes and other institutions established by the Academy, and, for this purpose, to appoint, within the sanctioned budget, librarians, superintendents, curators, directors, research officers and other staff, whether paid or honorary;
- v. subject to the powers of the President, Secretary-General and Treasurer, to appoint salaried staff of the Academy as sanctioned in the budget, to define their duties and terms and conditions of service, and to dispense with their services as the occasion may require;
- vi. to prepare and submit to the General Body and the Government, the annual Report on the affairs of the Academy;
- vii. To sanction, in an emergency, extra expenditure not provided for in the budget, provided that funds are available for the purpose;
- viii. To appoint Committees and Boards for specific matters and to take necessary action on the reports submitted by the Committees and Boards;
- ix. To consider and dispose of the proposals received from the members of the Council and Fellows, Members and Foreign Fellows of the Academy, and communications received from the others, excepts in so far as such proposals and communications require the consideration of the General Body.

#### **4.10. Funds of the Academy**

The Treasurer shall receive and hold for the use of the Academy all moneys paid to the Academy; he shall disburse all sums due from the Academy, and shall keep proper accounts of all such receipts and payments.

- i. The procedures for keeping of proper accounts for competent sanction of expenditure, for disbursements and for countersigning cheques, or authorizing payments, shall be laid down in the Bye-Laws;
- ii. The full accounts of Academy shall be audited every year by a Chartered Accountant appointed annually by the Council, and copies of the audited statement shall be submitted to the General Body and the Government;
- iii. All sums received for and on behalf of the Academy shall be regularly deposited by the Treasurer, as soon as possible after the receipt thereof, in a scheduled Bank approved by the Council for this purpose;
- iv. The income and property of the Academy, however derived, shall be utilized exclusively for the promotion of the Aims and Objectives of the Academy, and no portion thereof shall be paid or transferred directly or indirectly by way of dividend, bonus or otherwise.

#### **4.11. Framing of Bye-Laws**

A majority of not less than \*forty percent (40%) of the total number of existing Fellows of the Academy, either present in person and voting at a General Body Meeting specially called for the purpose, of which due notice has been given, or the like majority of the Fellows voting by means of a postal ballot, shall have the power to make such Bye-Laws



which are not inconsistent with this Charter, and are requisites for the proper conduct and management of the affairs of the Academy, and to revoke or amend any Bye-Law previously made.

*(\*As amended by G.B. in its meeting held on November 25, 2013)*

#### **4.12. Amending the Charter**

When the introduction of any new clause or the modification or repeal of any existing clause in the Charter is recommended by the Council, or proposed by ten (10) or more Fellows, this shall only be done by a majority of not less than forty percent (40%) of the total number of the existing Fellows of the Academy, either present in person and voting at a General Body Meeting, specially called for the purpose, of which due notice has been given, or the like majority of the Fellows voting by means of a postal ballot.

*(\*As amended by G.B. in its meeting held on November 25, 2013)*

#### **4.13. Duties and Powers of the President**

The duties and powers of the president shall be as follows:

- i. To preside at all Meetings of the Academy and of the Council, and to regulate the proceedings at such Meetings;
- ii. To ensure due effect being given to the Rules and to the Bye-Laws, made by the Council and the General Body;
- iii. To check irregularities and to keep all persons to order;
- iv. To call for reports and accounts from all Bodies, Institutions, Officers (paid or otherwise) and Employees of the Academy;
- v. To be ex-officio Member of all Committees, appointed by the Council, and to call for reports and accounts from such Committees;
- vi. In case of doubt as to the interpretation of any of the Rules. to decide on the interpretation. In such case the President's interpretation, shall hold until the next Meeting of the Council, when the interpretation of the Rule should be discussed and finally determined;
- vii. To summon Meetings of the General Body and of the Council.

#### **4.14. Duties and Powers of the Secretary General**

The duties and powers of the Secretary General shall be as follows:

- i. To conduct the correspondence of the Academy and of the Council and to sign all letters and papers emanating from the Academy, except in so far as other provision is made in the Rules;
- ii. To attend the Meetings of the Academy and of the Council, and to take minutes of the proceedings of such Meetings during the progress; and, at the commencement of every such Meeting, to read the minutes of the previous Meeting, if so desired;
- iii. To prepare for submission to the annual General Body Meeting, a list of Fellows, corrected to the close of the previous year;
- iv. To enter, or cause to be entered, in the Minute-books all the proceedings of the



Academy and of the Council before the following Meeting, and to see that all letters and papers and documents of every kind connected with the business of the Academy, except those relating to finance, are properly filed and preserved;

- v. To exercise general supervision over the employees and affairs of the Academy, and to assist in carrying out the Rules, the Bye-Laws, and orders / discussions made by the Council and the General Body;
- vi. To be ex-officio Member of the Committees appointed by the Council;
- vii. To be the custodian of the Files and other property of the Academy.

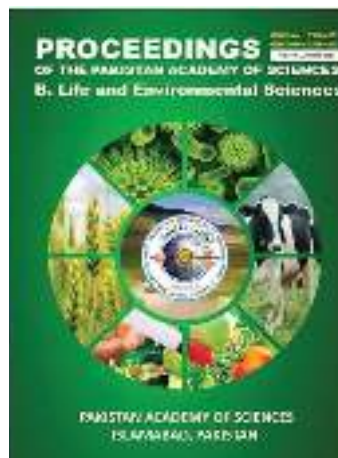
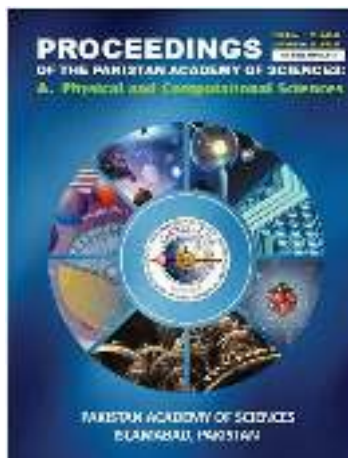
## 5. FINANCIAL ASSISTANCE TO THE ACADEMY

Historically, the Ministry of Education, Government of Pakistan, and the Pakistan Science Foundation (PSF) have been providing annual grant-in-aid to the Academy to carry out scientific activities. Occasionally, the Ministry of Science and Technology, Government of Pakistan, has also helped the Academy financially. The Fellows also voluntarily make contributions to the Academy. Besides, the Academy receives yearly grants from the Higher Education Commission (HEC).

## 6. PUBLICATIONS OF THE ACADEMY

### 6.1. Proceedings of the Pakistan Academy of Sciences

The Academy has been publishing its official journal “Proceedings of the Pakistan Academy of Sciences” since 1964. The Proceedings is an Open Access international journal and is published quarterly since 2004. It publishes original research papers and reviews on a broad range of topics in basic and applied sciences, i.e., Engineering Sciences, Life Sciences, Medical Sciences and Physical Sciences. All papers are written in English and are peer reviewed. Authors are not required to be Fellows or Members of the Academy, or citizens of Pakistan.



Since March 2016, the Proceedings have been bifurcated into Proceedings of the Pakistan Academy of Sciences: A. Physical and Computational Sciences; and Proceedings of the Pakistan Academy of Sciences: B. Life and Environmental Sciences. The affairs of the Proceedings are managed by the Editor-in-Chief, Discipline Editors, and Editorial Advisory Boards.

The journals are covered by Print and Online ISSN and are distributed to scientific organizations and universities throughout the country and to international scientific organizations, by subscription and on exchange basis. These are abstracted in Biological Abstracts, Physical Sciences Abstracts, Chemical Sciences Abstracts, Mathematical Reviews, Scopus, Elsevier products and other many leading abstracting and indexing services.

All correspondence and inquiries about publication of manuscripts are received by the Editor-in-Chief at the following address:

#### ***Editor-in-Chief***

Pakistan Academy of Sciences  
3-Constitution Avenue  
Islamabad, Pakistan  
Email: [editor@paspk.org](mailto:editor@paspk.org)

## *Discipline Editors*

### **Proceedings of the Pakistan Academy of Sciences: A. Physical and Computational Sciences**

- i. Engineering Sciences:**  
Prof. Dr. Fazal A. Khalid,  
University of Engineering &  
Technology, Lahore
- ii. Computer Sciences:**  
Prof. Dr. Sharifullah Khan,  
National University of Science &  
Technology, Islamabad
- iii. Mathematical Sciences:**  
Prof. Dr. Muhammad Sharif,  
University of the Punjab, Lahore
- iv. Physical Sciences:**  
Prof. Dr. M. Aslam Baig,  
National Center for Physics  
Quaid-i-Azam University campus,  
Islamabad

### **Proceedings of the Pakistan Academy of Sciences: B. Life and Environmental Sciences**

- i. Animal Sciences:**  
Prof. Dr. Abdul Rauf Shakoori,  
University of the Punjab,  
Lahore
- ii. Environmental Sciences:**  
Prof. Dr. Zahir Ahmad Zahir,  
University of Agriculture, Faisalabad
- iii. Health Sciences:**  
Prof. Dr. Rumina Hasan,  
The Aga Khan University, Karachi
- iv. Plant Sciences:**  
Prof. Dr. Muhammad Ashraf,  
Pakistan Science Foundation, Islamabad

The following issues of both journals of the Pakistan Academy of Sciences were published during the years 2016 and 2017:

Volume 53 (No. 1), March 2016  
Volume 53 (No. 2), June 2016  
Volume 53 (No. 3), September 2016  
Volume 53 (No. 4), December 2016

Volume 54 (No. 1), March 2017  
Volume 54 (No. 2), June 2017  
Volume 54 (No. 3), September 2017  
Volume 54 (No. 4), December 2017

Both journals of the Pakistan Academy of Sciences are freely accessible on website of the Academy, i.e., <http://www.paspk.org/proceedings/>.

## **6.2. Newsletter of the Pakistan Academy of Sciences**

Following issues of quarterly Newsletter of the Pakistan Academy of Sciences were published during the years 2016 and 2017:

Volume 11 (No. 1), January 2016	Volume 12 (No. 1), January 2017
Volume 11 (No. 2), April 2016	Volume 12 (No.2), April 2017
Volume 11 (No. 3), July 2016	Volume 12 (No. 3), July 2017
Volume 11 (No. 4), October 2016	Volume 12 (No. 4), October 2017



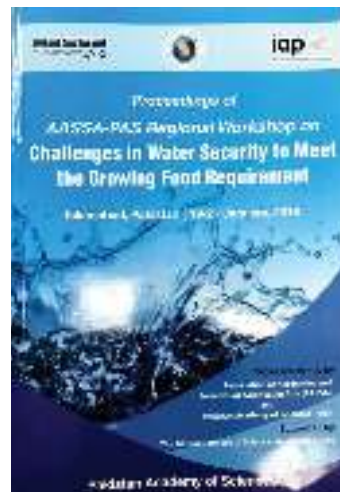
In addition to publishing hard copies of the Newsletter, it is also accessible at official website of the Academy, i.e., <http://www.paspk.org/all-newsletters/>.



### 6.3. Proceedings of Association of Academies and Societies of Sciences in Asia (AASSA) and Pakistan Academy of Sciences (PAS) Regional Workshop

Water is a key determinant for crop productivity and food security, and the current water use trend is not sustainable in the face of fast increasing populations, especially in countries of Asia, and the challenges posed by climate change. Thus, ensuring food security in Asian countries with shrinking water resources is a daunting task.

This gigantic issue was deliberated upon in this Regional Workshop organized jointly by the Pakistan Academy of Sciences (PAS) and the Association of Academies and Societies of Sciences in Asia (AASSA) in Islamabad during January 2016. Leading experts from Pakistan, Turkey, Malaysia, Korea and Nepal were resource persons. Despite all efforts, two Indian scientists could not get visa to travel to Pakistan. Both had provided their PowerPoint presentations as well as full papers; their papers are included in the Proceedings.



This forum of leading experts was inaugurated by Minister of State for Federal Education & Professional Training, Engr. Baligh Ur Rehman. The President of PAS, Dr. Anwar Nasim, and Vice President of AASSA, Professor Namik Aras, also spoke on the occasion. The Workshop was well attended by water and agriculture experts, heads of scientific organizations, university faculty members, researchers, postgraduate students, policy makers and other stakeholders.

Themes of the Workshop concerned food security, water security, climate change impact on agriculture, soil health, water productivity, and policies and strategies pertaining to water and food security. The Workshop comprised of five technical sessions, pertaining to: Water and Food Security; Climate Change and Food Security; Water Conservation, Reuse, Soil Health and Food Security; and Water, Climate Change and Food Security. In total 17 lectures were presented, five by expatriates and nine by Pakistani resource persons.

### 6.4. Other Publications of the Academy

1. Anonymous (undated) Pakistan Academy of Sciences (Introduction, Functions, Achievements, Future Programme). Pakistan Academy of Sciences, University of Islamabad, Islamabad, 19 pp.
2. Siddiqi, M. Raziuddin (1953) Pakistan Academy of Sciences – Inauguration and Constitution; Lahore, 16 February 1953. Pakistan Academy of Sciences. 37 pp.
3. Pakistan Academy of Sciences (1968) Proceedings of the Symposium on Waterlogging and Salinity, March 17-20, 1968. Pakistan Academy of Sciences, Islamabad, 256 pp.
4. Ahmad, Nazir (1972) Survey of Fuels and Electric Power Resources in Pakistan.
5. Pakistan Academy of Sciences (1973) Human Environment in Pakistan – Report of Seminars held on 5 June 1973 at Islamabad, Lahore & Karachi. Pakistan Academy of Sciences, Islamabad; Public Health Engineering Department, Lahore; Pakistan Association of Scientists & Scientific Professions, Karachi, 13 pp.

6. Pakistan Academy of Sciences (1974) The Investiture Ceremony of the Gold Medals of the Pakistan Academy of Sciences. Karachi, 7 January 1974. Pakistan Academy of Sciences, Islamabad, 12 pp.
7. Pakistan Academy of Sciences (1974) Memorandum Concerning the Organization and Development of the Pakistan Academy of Sciences. Pakistan Academy of Sciences, Islamabad, 14 pp.
8. PSF & PAS (1974) Souvenir "Marconi's Birthday Century Celebrations", 11-17 November 1974, Rawalpindi & Islamabad. Organized by Pakistan Science Foundation, Pakistan Academy of Sciences, and Institution of Electrical Engineers, 23 pp.
9. Pakistan Academy of Sciences (1974) Proceedings of the Symposium on Nutritional Deficiencies and Their Remedies (a Brief Report), 23-24 April, 1974, held at Institute of Chemistry, University of the Punjab, Lahore. Pakistan Academy of Sciences, Islamabad, 139 pp.
10. Pakistan Academy of Sciences (1975) International Symposium on "Natural & Man-made Fibres". Pakistan Academy of Sciences, the Pakistan Central Cotton Committee & Pakistan Central Jute Committee, 30 pp.
11. Pakistan Academy of Sciences (1975) International Conference on the Management of Environment; Part I, Proceedings and Recommendations, February 17-19, 1975; Pakistan Academy of Sciences, Islamabad, 21 pp.
12. Pakistan Academy of Sciences (1975) Joint Panel Discussions on National Science Policy. Vol. I. Food, Agriculture and Minor Forest Industries. 25-27 Jan 1975. Organized by Pakistan Academy of Sciences and National Science Council.
13. Pakistan Academy of Sciences (1975) Joint Panel Discussions on National Science Policy. Vol. II. Mineral Resources. 25-27 Jan 1975. Organized by Pakistan Academy of Sciences and National Science Council.
14. Pakistan Academy of Sciences (1975) Joint Panel Discussions on National Science Policy. Vol. IV. Health and Medicine. 25-27 Jan 1975. Organized by Pakistan Academy of Sciences and National Science Council.
15. Pakistan Academy of Sciences (1975) Joint Panel Discussions on National Science Policy. Vol. V. Irrigation and Reclamation. 25-27 Jan 1975. Organized by Pakistan Academy of Sciences and National Science Council, Islamabad.
16. Pakistan Academy of Sciences (1975) Joint Panel Discussions on National Science Policy. Vol. VIII. Nutrition. 25-27 Jan 1975. Organized by Pakistan Academy of Sciences and National Science Council.
17. Afzal, Muhammad (1975) Farming in Pakistan. Pakistan Academy of Sciences, Islamabad, 277 pp Shah, M.H. (1976) An Evaluation of Ibn Sina's Concept of Temperament & Constitution for Food & Drug Research (Academy's Annual Lecture). Pakistan Academy of Sciences, Islamabad, 51 pp.
18. Siddiqi, M. Raziuddin (1978) History of the Pakistan Academy of Sciences, 1953 to 1978. Pakistan Academy of Sciences, Islamabad, 139 pp.
19. Siddiqi, M. Raziuddin (1978) Proceedings of the Silver Jubilee of the Pakistan Academy of Sciences, 16 February 1978. Pakistan Academy of Sciences, Islamabad, 50 pp.



20. Qurashi, M.M. (1978) The Mechanics of R&D and Technology Transfer. Pakistan Academy of Sciences, Islamabad, Pakistan. 127 pp.
21. Ahmad, Nazir (1979) Tubewell: Theory and Practice; PAS Monograph No. 4. Pakistan Academy of Sciences, Islamabad.
22. Kazi, M.A. (1979) Address of Welcome to Professor Abdus Salam, by Dr. M. A. Kazi on the occasion of The Award of the 1979 Nobel Prize for Physics, 19 December 1979. Pakistan Academy of Sciences, Islamabad, 6 pp.
23. Pakistan Academy of Sciences (1979) Pakistan Academy of Sciences Headquarters Building at Constitution Avenue, Islamabad: Perspective View. Pakistan Academy of Sciences, Islamabad.
24. Qurashi, M.M., Karimullah, M. Aslam, A.H. Chotani, and S.M. Moghni (1981) Appropriate Technology & Development (with special reference to Pakistan). Appropriate Technology Development Organization, Government of Pakistan, in collaboration with Pakistan Academy of Sciences & Pakistan Banking Council, 430 pp.
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31. Ali, S.M., M.H. Quazi, M.M. Qurashi, M.A. Rahim, and F.H. Shah (1989) Food & Nutrition Problems of the Muslim Ummah. Pakistan Science Foundation and Pakistan Academy of Sciences, Islamabad, 244 pp.
32. Karimullah, and A.R. Ghani (1989) Biographical Notes on Eminent Muslim Scientists of South Asia in the 14th Century Hijra, Vol. I. (d. 1877–1979 A.D.). Pakistan Science Foundation and Pakistan Academy of Sciences, Islamabad, 131 pp.
33. Aslam, M. (1990) Polymers as Soil Conditioners & Sealing Agents, Part I. Pakistan Academy of Sciences, Islamabad, 66 pp.
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39. Pakistan Academy of Sciences (1992) Year Book of Pakistan Academy of Sciences (1992). Pakistan Academy of Sciences, Islamabad, Pakistan. 44 pp.
40. Anwar-ul-Haq (1993) Proceedings of the Federation of Asian Scientific Academies and Societies (FASAS) Symposium “New Materials and Contemporary Applications”, 28 November to 1 December 1992, Islamabad, Pakistan. Pakistan Academy of Sciences, Islamabad, Pakistan. 152 pp.
41. Qurashi, M.M., and S.S.H. Rizvi (1996) History & Philosophy of Muslim Contributions to Science & Technology. Pakistan Academy of Sciences, Islamabad, Pakistan. 188 pp.
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43. Pakistan Academy of Sciences (1996) Year Book of Pakistan Academy of Sciences (1992). Pakistan Academy of Sciences, Islamabad, Pakistan. 56 pp.
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47. Pakistan Academy of Sciences (1998) Proceedings of Seminar on “Emerging Environmental Issues in Pakistan”. Organized by Pakistan Academy of Sciences, in collaboration with Energy and Environment Society of Pakistan, 91 pp.
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52. Shami, M.D. (2003) Education, Science & Industry in the Muslim World. Institute of Policy Studies, and Pakistan Academy of Sciences, Islamabad, 160 pp.
53. Hafeez, M.A. (Ed.) (2003) Year Book of the Pakistan Academy of Sciences 2003. Pakistan Academy of Sciences, Islamabad, 87 pp.
54. Jafar, S.M., and Maulana Misbah-ur-Rahman Yousufi (2004) Genetic Principles and Islam. Pakistan Academy of Sciences, Islamabad. 39 pp.
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88. Rashid, Abdul (2016) Abstract Book of AASSA-PAS Regional Workshop on Challenges in Water needs to meet the Growing Food Requirement, 35 pp.
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## 7. 2016-2017 ACTIVITIES OF THE ACADEMY

### 7.1. Projects Executed

#### 7.1.1. Projects Executed by Fellows of the Academy

1. Stability Analysis and some interesting Cosmic Issues; by **Dr. M. Sharif**
2. Osteogenic Potential of a Local Herb *Cissus quadrangularis*; Development of Potential Drug for Osteoporosis; by **Dr. A.R. Shakoori**
3. Targetting central Nervous System for novel therapeutic Effects of Metformin; **Dr. Darakhshan Jabeen Haleem**
4. Synthesis of bioactive guanidine based surfactants and their application as anticancer, antibiotic and as a drug delivery agent; by **Dr. Amin Badshah**
5. Identification and characterization of different proteins involved in osmoregulation of halophilic bacteria through culturable and metaproteomics approaches; by **Dr. Kauser A. Malik**
6. Production of Keratinase Enzyme for Deharing Process in Leather Industry; by **Dr. Ikram-ul-Haq**
7. Anticancer and Antidiabetic Drug Discovery from Medicinal Plants in Pakistan: From Bench to Bedside; by **Dr. Zabta Khan Shinwari**
8. Cost Effective Synthesis of New Environmental Friendly Surfactants and their Application as Drug Carrier; by **Dr. Saqib Ali**
9. Shear Flow-Driven Instabilities and Nonlinear Waves in Multi-Component Space Plasmas; by **Dr. Hamid Saleem**
10. Enhancement in Detection Limit of Trace Elements Using Dual Pulse Laser Breakdown Spectroscopy; by **Dr. M. Aslam Baig**

#### 7.1.2. Projects Executed by Members of the Academy

1. Synthesis and Characterization of a disulfide cross-linked multifunctional in situ gelling cargo for oral peptide drug delivery; by **Dr. Gul Shahnaz**, Assistant Professor, Department of Pharmacy, Faculty of Biological Sciences, Quaid-i-Azam University, Islamabad
2. Molecular Characterization of Glu-1, Glu-3 and wbm loci in D-genome synthetic hexaploid wheats and their advanced derivatives; by **Dr. Tariq Mahmood**, Associate Professor and Chairperson, Department of Plant Sciences, Quaid-i-Azam University, Islamabad

### 7.2. Conferences, Seminars, Workshops, Symposium and Meetings Organized

#### 7.2.1. Conferences/Workshops at PAS Headquarters

S. No.	Topic	Organizer	Date
1	The 90th birthday of Dr. Abdus Salam, Pakistani Nobel Laureate	Pakistan Academy of Sciences, COMSTECH, and National Centre for Physics	January 29, 2016
2	Session on "Past, Present and Future of Science in Pakistan"	Pakistan Academy of Sciences	February 17, 2016



3	A National Workshop on Organic Food and Health: Avenues of Innovation and Entrepreneurship	Pakistan Council for Science & Technology	June 2, 2016
4	Workshop on South-South Cooperation in the Framework of Sustainable Development Goals	Pakistan Academy of Sciences, and COMSATS Institute of Information Technology, Islamabad	22 September, 2016
5	A Joint Pakistan-U.S. Workshop on “Strengthening and Sustaining a Network of Public and Animal Health Clinical Laboratories in Pakistan”	Pakistan Academy of Sciences, and US National Academy of Sciences	September 27-29, 2016
6	International workshop of Science Editors PAS-PCST-ACSE “From Impact Factor to Impact: Open Science, Open access and Inclusive Society”	Pakistan Academy of Sciences, and Asian Council of Science Editors	November 21, 2016
7	Workshop on One-Health Fellowship	US National Academy of Sciences, and Pakistan Academy of Sciences	March 30, 2017
8	A Faculty Development Workshop	University of Peshawar, and University of Utah, USA	August 10-11, 2017

### 7.2.2. E-Lectures

S. No.	Topic	Speaker	Organizer	Date
1	Lecture on Climate change and the changing monsoon pattern	Professor Greg Bothum, University of Oregon, a renowned Astrophysicist/ Cosmologist	Pakistan Academy of Sciences, and COMSTECH	September 7, 2016
2	Novel Accelerator-based Medical Radionuclides	Prof. Dr. S. M. Qaim, Foreign Fellow of PAS, Research Centre Jülich and University of Cologne, Germany	Pakistan Academy of Sciences, and Pakistan Nuclear Society	November 28, 2016

### 7.2.3. Conferences/Workshops/Symposium/Meeting Organized by Fellows of the Academy

1. AASSA Regional Workshop on Challenges in Water needs to meet the Growing Food Requirement, January 19-21, 2016 at PAS, Islamabad; by **Dr. Abdul Rashid**
2. Sharing Knowledge of Sustainable Use of Plant Resources of Pakistan: Support Biodiversity Conservation, January 18-19, 2016 at University of Karachi, Karachi; by **Dr. M. Qaiser**

3. Conference on Promotion of Science and Technology in Baluchistan, March, 2016, at University of Baluchistan, Quetta (Event Post poned till March 2016; by **Dr. Masoom Yasinzai**
4. Regional Workshop on Biosafety and Biosecurity in Lifescience Research, April 26-28, 2016, at Pakistan Academy of Sciences, Islamabad; by **Dr. Wasim Ahmad**
5. Science Community and Pakistan's Challenges of Health and Nutrition in the context of Sustainable Development Goals Workshop, March 6-7, 2017, at Pakistan Academy of Sciences, Islamabad; by **Dr. Anwar Nasim**
6. 14th National Symposium on Frontiers in Physics at GC University Lahore, November 21-23, 2016; by **Dr. G. Murtaza**
7. Workshop on Sustainable Development and Environment Protection, at the Institute of Sustainable Halophyte Utilization, University of Karachi, from December 3-4, 2016; by **Dr. M. Ajmal Khan**
8. 14th Eurasia Conference on Chemical Sciences (EuAsC2S-14) at ICCBS, University of Karachi, Karachi, from December 15-18, 2016; by **Dr. M. Iqbal Choudhary**
9. One Day Meeting of the Alexander von Humboldt Fellows, on January 17, 2016 at Pakistan Academy of Sciences; by **Dr. N.M. Butt**
10. 1st International Symposium on Global Food Security through Biosciences: Active Engagements with Developing Countries. 9th – 10th May, 2017, organized by Sardar Bahadur Khan Women University, Quetta, Pakistan; by **Dr. Masoom Yasinzai**
11. CPEC Natural Hazard Risk Assessment and Mitigation, 17-18 July 2017 at the Pakistan Academy of Sciences, Islamabad-Pakistan; by **Dr. Asif Khan**
12. 6th International Symposium-Cum-Training course on Molecular Medicine and Drug Research (MMDR-6), November 6-9, 2017, Karachi, Pakistan; by **Dr. M. Iqbal Choudhary**

### **7.3. Travel Grants to the Fellows of the Academy for Participation in Conferences, Workshops, Meetings Abroad**

1. 2nd United Arab Emirates Conference on Pure and Applied Chemistry, to be held in Sharjah from March 1-3, 2016; Dr. Haq Nawaz Bhatti.
2. Presentation of Paper at the 2nd Scientific Agricultural Conference (2nd SAC), at the College of Agriculture, University of Duhok, Iraqi Kurdistan Region, April 26-27, 2016; Dr. Khan B. Marwat.
3. Presentation of Paper at 16 th Science Council of Asia Conference, SCA-16, to be held in Colombo, Sri Lanka from May 30-June 1, 2016; Dr. Azra Khanum.
4. 3rd AASSA General Assembly to be held on October 21, 2016 in Ankara, Turkey; Dr. Anwar Nasim.
5. TWAS 27h General Meeting, November 12-17, 2016, Kigali, Rwanda; Dr. M. Qaiser.
6. Presentation of Paper at the International Symposium on Boron in Agriculture” to be held from 16-18 November, 2016 in Ankara, Turkey; Dr. Abdul Rashid.
7. Invited talk and represent PSBMB in the FAOBMB Conference in Manila, Philippines; Dr. M. Waheed Akhtar.

8. Invited talk in the “641. WE-Heraeus-Seminar to be held on April 24-28, 2017 in Bad Honnef-Germany; Dr. M. Sharif.
9. Participation in 23rd regular session of ICGEB Board of Governor at Trieste, Italy, 16-17 May, 2017; Dr. Shahid Mansoor.
10. Invited talk in the “Free versus cellulosomal cellulases: joining forces with David Wilson and the meeting of parallel paradigms” from June 29 to July 2, 2017 in Cornell University, Ithaca, New York; Dr. Ikram ul Haq.
11. Invited talk in the “4th International Turk-Pak Conference on Chemical Sciences (ITPCCS 2017), to be held on October 26-28, 2017, Konya, Turkey; Dr. M. Rasul Jan.

#### 7.4. Inauguration of Quetta Chapter, Pakistan Academy of Sciences

The Pakistan Academy of Sciences (PAS) inaugurated its Quetta Chapter on April 20, 2016 at University of Balochistan (UoB). Prof. Dr. Zabta K Shinwari, Secretary General of PAS and Prof. Dr. Masoom Yasinzai, Secretary Balochistan Chapter of PAS visited the University to formally inaugurate the Regional Chapter Office at UoB and conduct a seminar on “Making Pakistan Science Conscious”.

The establishment of PAS Chapter at UoB is expected to be beneficial for promoting S&T in the province. The University of Balochistan provided the physical infrastructure to establish the Regional Chapter of PAS at UoB. Inauguration of the PAS Chapter was done by The Minister of Education, Government of Balochistan and the ceremony was attended by a large number of stakeholders, scientists and students.

The functions of the Regional Chapter will be:

- i. To establish and maintain association and relations between Balochistan scientists and the national and international groups, and unions of scientists;
- ii. To promote higher studies and research on pure and applied sciences in Balochistan and to disseminate scientific knowledge;
- iii. To do all other lawful things that the Academy may consider conducive to, or necessary for, the attainment of its aims and objects that would benefit UoB and other scientific institutions in the Balochistan province.



Inauguration of the PAS Quetta Chapter by Minister of Education, Government of Balochistan, Prof. Dr. Zabta Khan Shinwari, Secretary General, Pakistan Academy of Sciences, and Prof. Dr. Masoom Yasinzai, Secretary, Quetta Chapter of Pakistan Academy of Sciences

## 7.5. International Liaison

The Pakistan Academy of Sciences has been signing MoUs with different science academies of the world from time to time since its establishment. When PAS signs MoU with an academy then the premier objective for signing the formal document is to promote joint scientific and technological pursuits by effectively involving both the academies.

### 7.5.1. Goals of Collaboration

The objectives of scientific collaboration with other academies of sciences are:

1. Coordination of joint research projects
2. Participation of scientists in bilateral symposia, seminars, researcher training courses and workshops
3. Exchange visits by the scientists
4. Exchange of scientific publication, information, and expertise on evaluation of science and funding procedures

### 7.5.2. MoUs with Other Academies of Sciences

Recognizing the importance of scientific cooperation, the PAS has signed Memoranda of Understanding (MoUs) with the following Academies:

S. No.	Academy	Date of Signing MoU	Coordinator
1	Chinese Academy of Sciences	March 30, 2000	Prof. Dr. M. Iqbal Choudhary
2	Nigerian Academy of Sciences	March 17, 2004	Prof. Dr. M. Ajmal Khan
3	Bangladesh Academy of Sciences	April 5, 2002 (Renewed on April 20, 2005)	Prof. Dr. Kauser A. Malik
4	Indian National Sciences Academy	January 07, 2006	Prof. Dr. G. A. Miana
5	Khorezm Mamun Academy	July 12, 2006	Prof. Dr. M. Qasim Jan
6	International Academy of Sciences, Austria	April 11, 2007	Prof. Dr. M. Aslam Baig
7	International Academy of Sciences, Azerbaijan Section	April 11, 2007	Prof. Dr. M. Asif Khan
8	The Academy of Sciences of the Czech Republic	May 10, 2007	Prof. Dr. Khalid M. Khan
9	The Royal Society of Edinburgh	November 8, 2007 (Renewed on January 15, 2016)	Prof. Dr. N. M. Butt
10	National Academy of Exact, Physical and Natural Sciences of Argentina	November 20, 2008	Prof. Dr. M. Ashraf
11	TWAS, the Academy of Sciences for the Developing World	March 10, 2011	Prof. Dr. Tasawar Hayat



12	Nepal Academy of Science and Technology	September 8, 2012	Dr. Anwar Nasim
13	Sri Lankan Association for Advancement of Science	November 11, 2014	Dr. Anwar Nasim
14	Turkish Academy of Sciences (TUBA)	February 17, 2015	Dr. Anwar Nasim
15	National Academy of Sciences of Belarus (NASB)	May 27, 2015	Dr. Anwar Nasim
16	Latvian Academy of Sciences	March 22, 2016	Dr. Anwar Nasim
17	Regional Information Center for Science and Technology (RiCeST), Iran	July 29, 2016	Prof. Dr. Zabta Khan Shinwari
18	Bulgarian Academy of Sciences (Memorandum of Cooperation)	November, 2016	Dr. Anwar Nasim
19	International Silk Road Academy of Sciences (ISRAS)	May 16, 2017	Prof. Dr. Khalid Mahmood Khan

### 7.5.3. Implementation of MoUs

Some of the MoUs are viable, whereas others are dormant. Very genuinely, therefore the Council and the General Body of the Academy have stressed upon for execution of the MoUs. Consequently, Council of the Academy, and especially the President, Dr. Anwar Nasim, are striving for follow up actions regarding the MoUs with various Academies. In the interest of rigorous follow up of activities regarding the MoUs, President of the Academy has nominated Fellows of the PAS as Coordinators, as given in the above Table. The Coordinators have been mandated to get materialized the MoUs between the counterpart academies for achieving the stipulated goals, by working jointly.

### 7.5.4. Science Cooperation MoU signed between Latvia and Pakistan

A delegation from Latvian Academy of Sciences visited Pakistan Academy of Sciences to formalize arrangements for mutual cooperation and collaboration and for building broad-based, substantive and long-term relationship with Pakistan Academy of Sciences in a wide array of scientific and technological disciplines. A Memorandum of Understanding (MoU) for cooperation between Science Academies of the two countries was signed on March 22, 2016 in a well-attended ceremony at PAS Headquarters, Islamabad by the President of Latvian Academy of Sciences, Dr. Ojar SPARITIS and the President of Pakistan Academy of Sciences, Dr. Anwar Nasim.

### 7.5.5. Regional Information Center for Science and Technology to Open Branch in Pakistan Academy of Sciences

Recognizing the importance of academic, research and technological cooperation between universities and research centers for active engagement of academic members and researchers in the domain of S&T and in order to expand the academic relationships, Pakistan Academy of Sciences (PAS) has signed a Memorandum of Understanding with the Regional Information Center for Science and Technology. The MoU with RiCeST will provide a two-year IP based access to its online databases for PAS. In case the information sources

are available at RICEST but not online, RICEST will deliver it through its Document Delivery Services.

Pakistan Academy of Sciences will be providing Infrastructure and IT related equipment for establishing RICEST's branch in its headquarters. The IT staff of PAS will be trained in Iran for one week and will be producing quarterly reports about the quality of the services being offered by RICEST. PAS will publicize the establishment of RICEST center and will also enhance the services to the Pakistani Academic Community. PAS has also agreed to collect journals of Pakistani universities; then RICEST will provide facilities to index them in their databases. Prof. Dr. Zabta Khan Shinwari, Secretary General, Pakistan Academy of Sciences recently visited Iran and during his visit he finalized the terms of the MoU with Dr. M. J. Dehghani, President, Regional Information Center for Science and Technology.

#### **7.5.6. Pakistan Academy of Sciences inks Agreements of Scientific Cooperation with International Silk Road Academy of Sciences (ISRAS), China**

Prof. Dr. Khalid Mahmood Khan, Vice President Pakistan Academy of Sciences, signed MoU with International Silk Road Academy of Sciences. He also represented Pakistan Academy of Sciences during the Conference "International Silk Road Academy of Sciences in Maritime Silk Road Infrastructure Construction High-Level" held on May 16-17, 2017 in Xiamen, Fujian Province China.

### **7.6. Visit of Foreign Delegations to the Academy**

#### **7.6.1. Visit of Delegation from Latvian Academy of Sciences**

A delegation from Latvian Academy of Sciences (LAS) visited Pakistan Academy of Sciences, on Mar 22, 2016, to formalize arrangements for mutual cooperation and collaboration and for building broad-based, substantive and long-term relationship with Pakistan Academy of Sciences (PAS) in a wide array of scientific and technological disciplines. LAS offered collaboration in all areas of S & T by way of joint projects, reciprocal visits of scientists and joint conferences. PAS shared its eagerness for a productive and mutually beneficial collaboration for a win-win situation of both countries.

#### **7.6.2. Chinese Academy of Sciences Visit to PAS**

A 6-member delegation of Chinese Academy of Sciences (CAS) visited the PAS Headquarters in Islamabad on 31st May, 2016 to invite Pakistan Academy of Sciences for co-organizing the CAS spearheaded "National Science and Research Organizations Summit Forum on the Belt and the Road Initiative" on 7-8 November, 2016 in Beijing, China. The Director-General of the Bureau of International Cooperation of CAS, Mr. Jinghua CAO, led the delegation. Prof. Khalid M. Khan, acting President of PAS led the PAS side; the Fellows present on the occasion included Prof. Dr. M. D. Shami, Dr. M. Iqbal, Prof. Dr. M. Ashraf, Prof. Dr. Anwar ul Hassan Gilani and Dr. Abdul Rashid.

#### **7.6.3. International Science Forum of National Scientific Organizations on the Belt and Road Initiative**

Pakistan Academy of Sciences hosted "International Science Forum of National Scientific Organizations on the Belt and Road Initiative" on 16-18 July 2017. The event was held



in Marriot Islamabad. Scientists from both the countries participated in the Event. Vice President of Chinese Academy of Sciences led the Chinese Delegation. A successful international forum was held in Beijing in November 2016, to share development of Belt and Road Initiative.

#### **7.6.4. Visit of H. E. Mr. Jan Fury, Ambassador of Czech Republic**

Ambassador of Czechoslovakia visited Pakistan Academy of Sciences and showed his keen to bridge ties of scientists of both countries. H.E. Mr. Jan Fury, visited PAS on 31 March 2016 and expressed his keen desire for collaborative scientific activities as envisaged in the MoU. The President of PAS, Dr. Anwar Nasim, Secretary General of PAS, Prof. Dr. Zabta K. Shinwari and Treasurer of PAS, Prof. Dr. M. D. Shami appreciated this unusual initiative on the part of Czech Ambassador and assured him of all possible cooperation in this regard. Consequently, PAS has suggested Ministry of Science and Technology (MoST) that a delegation, comprising of two Fellows of the Academy and a member from MoST, be sent to Czech Republic to work out strategies for mutual cooperation.

#### **7.6.5. Meeting with officials from US National Academy of Sciences for PAS-NAS Joint Workshop: Phase II**

A delegation from National Academy of Sciences (NAS), USA visited Pakistan Academy of Sciences (PAS) for a Planning Meeting on 24-26 April, 2017 for the upcoming PAS-NAS Joint Workshop on “Strengthening and Sustaining a Network of Public and Animal Health Clinical Laboratories in Pakistan: Phase II”. The delegation included Dr. David Franz, Ms. Rita S. Guenther and Mr. Benjamin Rusk. The delegation had detailed meeting with Prof. Dr. Zabta Khan Shinwari, Secretary General, Pakistan Academy of Sciences and Dr. Aamer Ikram, President, Pakistan Biological Safety Association.

## 8. GOLD MEDALS AND AWARDS

Currently, the PAS is conferring the following Awards/Prizes/Gold Medals:

1. PAS Gold Medals and Prizes in the following areas:
  - i. Agricultural Sciences, including Veterinary Sciences and Forestry;
  - ii. Biological Sciences, including Botany, Zoology, Microbiology, and Bio-Chemistry;
  - iii. Chemical Sciences, Including Pharmaceutical Sciences;
  - iv. Earth and Environmental Sciences;
  - v. Emerging Technologies, including Biotechnology, Nanotechnology, Molecular Biology, and Bioinformatics;
  - vi. Engineering Sciences, including Information Technology;
  - vii. Mathematical Sciences, including Mathematics, Statistics and Computer Sciences;
  - viii. Health Sciences;
  - ix. Physics.
2. Dr. Atta-ur-Rahman Gold Medal in Chemistry for Scientists (under 40);
3. Dr. M. Raziuddin Siddiqi Prize in Physics for Scientists (under 40);
4. Dr. M. N. Azam Prize in Computer Science (Software);
5. PAS-COMSTECH Prize in Computer Science (IT);
6. Dr. Shah Jahan Prize in Engineering Sciences, including Information Technology for Scientists (under 40);
7. TWAS Abdus Salam Prize in Basic Sciences for Scientists (under 40);
8. TWAS Salimuzzaman Siddiqui Prize in Applied Science-Technology for Scientists (under 40);
9. Prof. Zabta K. Shinwari Gold Medal in Biotechnology for Scientists (under 50).

In the past, the Academy had been conferring the following Awards as well:

1. PAS Open Gold Medal;
2. PAS Gold Medal (under 40);
3. PAS/Infaq Foundation Agha Hasan Abedi Gold Medal;
4. PAS/Infaq Foundation Agha Hasan Abedi Prize for Scientist of the Year;
5. TWAS Cash Prize (under 40);
6. Distinguished Scientist of the Year Award;
7. Meritorious Service Award (Special Medal);
8. World Science Day for Peace and Development Award.



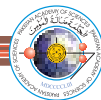
## 8.1. PAS Open Gold Medal

S.No.	Award Winner	Discipline	Year
1	<b>Prof. Mukarram Hussain Khundker,</b> University of Dhaka, Dhaka	Physical Sciences	1967
2	<b>Prof. Afzal Hussain Qadri,</b> University of Karachi, Karachi	Biological Sciences	1968
3	<b>Prof. Kamaluddin Ahmad,</b> University of Dhaka, Dhaka	Physical Sciences	1969
4	<b>Dr. Mohammad Abdul Ghani,</b> Commonwealth Institute of Biological Control (C.I.B.C.), Rawalpindi	Biological Sciences	1970
5	<b>Dr. M. M. Qurashi,</b> Pakistan Council for Scientific & Industrial Research (PCSIR), Lahore	Physical Sciences	1971
6	<b>Prof. Majeed Ahmad</b> University of Islamabad, Islamabad	Biological Sciences	1972
7	<b>Dr. M.K. Bhatti,</b> Pakistan Council for Scientific & Industrial Research (PCSIR), Lahore	Physical Sciences	1973
8	<b>Prof. M.I.D. Chughtai,</b> University of the Punjab, Lahore	Biological Sciences	1974
9	<b>Mr. M. Aslam,</b> Pakistan Council for Scientific Industrial Research (PCSIR), Karachi	Technology	1974
10	<b>Dr. M. Aslam Khan,</b> Defense Science & Technology Organization (DESTO), Rawalpindi	Physical Sciences	1975
11	<b>Dr. S. Riaz Ali Shah,</b> Pakistan Council for Scientific Industrial Research (PCSIR), Peshawar	Engineering & Technology	1975
12	<b>Mr. A.H. Chotani,</b> Pakistan Council for Science Industrial Research (PCSIR), Karachi	Technology	1976
13	<b>Dr. Riazuddin,</b> Pakistan Atomic Energy Commission (PAEC), Islamabad	Physical Sciences (Shared)	1978

14	<b>Dr. Fayyazuddin,</b> Quaid-i-Azam University, Islamabad	Physical sciences (Shared)	1978
15	<b>Dr. Muzaffar Ahmad,</b> University of the Punjab, Lahore	Biological Sciences	1979
16	<b>Dr. M. Safdar,</b> University of the Punjab, Lahore	Technology	1979
17	<b>Dr. Mahbub Ali,</b> Central Cotton Research Station, Multan	Agriculture	1980
18	<b>Dr. Fazal Ahmad Faruqi</b> Pakistan Council for Science Industrial Research (PCSIR), Lahore	Engineering & Technology	1980
19	<b>Dr. S.A. Qureshi,</b> Ayub Agricultural Research Institute (AARI), Faisalabad	Agriculture	1980
20	<b>Prof. Iqbal Hussain Shah,</b> University of Peshawar, Peshawar	Energy	1980
21	<b>Dr. S.M.H. Bokhari,</b> Min. of Water & Power, Lahore	Water Management	1980
22	<b>Prof. M. Ata-ur-Rahman,</b> Jinnah Postgraduate Medical Center (JPMC), Karachi	Biological Sciences	1981
23	<b>Dr. Hesham ul Haque,</b> Pakistan Central Cotton Committee, Karachi	Agriculture & Allied subjects	1982/83
24	<b>Dr. Atta-ur-Rehman,</b> H.E.J. Research Institute of Chemistry, University of Karachi, Karachi	Physical Sciences	1982/83
25	<b>Dr. M. Arshad Ali Beg,</b> Pakistan Council for Science Industrial Research (PCSIR), Lahore	Engineering & Technology	1982/83
26	<b>Prof. Imtiaz Ahmad,</b> University of Karachi, Karachi	Biological Sciences	1985
27	<b>Dr. Arshad Mohammad Khan,</b> Pakistan Atomic Energy Commission (PAEC), Islamabad	Energy	1985
28	<b>Dr. Nazir Ahmad,</b> P.I.H.R., Lahore	Water Management	1985



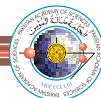
29	<b>Prof. Ghulam Murtaza,</b> Quaid-i-Azam University, Islamabad	Physics (Shared)	1985
30	<b>Prof. Viqar Uddin Ahmad,</b> University of Karachi, Karachi	Chemistry (Shared)	1986
31	<b>Dr. Ashhad Mehdi,</b> <i>Pakistan Council for Science Industrial Research (PCSIR), Lahore</i>	Engineering & Technology	1987
32	<b>Prof. N.M. Awan,</b> University of Engineering & Technology, Lahore	Water Management	1989
33	<b>Dr. Iqbal Hussain Qureshi,</b> Pakistan Atomic Energy Commission (PAEC), Islamabad	Physical Sciences	1988
34	<b>Dr. Khushnood Ahmad Siddiqi,</b> AEARC, Tandojam	Agriculture	1988
35	<b>Dr. M.S. Bukhari,</b> Defense Science & Technology Organization (DESTO), Rawalpindi	Engineering & Technology	1988
36	<b>Dr. Abdul Quadeer Khan,</b> KRL, Rawalpindi	Engineering & Technology	1989
37	<b>Dr. Syed Irtifaq Ali,</b> University of Karachi, Karachi	Biological Sciences	1989
38	<b>Dr. Abdul Wahab Khan,</b> Food & Agriculture Organization (FAO) of the United Nations	Agriculture	1989
39	<b>Dr. N. M. Butt,</b> Pakistan Atomic Energy Commission (PAEC), Islamabad	Physical Sciences	1990
40	<b>Dr. A. D. Choudhry,</b> University of Agriculture, Faisalabad	Engineering Sciences	1990
41	<b>Mr. Mushtaq Ahmad,</b> Irrigation Research Institute (IRI), Lahore	Water Management	1990
42	<b>Dr. Agha Ikram Mohyuddin,</b> CIBC, Rawalpindi	Agriculture	1990
43	<b>Dr. Shah Mohammed,</b> University of Agriculture, Faisalabad	Earth Sciences	1990
44	<b>Dr.S.H.M.Naqvi,</b> Nuclear Institute for Agriculture & Biology (NIAB), Faisalabad	Biological Sciences	1991



45	<b>Dr. M. Shabbir,</b> Pakistan Atomic Energy Commission (PAEC), Islamabad	Engineering & Technology	1991
46	<b>Dr. Izhar-ul-Haq,</b> WAPDA, Lahore	Water Management	1991
47	<b>Dr. Manzur A. Bajwa,</b> Ayub Agricultural Research Institute (AARI), Faisalabad	Agriculture (Shared)	1991
48	<b>Dr. M. Hanif Qauzi,</b> Pakistan Agriculture Research Council (PARC), Islamabad	Agriculture (Shared)	1991
49	<b>Dr. Naeem Ahmed Khan,</b> COMSTECH, Islamabad	Physics	1992
50	<b>Dr. M. Anwar Waqar,</b> The Aga Khan University, Karachi	Chemistry	1992
51	<b>Mr. Bashiruddin Mahmood,</b> Pakistan Atomic Energy Commission (PAEC), Islamabad	Engineering & Technology (Shared)	1992
52	<b>Mr. Ghulam Kibria,</b> Bank of Credit & Commerce International (BCCI), Karachi	Engineering & Technology (Shared)	1992
53	<b>Dr. Nisar Ahmad,</b> Pakistan Council for Scientific & Industrial Research (PCSIR), Lahore	Energy	1992
54	<b>Dr. M. Zafar Iqbal,</b> Quaid-i-Azam University, Islamabad	Physics (Shared)	1993
55	<b>Dr. Saleem Asghar,</b> Quaid-i-Azam University, Islamabad	Mathematics (Shared)	1993
56	<b>Dr. Kauser A. Malik,</b> National Institute for Biotechnology and Genetic Engineering (NIBGE), Faisalabad	Botany (Shared)	1993
57	<b>Maj. Gen. (Retd) Iftikhar A. Malik,</b> Armed Forces Institute of Pathology (A.F.I.P.), Rawalpindi	Medicine (Shared)	1993
58	<b>Dr. Shaukat Hameed Khan,</b> PINSTECH, Islamabad	Engineering & Technology	1993
59	<b>Dr. Muhammad Zafar Iqbal,</b> University of the Punjab, Lahore	Chemistry	1993
60	<b>Dr. Darakhshan J. Haleem,</b> University of Karachi, Karachi	Biochemistry	1996



61	<b>Dr. Ihsan Ilahi,</b> University of Peshawar, Peshawar	Botany	1996
62	<b>Dr. M. Maqsood,</b> 243-A, Shadman-I, Lahore	Medical Sciences	1996
63	<b>Dr. Nisar Ahmad,</b> Applied Physics Division, PINSTECH, Islamabad	Engineering & Technology	1996
64	<b>Dr. Ghulam Jilani,</b> Commonwealth Institute of Biological Control (CIBC), Rawalpindi	Agriculture	1996
65	<b>Dr. M. Qasim Jan,</b> University of Peshawar, Peshawar	Earth Sciences	1996
66	<b>Dr. Asghar Qadir,</b> Quaid-i-Azam University, Islamabad	Mathematics	1996
67	<b>Dr. M. Yar Khawar,</b> University of the Sindh, Jamshoro	Chemistry	1996
68	<b>Dr. M. Afzal,</b> Quaid-i-Azam University, Islamabad	Chemistry	1997
69	<b>Dr. M. Zakria Butt,</b> Government College, Lahore	Physics	1997
70	<b>Dr. Muhammad Ashraf,</b> Bahauddin Zakria University, Multan	Botany	1997
71	<b>Col. Dr. M. Aslam,</b> Army Medical College, Rawalpindi	Medical Sciences	1997
72	<b>Dr. Aijaz Karim,</b> PINSTECH, Islamabad	Engineering & Technology	1997
73	<b>Mr. Ali Hamza Kazmi,</b> Geological Survey of Pakistan, DHA, Karachi	Earth Sciences	1997
74	<b>Dr. Jamil Ahmad Qureshi,</b> University of Agriculture, Faisalabad	Biochemistry	1999
75	<b>Dr. M. Nawaz Chaudhry,</b> University of the Punjab, Lahore	Earth Sciences	2001
76	<b>Dr. M. Asif Khan,</b> University of Peshawar, Peshawar	Earth Sciences	2002



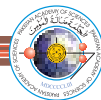
77	<b>Dr. Atiya Abbasi,</b> H.E.J. Research Institute of Chemistry, University of Karachi, Karachi	Biochemistry	2002
78	<b>Dr. Azra Khanum,</b> University of Arid Agriculture, Rawalpindi	Biochemistry	2003
79	<b>Dr. Khalid Mohammed Khan,</b> H.E.J. Research Institute of Chemistry, University of Karachi, Karachi	Chemistry	2004
80	<b>Prof. Dr. Ahmed Saeed,</b> Gomal University, DI Khan	Biochemistry	2004
81	<b>Dr. Hamid Saleem,</b> PINSTECH, Islamabad	Physics	2004
82	<b>Dr. Muhammad Ayub,</b> Quaid-i-Azam University, Islamabad	Mathematics	2004
83	<b>Dr. Mohammad Qaiser,</b> University of Karachi, Karachi	Botany	2004
84	<b>Dr. Maqsood A. Chotani,</b> DHA, Karachi	Medical Sciences	2004
85	<b>Engr. Dr. Riazuddin Abro,</b> OLC, Hyderabad	Engineering & Technology	2004
86	<b>Dr. Muhammad Bashir,</b> National Agricultural Research Center (NARC), Islamabad	Agriculture	2004
87	<b>Dr. Sabira Begum,</b> HEJ Research Institute of Chemistry, University of Karachi, Karachi	Chemistry	2005
88	<b>Dr. Sheikh Ahmed Saeed,</b> University of Karachi, Karachi	Biochemistry	2005
89	<b>Dr. Bilquees Gul,</b> University of Karachi, Karachi	Botany	2005
90	<b>Dr. M. Sarwar Khan,</b> National Institute for Biotechnology and Genetic Engineering (NIBGE), Faisalabad	Agriculture	2005
91	<b>Prof. Dr. Tahir Shah,</b> University of Peshawar, Peshawar	Earth Sciences	2005
92	<b>Dr. Wasim Ahmed,</b> Quaid-i-Azam University, Islamabad	Biochemistry	2006



93	<b>Dr. M. Zakaullah,</b> Quaid-i-Azam University, Islamabad	Physics	2006
94	<b>Dr. Tasawar Hayat,</b> Quaid-i-Azam University, Islamabad	Mathematics	2006
95	<b>Dr. Muhammad Yasin Ashraf,</b> Nuclear Institute for Agriculture and Biology (NIAB), Faisalabad	Botany	2006
96	<b>Dr. Azhar Mubarik,</b> Army Medical College, Rawalpindi	Medical Sciences	2006
97	<b>Dr. Muhammad Abid,</b> GIK Institute of Sciences and Technology, Topi, Swabi, KPK	Engineering & Technology	2006
98	<b>Dr. Muhammad Sarwar,</b> University of Agriculture, Faisalabad	Agriculture	2006
99	<b>Dr. Muhammad Kaleem Abbasi,</b> University of Azad Jammu & Kashmir, Muzaffarabad	Agriculture	2006

## 8.2. PAS Gold Medal

S.No.	Award Winner	Discipline	Year
1	<b>Dr. Muhammad Shaiq Ali,</b> University of Karachi, Karachi	Chemistry	2007
2	<b>Dr. Amer Jamil,</b> University of Agriculture, Faisalabad	Biochemistry	2007
3	<b>Dr. Zafar Iqbal,</b> Dr. A.Q. Khan Research Labs, Rawalpindi	Physics	2007
4	<b>Dr. Dilshad Ahmed Khan,</b> Army Medical College, Rawalpindi	Medical Sciences	2007
5	<b>Dr. Muhammad Sayab,</b> University of Peshawar, Peshawar	Earth Sciences	2007
6	<b>Prof. Dr. Ismat Beg,</b> Lahore University of Management Sciences (LUMS), Lahore	Mathematics	2008
7	<b>Dr. Muhammad Iqbal,</b> PCSIR Labs Complex, Lahore	Botany	2008



8	<b>Mr. Aziz Ahmed Qureshi,</b> Pakistan Atomic Energy Commission, Islamabad	Earth Sciences	2008
9	<b>Dr. Bushra Mirza,</b> Quaid-i-Azam University, Islamabad	Biochemistry	2008
10	<b>Prof. Dr. M. Mansoor Ahmed,</b> M. A. Jinnah University, Islamabad	Engg. & Tech.	2008
11	<b>Prof. Dr. Zafar Iqbal,</b> University of Agriculture, Faisalabad	Agriculture	2008
12	<b>Dr. Ghanzanfer Ali,</b> PMRC Central Research Center, NIH, Islamabad	Biochemistry	2009
13	<b>Prof. Dr. Rasool Bakhsh,</b> Department of Botany, University of Balochistan, Quetta	Botany	2009
14	<b>Dr. Mona Lisa,</b> Department of Earth Sciences, Quaid-i-Azam University, Islamabad	Earth Sciences	2009
15	<b>Prof. Dr. Muhammad Sharif,</b> Department of Mathematics, University of the Punjab, Lahore	Mathematics	2009
16	<b>Dr. Zahir Ahmad Zahir,</b> University of Agriculture, Faisalabad	Agriculture	2010
17	<b>Dr. Muhammad Ansar,</b> Quaid-i-Azam University, Islamabad	Biochemistry	2010
18	<b>Prof. Dr. Asghari Bano,</b> Quaid-i-Azam University, Islamabad	Botany	2010
19	<b>Prof. Dr. Khalid M. Khan,</b> University of Karachi, Karachi	Chemistry	2010
20	<b>Dr. Akhtar Muhammad Kassi,</b> University of Balochistan, Quetta	Earth Sciences	2010
21	<b>Dr. Munir A. Rashid,</b> NUST, Islamabad	Mathematics	2010
22	<b>Dr. Ambreen Arif,</b> Medical Officer, JPMC, Karachi	Medical Sciences	2010



23	<b>Dr. Nasir Amin,</b> University of Agriculture, Faisalabad	Physics	2010
24	<b>Dr. Abdul Rehman,</b> University of Punjab, Lahore	Zoology	2010
25	<b>Dr. Asma Saeed,</b> Biotechnology & Food Research Center, PCSIR Labs Complex, Lahore	Biochemistry	2011
26	<b>Dr. Mushtaq Ahmad,</b> Department of Plant Sciences Quaid-i-Azam University, Islamabad	Botany	2011
27	<b>Prof. Dr. Haq Nawaz Bhatti,</b> Department of Chemistry & Biochemistry, University of Agriculture, Faisalabad	Chemistry	2011
28	<b>Prof. Dr. Nimatullah Khattak,</b> National Center of Excellence in Geology, University of Peshawar, Peshawar	Earth Sciences	2011
29	<b>Dr. S. F. A. Rafeeqi,</b> Pro-Vice Chancellor, NED University of Engineering & Technology, Karachi	Engineering & Technology	2011
30	<b>Prof. Dr. M. Khaleeq ur Rahman,</b> Chairman, Department of Physics, University of Engineering & Technology, Lahore	Physics	2011
31	<b>Dr. Muhammad Zafar,</b> Department of Plant Sciences, Quaid-i-Azam University, Islamabad	Botany	2012
32	<b>Dr. Farzana Shaheen,</b> H.E.J. Research Institute of Chemistry, International Center for Chemical and Biological Sciences (ICCBBS), University of Karachi, Karachi	Chemistry	2012
33	<b>Prof. Dr. Muhammad Arif,</b> Department of Geology, University of Peshawar, Peshawar	Earth Sciences	2012

34	<b>Dr. Ghulam Shabbir,</b> GIK Institute of Engineering Sciences & Technology, Topi, Swabi, KPK	Mathematics	2012
35	<b>Dr. Javed Iqbal Akhter,</b> Chief Scientist / Director Science, Pakistan Institute of Nuclear Science & Technology (PINSTECH), P.O. Nilore, Islamabad	Physics	2012
36	<b>Prof. Dr. Amin Badshah,</b> Chairman, Department of Chemistry, Quaid-i-Azam University, Islamabad	Chemistry	2013
37	<b>Dr. Azeem Khalid,</b> Department of Environmental Sciences, Arid Agriculture University, Rawalpindi	Agriculture	2013
38	<b>Dr. Mujahid Abbas,</b> Department of Mathematics, Lahore University of Management Sciences (LUMS), Lahore	Mathematics	2013
39	<b>Prof. Dr. Shahzad Naseem,</b> Director, Centre of Excellence in Solid State Physics, University of the Punjab, Lahore	Physics	2013
40	<b>Dr. Muhammad Shahab,</b> Department of Animal Sciences, Quaid-i-Azam University, Islamabad	Zoology	2013
41	<b>Dr. Abid Mahmood</b> Director General, Ayub Agriculture Research Institute, Jhang Road, Faisalabad	Agriculture	2014
42	<b>Dr. Muhammad Rashid Khan</b> Associate Professor, Faculty of Biological Sciences, Department of Biochemistry, Quaid-e-Azam University, Islamabad	Biochemistry	2014
43	<b>Dr. Mansoor Hameed</b> Associate Professor, Department of Botany, University of Agriculture, Faisalabad.	Botany	2014
44	<b>Dr. Irshad Hussain</b> Associate Professor and Chair, Department of Chemistry, LUMS, SBA School of Sciences & Engineering (SEE), Lahore.	Chemistry	2014



45	<b>Dr. Rahmat Ali Khan</b> Dean Faculty of Sciences & Director Quality Enhancement Cell (QEC), University of Malakand at Chakdara, Dir (Lower), KPK	Mathematics	2014
46	<b>Dr. Mahmood Ahmad</b> Dean, Faculty of Pharmacy & Alternative Medicine, Khawaja Fareed Campus, The Islamia University of Bahawalpur	Medical Sciences	2014
47	<b>Dr. Farhan Saif</b> Chairman, Department of Electronics, Quaid-i-Azam University, Islamabad	Physics	2014
48	<b>Dr. Farah Rauf Shakoori</b> Associate Professor, Department of Zoology, University of the Punjab, Lahore	Zoology	2014
49	<b>Dr. Ghulam Murtaza</b> Institute of Soil and Environmental Sciences, University of Agriculture, Faisalabad	Agricultural Sciences including Veterinary Sciences and Forestry	2015
50	<b>Dr. Naveed Ahmed Khan</b> Professor and Chairman, Department of Biological Sciences, The Aga Khan University, Karachi	Biological Sciences, including Botany, Zoology, Microbiology and Bio- Chemistry	2015
51	<b>Dr. Shahabuddin Memon</b> Professor NCE in Analytical Chemistry, University of Jamshoro, Sindh	Chemical Sciences including Pharmaceutical Sciences	2015
52	<b>Dr. Riffat Nasim Malik</b> Associate Professor, Department of Environmental Sciences, Quaid-i-Azam University, Islamabad	Earth & Environmental Sciences	2015
53	<b>Prof. Dr. Muhammad Wasay</b> Department of Medicine, The Aga Khan University, Karachi	Health Sciences	2015
54	<b>Dr. Iftikhar Ahmad</b> Professor and Chairman, Department of Physics, University of Malakand, Chakdara	Physics	2015
55	<b>Dr. Tufail Hussain Shah</b> University of Sindh, Jamshoro	Chemical Sciences	2016

56.	<b>Dr. Qaiser Mehmood</b> COMSATS Institute of IT, Abbottabad	Earth and Environmental Sciences	2016
57.	<b>Dr. Tayyab Husnain</b> CEMB, University of Punjab, Lahore	Emerging Technologies	2016
58.	<b>Dr. Sohail Nadeem</b> Quaid-i-Azam University, Islamabad	Mathematical Sciences	2016
59.	<b>Dr. Shahid Ali</b> Quaid-e-Azam Campus, Islamabad	Physics	2016
60.	<b>Dr. Muhammad Farooq</b> University of Agriculture, Faisalabad	Agricultural Sciences	2017
61.	<b>Syed Sohail Zahoor Zaidi</b> Virology National Institute of Health, Islamabad, Pakistan	Biological Sciences	2017
62.	<b>Dr. Jamshed Iqbal</b> Department of Pharmacy, CIIT, Abbottabad	Chemical Sciences	2017
63.	<b>Dr. Shafaqat Ali</b> Assistant Professor Government College University, Faisalabad	Earth and Environmental Sciences	2017
64.	<b>Dr. Muhammad Idrees</b> Hazara University, Mansehra, KP	Emerging Technologies	2017
65.	<b>Dr. Masood Khan</b> Quaid-i-Azam University, Islamabad	Mathematical Sciences	2017
66.	<b>Dr. Yaseen Iqbal</b> Materials Research Laboratory, University of Peshawar	Physics	2017

### 8.3. PAS Gold Medal (Under 40 Years)

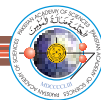
S. No.	Award Winner	Discipline	Year
1	<b>Dr. Riazuddin,</b> University of Islamabad, Islamabad	Physical Sciences	1968
2	<b>Dr. Mrs. Nasima M. Tirmizi,</b> University of Karachi, Karachi	Biological Sciences	1969
3	<b>Dr. Mrs. Bilqees Mujib,</b> University of Karachi, Karachi	Biological Sciences	1971
4	<b>Dr. Viqaruddin Ahmad,</b> University of Karachi, Karachi	Physical Sciences	1972



5	<b>Dr. Hameed Ahmed Khan,</b> Pakistan Atomic Energy Commission (PAEC), Islamabad	Physical Sciences	1974
6	<b>Dr. M. Ijaz,</b> Pakistan Atomic Energy Commission (PAEC), Islamabad	Biological Sciences	1975
7	<b>Dr. Atta-ur-Rahman,</b> H.E.J. Research Institute of Chemistry, University of Karachi, Karachi	Physical Sciences	1976
8	<b>Dr. Qasim Jan,</b> University of Peshawar, Peshawar	Physical Sciences	1979
9	<b>Dr. S. Riazuddin,</b> University of the Punjab , Lahore	Biological Sciences	1980
10	<b>Dr. Arif Ali Zaidi,</b> Quaid-i-Azam University, Islamabad	Biological Sciences	1982/83
11	<b>Dr. Fazl-e-Aleem,</b> University of the Punjab, Lahore	Physical Sciences	1985
12	<b>Dr. Khalid Pervez Lone,</b> University of the Punjab, Lahore	Biological Sciences	1986
13	<b>Dr. M. Aslam Baig,</b> Quaid-i-Azam University, Islamabad	Physical Sciences	1987
14	<b>Dr. Suhail Zuberi,</b> Quaid-i-Azam University, Islamabad	Physical Sciences	1989
15	<b>Dr. Muhammad Ashraf,</b> Bahauddin Zakria University, Multan	Biological Sciences	1990
16	<b>Dr. S. Kamaluddin,</b> Urdu Science College, Karachi	Biological Sciences	1992
17	<b>Mr. Shoaib Ismail,</b> University of Karachi, Karachi	Biological Sciences	1993

#### ***8.4. PAS/Infaq Foundation Agha Hasan Abedi Gold Medal***

S.No.	Award Winner	Discipline	Year
1	<b>Dr. Hameed Ahmed Khan,</b> PINSTECH, Islamabad	Physical Sciences	1995



2	<b>Dr. Syed Moosa Hasany,</b> PINSTECH, Islamabad	Chemical Sciences	1995
3	<b>Dr. M. Perwaiz Iqbal,</b> Aga Khan University, Karachi	Biological Sciences	1995
4	<b>Dr. Anwar-ul-Haque,</b> KRL, Rawalpindi	Engineering Sciences	1995
5	<b>Dr. Abdul Malik</b> HEJ Research Institute of Chemistry, University of Karachi, Karachi	Chemistry	1998
6	<b>Dr. Kamaluddin Ahmad,</b> Quaid-i-Azam University Islamabad	Physics	1998
7	<b>Dr. Naseer Shahzad,</b> Quaid-i-Azam University Islamabad	Mathematics	1998
8	<b>Dr. S. Naimul Hasan Naqvi,</b> University of Karachi, Karachi	Zoology	1998
9	<b>Dr. Mustafa Shameel,</b> University of Karachi, Karachi	Botany	1998
10	<b>Dr. Waheed-uz-Zaman Tariq,</b> AFIP, Rawalpindi	Medical Sciences	1998
11	<b>Dr. Anjum Tauqir,</b> Dr. A.Q. Khan Research Labs, Rawalpindi	Engineering Sciences	1998
12	<b>Dr. Habib-ur-Rahman,</b> A.J.K. University , Muzaffarabad	Chemistry	1999
13	<b>Dr. M. Ajmal Khan,</b> University of Karachi, Karachi	Botany	1999
14	<b>Dr. Anwar-ul-Hassan Gilani,</b> Aga Khan University Medical College, Karachi	Sciences	1999
15	<b>Dr. Fazal A. Khalid,</b> GIK Institute of Engineering Sciences & Technology, Topi, Swabi, KPK	Engineering & Technology	1999
16	<b>Dr. Iftikhar Ahmad,</b> Pakistan Agriculture Research Council (PARC), Islamabad	Agriculture	1999



17	<b>Dr. Mrs. Asghari Maqsood,</b> Quaid-i-Azam University Islamabad	Physics	2000
18	<b>Dr. Qaiser Mushtaq</b> Quaid-i-Azam University, Islamabad	Mathematics	2000
19	<b>Dr. Muhammad Javed,</b> University of Agriculture, Faisalabad	Zoology	2000
20	<b>Dr. Muhammad Perwaiz Iqbal,</b> Aga Khan University, Karachi	Medical Sciences	2000
21	<b>Dr. M, Ramzan Sabayo,</b> Mehran University of Engineering & Technology, Jamshoro	Engineering & Technology	2000
22	<b>Dr. Zahid Hussain Chohan,</b> Islamia University, Bahawalpur	Chemistry	2001
23	<b>Dr. Muhammad Ali,</b> B. Zakria University, Multan	Zoology	2001
24	<b>Dr. S. M. Saifullah,</b> University of Karachi, Karachi	Botany	2001
25	<b>Dr. Muhammad Yunus Khan,</b> H. No. 785, St. 6, I-9/1, Islamabad	Medical Sciences	2001
26	<b>Dr. Muhammad Afzaal Malik,</b> NUST, Rawalpindi	Engineering & Technology	2001
27	<b>Dr. Muhammad Arshad,</b> University Agriculture, Faisalabad	Agriculture	2001
28	<b>Dr. Mrs. Tahseen Aman,</b> Pakistan Council for Science and Industrial Research (PCSIR), Lahore	Chemistry	2002
29	<b>Dr. M. Ziad,</b> Quaid-i-Azam University, Islamabad	Mathematics	2002
30	<b>Dr. Aleem Ahmad Khan,</b> Bahauddin Zakariya University, Multan	Zoology	2002
31	<b>Col. Abdul Khaliq Naveed,</b> Army Medical College, Rawalpindi	Medical Sciences	2002
32	<b>Dr. Muhammad Akram Kahlowan,</b> PCRWR, Islamabad	Engineering & Technology	2000

33	<b>Dr. Syed Manzoor Alam,</b> Nuclear Institute of Agriculture, Tandojam	Agriculture	2002
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### 8.5. *PAS/Infaq Foundation Agha Hasan Abedi Prize for Best Scientist of the Year (Gold Medal and Rs. 200,000/-)*

S.No.	Award Winner	Discipline	Year
1	<b>Prof. Dr. Atta-ur-Rahman,</b> HEJ Research Institute of Chemistry, University of Karachi,	Science (Chemistry)	1995
2	<b>Prof. Dr. Abdul Raouf,</b> GIK Institute of Engineering Sciences & Technology, Topi, Swabi, KPK	Engineering & Technology	1998
3	<b>Dr. Syed Qasim Mehdi,</b> KRL, Islamabad	Biotechnology & Genetic Engineering	1999
4	<b>Dr. Riaz Hussain Qureshi,</b> University Agriculture, Faisalabad	Agriculture	2000
5	<b>Dr. Riazuddin,</b> Quaid-i-Azam University, Islamabad	Physics	2001

### 8.6. *Dr. M. Raziuddin Siddiqi Cash Prize & Gold Medal (Under 40 Years)*

S.No.	Award Winner	Discipline	Year
1	<b>Dr. Qaiser Mushtaq,</b> Quaid-i-Azam University, Islamabad	Mathematics	1991
2	<b>Dr. Mohammad Iqbal Choudhry,</b> HEJ Research Institute of Chemistry, University of Karachi,	Chemistry	1992
3	<b>Dr. Hamid Saleem,</b> PINSTECH, Islamabad	Physics	1993
4	<b>Dr. Muhammad Sarfraz,</b> University of the Punjab, Lahore	Mathematics	1994
5	<b>Dr. Muhammad Javed Akhtar,</b> PINSTECH, Islamabad	Chemistry	1995
6	<b>Dr. Arshad Majid Mirza,</b> Quaid-i-Azam University, Islamabad	Physics (Shared)	1996
7	<b>Mr. Muhammad Arshad,</b> PINSTECH, Islamabad	Physics (Shared)	1996



8	<b>Dr. Muhammad Ayub,</b> Quaid-i-Azam University, Islamabad	Mathematics	1997
9	<b>Dr. M. Masoom Yasinai,</b> University of Balochistan, Quetta	Biochemistry	1998
10	<b>Dr. Tasawar Hayat,</b> Quaid-i-Azam University, Islamabad	Mathematics	1999
11	<b>Dr. M. Shaiq Ali,</b> HEJ Research Institute of Chemistry, University of Karachi, Karachi	Chemistry	2001
12	<b>Dr. Shahid Qamar,</b> PIEAS, Islamabad	Physics	2001
13	<b>Dr. Muhammad Sharif,</b> University of the Punjab, Lahore	Mathematics	2002
14	<b>Dr. Aamir Saeed Bhatti,</b> Quaid-i-Azam University, Islamabad	Chemistry	2003
15	<b>Dr. Arif Mumtaz,</b> Quaid-i-Azam University, Islamabad	Physics	2004
16	<b>Mr. M. Raheel Mohyuddin,</b> Quaid-i-Azam University, Islamabad	Mathematics	2005
17	<b>Dr. Farzana Shaheen,</b> Quaid-i-Azam University, Islamabad	Chemistry	2006
18	<b>Dr. Sohail Nadeem,</b> Quaid-i-Azam University, Islamabad	Mathematics	2008
19	<b>Dr. Sonia Zulfiqar,</b> Quaid-i-Azam University, Islamabad	Chemistry	2009
20	<b>Dr. M. Shahid Rafique,</b> University of Engineering & Technology, Lahore	Physics	2010
21	<b>Dr. Mubashir Jamil,</b> NUST, Islamabad	Mathematics	2011

22	<b>Dr. Hassan Imran Afridi,</b> University of Sindh, Jamshoro	Chemistry	2012
23	<b>Dr. Zaheer Abbas</b> Assistant Professor, Department of Mathematics, The Islamia University of Bahawalpur, Bahawalpur	Mathematics	2014
24	<b>Dr. M. Raza Shah</b> Associate Professor, H.E.J. Research Institute of Chemistry, International Center for Chemical and Biological Sciences (ICCBS), University of Karachi	Chemistry	2015
25.	<b>Dr. Rashid Jalil</b> Associate Professor UET, Lahore	Physics	2016
26	<b>Dr. Noreen Sher Akbar</b> Assistant Professor National University of Sciences & Technology, College of Electrical and Mechanical Engineering, Rawalpindi	Mathematics	2017

### 8.7. TWAS Cash Prize (Under 40 Years)

S.No.	Award Winner	Discipline	
1	<b>Dr. Qaiser Mushtaq,</b> Quaid-i-Azam University, Islamabad	Mathematics (Shared)	1993
2	<b>Dr. Syed Khurshid Husnain,</b> Quaid-i-Azam University, Islamabad	Physics (Shared)	1993
3	<b>Dr. Mohammad Iqbal Choudhry,</b> HEJ Research Institute of Chemistry, University of Karachi, Karachi	Chemistry	1994
4	<b>Dr. Muhammad Iqbal,</b> PCSIR, Lahore	Biology (Shared)	1995
5	<b>Dr. Bukhtiar Hussain Shah</b> Aga Khan University, Karachi	Biology (Shared)	1995
6	<b>Dr. Khalid Jamil,</b> PINSTECH, Nilore, Islamabad	Physics	1996



7	<b>Dr. M. Shaiq Ali,</b> HEJ Research Institute of Chemistry, University of Karachi, Karachi	Chemistry	1997
8	<b>Dr. Rehana Asghar,</b> University of Balochistan, Quetta	Botany (Shared)	1998
9	<b>Dr. M. Shahab,</b> Quaid-i-Azam University, Islamabad	Biology (Shared)	1998
10	<b>Dr. Arshad Majid Mirza,</b> Quaid-i-Azam University, Islamabad	Physics (Shared)	1999
11	<b>Mr. Shahid Manzoor,</b> PINSTECH, Nilore, Islamabad	Physics (Shared)	1999
12	<b>Dr. Tasawar Hayat,</b> Quaid-i-Azam University, Islamabad	Mathematics	2000
13	<b>Dr. Amir Azam Khan,</b> GIK Institute of Engineering Sciences & Technology, Topi, Swabi, KPK	Chemistry	2001
14	<b>Dr. Amer Jamil,</b> University of Agriculture, Faisalabad	Biology	2002
15	<b>Dr. Farhan Saif,</b> Quaid-i-Azam University, Islamabad	Physics	2003
16	<b>Dr. Ghulam Shabbir,</b> GIK Institute of Engineering Sciences & Technology, Topi, Swabi, KPK	Mathematics	2004
17	<b>Dr. Shazia Anjum,</b> HEJ Research Institute of Chemistry, University of Karachi, Karachi	Chemistry	2005
18	<b>Dr. Zubair Ahmad,</b> University of the Punjab, Lahore	Biology	2006
19	<b>Dr. Muhammad Sabieh Anwar,</b> Lahore University of Management & Sciences (LUMS), Lahore	Physics	2007
20	<b>Dr. Masood Khan,</b> Quaid-i-Azam University, Islamabad	Mathematics	2008

21	<b>Dr. Muhammad Idrees,</b> National Centre of Excellence in Molecular Biology, University of the Punjab, Lahore	Biology	2009
22	<b>Dr. Syed Munir Hussain,</b> Quaid-i-Azam University Islamabad	Chemistry	2010

### 8.8. *Dr. M.N. Azam Prize for Pakistani Scientists in Computer Science (Software)*

S.No.	Award Winner	Discipline	Year
1	<b>Dr. Muhammad Yaqub,</b> PCSIR, Karachi	Computer Science (Software)	1998
2	<b>Dr. Mohammad Mahboob,</b> Pakistan Atomic Energy Commission (PAEC), Islamabad	Computer Science (Software)	1999
3	<b>Mr. Ghulam Mustafa,</b> Pakistan Atomic Energy Commission (PAEC), Islamabad	Computer Science (Software)	2000
4	Dr. Salman Iqbal, A.Q. Khan Res. Labs, Rawalpindi	Computer Science (Software)	2001
5	<b>Dr. Sarmad Hussain,</b> University of the Punjab, Lahore	Computer Science (Software)	2002
6	<b>Mr. Zaheer Aziz,</b> International Islamic University, Islamabad	Computer Science (Software)	2003
7	<b>Mr. Ali Nasir,</b> NESCOM, Islamabad	Computer Science (Software)	2004
8	<b>Mr. Ahsan Abdullah,</b> National University of Computer & Emerging Sciences, Islamabad	Computer Sciences (Software)	2005
9	<b>Dr. Asif Masood,</b> National University of Science & Technology (NUST), Islamabad	Computer Sciences (Software)	2009
10	<b>Dr. SiffatUllah Khan,</b> Assistant Professor Department of Computer Science and IT University of Malakand, Chakdara	Computer Science (Software)	2015



### 8.9. PAS/COMSTECH Gold Medal in Computer Science (IT)

S. No.	Award Winner	Discipline	Year
1	<b>Dr. Imdad Ali Ismaili,</b> University of Sindh, Jamshoro	Information Technology	2003
2	<b>Prof. Dr. Arshad Ali,</b> Institute of Information Technology, NUST, Rawalpindi	Computer Science	2004
3	<b>Dr. Hafiz Farooq Ahmad,</b> Institute of Information Technology, NUST, Islamabad	Computer Science/IT	2005
4	<b>Dr. Asifullah Khan,</b> PIEAS, Nilore, Islamabad	Computer Science/IT	2011
5	<b>Dr. Abdul Majid</b> Pakistan Institute of Engineering and Applied Science (PIEAS), Nilore, Islamabad	Computer Science/ (IT)	2014
6	<b>Dr. Asim Karim,</b> University of Management Sciences, Sector U, DHA, Lahore	Computer Science/(IT)	2015

### 8.10. Dr. Atta-ur-Rahman Gold Medal in Chemistry for Scientists (under 40)

S. No.	Award Winner	Discipline	Year
1	<b>Prof. Dr. Nighat Afza,</b> PCSIR Labs Complex, Karachi	Chemistry	2004
2	<b>Dr. Muhammad Iqbal Bhanger,</b> University of Sindh, Jamshoro	Chemistry	2005
3	<b>Dr. Irshad Hussain,</b> NIBGE, Faisalabad	Chemistry	2007
4	<b>Dr. Zaheer-ul-Haq,</b> University of Karachi, Karachi	Chemistry	2008
5	<b>Dr. Mazhar Hamid,</b> G-11/1, Islamabad	Chemistry	2009
6	<b>Dr. Farooq Anwar,</b> University of Agriculture, Faisalabad	Chemistry	2010
7	<b>Dr. Umar Farooq,</b> CIIT, Abbottabad	Chemistry	2011

8	<b>Dr. Basit Yameen,</b> School of Sciences and Engineering, LUMS, Lahore	Chemistry	2012
9	<b>Dr. Syed Ghulam Musharraf,</b> Assistant Professor, HEJ Research Institute of Chemistry, International Center for Chemical and Biological Sciences (ICCBS), University of Karachi, Karachi	Chemistry	2013
10	<b>Dr. Muhammad Balal</b> University College of Science, Mardan	Chemistry	2014
11	<b>Dr. Itrat Anis</b> University of Karachi, Karachi	Chemistry	2015
12	<b>Dr. Jameel Ahmed Baig.</b> Asst. Professor, National Center of Excellence in analytical Chemistry, University of Sindh, Jamshoro	Chemistry	2016
13	<b>Dr. Zia-ur-Rehman</b> Assistant Professor Department of Chemistry, Quaid-i-Azam University, Islamabad	Chemistry	2017

### 8.11. Distinguished Scientist of the Year Award

S.No.	Award Winner	Discipline	Year
1	<b>Dr. Sheikh Riazuddin,</b> National Center of Excellence in Molecular Biology (NCMB), Lahore	Biology	2004
2	<b>Prof. Dr. M. Salim Akhter,</b> University of South Asia, Lahore	Medical Sciences	2005
3	<b>Prof. Dr. Arshad Ali,</b> Information Technology, NUST, Rawalpindi	Computer Sciences	2006
4	<b>Dr. Muhammad Anwar Waqar,</b> University of Karachi, Karachi	Biochemistry	2007
5	<b>Prof. Dr. M. Ajmal Khan,</b> University of Karachi, Karachi	Botany	2008
6	<b>Dr. M. Qasim Jan,</b> Quaid-i-Azam University, Islamabad	Earth Sciences	2009
7	<b>Dr. Tasawar Hayat,</b> Department of Mathematics, Quaid-i-Azam University, Islamabad	Mathematics	2010



8	<b>Prof. Dr. Abdul Rauf Shakoori,</b> School of Biological Sciences University of the Punjab Lahore	Zoology	2011
9	<b>Prof. Dr. Muhammad Ashraf,</b> Distinguished National Professor, Director-Quality Enhancement Cell, University of Sargodha,	Botany	2013
10	<b>Prof. Dr. Wasim Ahmad,</b> Department of Biochemistry, Quaid-i-Azam University, Islamabad	Biochemistry	2013

### 8.12. Meritorious Service Award (Special Medal)

S. No.	Award Winner	Year
1	<b>Dr. A. Quadeer Khan,</b> KPL, Rawalpindi	1998
2	<b>Dr. Ishfaq Ahmad,</b> Pakistan Atomic Energy Commission (PAEC), Islamabad	1998

### 8.13. Meritorious Service Award (Special Medal)

S. No.	Award Winner	Year
1	<b>Dr. A. Quadeer Khan,</b> Advisor to the Prime Minister on Strategic Programme, Islamabad	2000

### 8.14. Dr. Shah Jahan Prize

S. No.	Award Winner	Discipline	Year
1	<b>Dr. Muhammad Azim Khan,</b> KPK Agricultural University, Peshawar	Agriculture	2010
2	<b>Dr. Nudrat Aisha Akram,</b> GC University, Faisalabad	Botany	2012
3	<b>Dr. Irfan Ullah Jan</b> NCE in Geology, University of Peshawar	Earth Sciences	2014

4	<b>Dr. Shamaila Sajjad</b> International Islamic University, Islamabad	Emerging Technologies	2015
5	<b>Dr. Rafi-ud-din</b> Principal Engineer Materials Division, PINSTECH, Nilore, Islamabad	Engineering Sciences	2016

### 8.15. TWAS Abdus Salam Prize in Basic Sciences

S. No.	Award Winner	Discipline	Year
1	<b>Dr. Zia ur Rahman,</b> Department of Biochemistry, Quaid-i-Azam University, Islamabad	Chemistry	2011
2	<b>Dr. Sohail Nadeem,</b> Associate Professor, Department of Mathematics, Quaid-i-Azam University, Islamabad	Mathematics	2012
3	<b>Dr, Mubasher Jamil</b> Assistant professor School of Natural Sciences (SNS), National University of Sciences and Technology (NUST), H-12, Islamabad	Mathematics	2016
4	<b>Dr. Tariq Mahmood</b> Associate Professor/Chairman Department of Plant Sciences Quaid-i-Azam University Islamabad	Biology	2017

### 8.16. TWAS Salimuzzaman Siddiqui Prize in Applied Science & Technology

S. No.	Award Winner	Discipline	Year
1	<b>Dr. Mehboob ur Rehman,</b> National Institute for Biotechnology and Genetic Engineering (NIBGE), Faisalabad	Agricultural Sciences	2011
2	<b>Dr. Sher Jamal Khan</b> Institute of Environmental sciences and Engineering , NUST, Islamabad	Engineering Sciences	2017



### ***8.17. Prof. Zabta K. Shinwari Gold Medal in Biotechnology for scientists under 50***

S. No.	Award Winner	Discipline	Year
1	<b>Dr. Bilal Haider Abbasi</b> Associate Professor, Department of Biotechnology QAU, Islamabad	Biotechnology	2016
2	<b>Dr. Zulfiqar Ali</b> Professor/Chairman Department of Plant Breeding & Genetics, Muhammad Nawaz Shareef University of Agriculture, Multan	Biotechnology	2017



# 9.PROFILES OF FELLOWS

Pakistan Academy of Sciences





## Abbas, Farhat

**FELLOW: Elected 2012**

Born in Hyderabad, Pakistan on July 15, 1960

Dean, Medical College,  
The Hussein Cumber Professor (Urology), The Aga Khan University  
Stadium Road, PO Box 3500, Karachi-74800

**Tel:** (021) 34864 409

**Mob:** 0300-824 8568

**Email:** farhat.abbas@aku.edu

- Education:** MBBS, Dow Medical College, Karachi, 1984; Fellowship in Urologic Oncology, Jackson Memorial Hospital, University of Miami, Florida, USA, 1995; Research and Clinical Fellowship in Urologic Oncology, Baylor College of Medicine, Houston, Texas, USA, 1997; FEBU, 2001; FACS, 2006.
- Positions Held:** Professor of Urology, The Aga Khan University, Karachi, 2008 to present; Associate Dean, Postgraduate Medical Education, The Aga Khan University, 200–2003; Acting Dean, Medical College, The Aga Khan University, 2002–2003; Medical Director & Associate Dean Clinical Affairs, The Aga Khan University, 2003–2007; Chief Operating Officer, The Aga Khan University Hospital, Karachi, 2007–2009; Interim Dean, Medical College, The Aga Khan University, 2009–2010; Dean, Medical College, The Aga Khan University, 2010–present.
- Awards:** Development Award, The Aga Khan University, 1993; G.B. Ong Gold Medal, Royal College of Surgeons of Edinburgh, 1993; International Guest Fellowship Award, American College of Surgeons, 2001; Hussain Cumber Endowed Professorship, Aga Khan University, 2002; Tamgha-i-Imtiaz, Government of Pakistan, 2009.
- Fellowships/ Memberships:** Fellow, College of Physicians and Surgeons of Pakistan (FCPS), 1992; Fellow, Royal College of Surgeons (FRCS), Edinburgh, UK, 1993; Fellow, Royal College of Physicians and Surgeons (FRCS), Glasgow, UK, 1993, Fellow, European Board of Urology, 2001; Fellow, American College of Surgeons, UK, 2006; Member, Pakistan Medical Association; Member, American Medical Association; Member, American Urological Association; Founding and Life Member, Pakistan Association of Urological Surgeons; Member, Urological Association of Asia, Member, Asian Society of Uro-Oncology and Asian School of Urology.
- Research Areas:** Molecular Research in Prostate Cancer and Urinary Bladder Cancer; Molecular Genetics; Epigenetics in Urological Cancers; Medical Education.



## Ahmad, Imtiaz

**FELLOW: Elected 1990**

Born in Gaya, British India on 3rd January, 1941

Biological Research Center, University of Karachi, Karachi

**Tel:** (92-21) 3497 9669, 3496 1943

**Mob:** (92) 323 211 0788

**Email:** iahmad3141@yahoo.com

- Education:** University of Karachi, Pakistan: B.Sc., 1958; M.Sc., 1961; Imperial College, London, UK: D.I.C., 1963; London University, UK: Ph.D., 1963; D.Sc., 1984.
- Positions Held:** University of Karachi: Dean, Faculty of Science, 2000-2001; Meritorious Professor of Zoology, 1999; Professor of Zoology, 1979-1999; Chairman, Department of Zoology, 1974, 1976, 1984, 1987, 1988, 1994, 1997, 2000; Associate Professor, 1971-1979; Postdoctoral Fellow, University of Connecticut, Storrs, USA, 1963-1965; Visiting Scientist, PABIO, Cardiff, University of Wales, UK, 1992-1993; Visiting Professor, Faculty of Agriculture, Ege University, Izmir, Turkey, 1988-1989; Visiting Professor, Department of Ecology and Evolutionary Biology, University of Connecticut, Storrs, USA, 1985-1986; Associate Professor, Faculty of Science, University of Mosul, Iraq, 1971-1973.
- Awards:** Pakistan Academy of Sciences: Open Gold Medal, 1984; Distinguished Scientist of the Year, 1994; National Book Foundation Award, 1997; Izaz-e-Kamal, Govt. of Pakistan, 1998; Presidential Award of Pride of Performance, Govt. of Pakistan, 1999; Lifetime Achievement Award of Zoological Society of Pakistan, 2010; Two dozen Gold Medals from national and international organizations.
- Fellowships/ Memberships:** Honorary Fellow of Zoological Society of Bangladesh, 1983; Fellow, Royal Entomological Society, London, 1963; Fellow, Environmental Sciences Academy, India, 1996; Fellow, The Academy of Sciences for the Developing World (TWAS), Trieste, Italy, 1996.
- Research Areas:** Pesticidal Pollution, Genotoxicity, Phytopesticides, Biodiversity, Biosystematics and Bioecology.



## Ahmad, Ishfaq

### FELLOW: Elected 1983

Born in Gurdaspur, British India, on 3rd November 1930

Chairman, Board of Governors (Honorary),  
National Centre for Physics (NCP), Islamabad

**Tel:** (Off) (051) 207 7380, 207 7381

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**Education:** University of the Punjab, Lahore Pakistan: M.Sc. (Physics), 1951; University of Montreal, Canada: D.Sc. (Physics), 1958.

**Positions Held:** Senior Advisor, Climate Change & Development, Planning Commission, Govt. of Pakistan, 2008-2012 (Status: Minister of State); Member, Governing Council of the International Institute of Applied Systems Analysis-IIASA, 2007-2012; President, Pakistan Academy of Sciences, 2006-2010; Special Advisor to the Prime Minister of Pakistan on Strategic Programs, 2002-2008; Chairman, Board of Governors, National Centre for Physics (NCP), since 2003; Special Advisor to the Chief Executive of Pakistan, 2001-2002 (Status: Federal Minister); Chairman, Pakistan Atomic Energy Commission (PAEC), 1991-2001; Member Syndicate, Quaid-e-Azam University, Islamabad, 1996-1999; Member Syndicate, Government College University (GCU), Lahore, 1989-1996; Member, Board of Governors, Ghulam Ishaq Khan Institute (GIKI), since 1996; Chairman/Member, IAEA Standing Advisory Group on Technical Assistance and Cooperation (SAGTAC), 1995-2011; Member, Board of Governors, International Islamic University, Islamabad, 1995-1999; Senior Member, PAEC, 1988-1991; Member Technical, PAEC, 1976-1988; Director and Chief Scientist, Pakistan Institute of Nuclear Science & Technology (PINSTECH), 1971-1976; Director, Atomic Energy Centre (AEC), Lahore, 1969-1971; Secretary, PAEC, 1967-1969; Head, Physics Division, AEC, Lahore, 1962-1963; Senior Scientific Officer, PAEC, 1960-1961; Lecturer in Physics, Government College, Lahore, 1952-1960.

**Awards:** *Nishan-i-Imtiaz*, Govt. of Pakistan, 1998; *Hilal-i-Imtiaz*, Govt. of Pakistan, 1995; *Sitara-i-Imtiaz*, Govt. of Pakistan, 1989; Gold Medal, Pakistan Academy of Sciences, 1998; Gold Medal, Institute of Leadership Management (ILM), 1998; Gold Medal, Society of Engineering, Materials and Metallurgy (SEMM), Karachi, 1998; Gold Medal, Geological Society of Punjab, 1998; Doctorate of Science Honoris Causa, University of Engineering & Technology, Lahore, 2000.

**Fellowships/Memberships:** Fellow: Islamic World Academy of Sciences, since 2000; Fellow, The Nuclear Society of Pakistan since 1997; Honorary Fellow, International Academy of Nuclear Energy; Postdoctoral Research Fellow, Niels Bohr Institute of Theoretical Physics, Copenhagen, Denmark, 1961-1962; Postdoctoral Research Fellow, University of Montreal, 1963-1964; Postdoctoral Research Fellow, University of Ottawa, 1964-1965; Postdoctoral Research Fellow, Sorbonne, Paris, 1959. Denmark, 1961-1962; Postdoctoral Research Fellow, University of Montreal, 1963-1964; Postdoctoral Research Fellow, University of Ottawa, 1964-1965; Member Syndicates of Quaid-e-Azam University, Islamabad and Government College University, Lahore.

**Research Area:** Nuclear Physics; Nuclear Technology; Particle Detectors; Climate Change Impacts and Earthquake Forecasting in Pakistan.



## Ahmad, Nisar

### FELLOW: Elected 1999

Born in Okara, British India, on 2nd April, 1942

House No. 17, Main Double Road,  
F-11/1, Islamabad

**Mob:** (92) 321-516 7697

**Education:** University of the Punjab, Pakistan: B.Sc., 1961; M.Sc., 1963; Queens University, Belfast, UK: Ph.D., 1970.

**Positions Held:** Rafi M. Chaudhary Chair, Govt. College University, Lahore, 2008-2011; Advisor (Technical) and Director Human Resource Development, National Engineering and Scientific Commission (NESCOM), Islamabad, 2001-2008; Pakistan Institute of Nuclear Science and Technology (PINSTECH), Islamabad: Director General, 2000-2001; Associate Director, 1998-2000; Chief Scientist/Head, Applied Physics Division, 1992-1998; Chief Scientific Officer/Head, Laser Development Project, 1988-1992; Principal Scientific Officer, 1976-1988; Senior Scientific Officer, 1971-1976; Scientific/Sr. Scientific Officer, Atomic Energy Centre, Lahore, 1964-1966, 1970-1971; Lecturer, Islamia College, Lahore, 1963-1964.

**Awards:** *Sitara-i-Imtiaz*, Govt. of Pakistan, 1997; Open Gold Medal, Pakistan Academy of Sciences, 1996; Roll of Honor, M.Sc., Govt. College, Lahore.

**Fellowships/Membership:** Fellow, Pakistan Nuclear Society; President, Pakistan Nuclear Society, 1998-1999; Member, Academic Council, Govt. College University, Lahore.

**Research Areas:** Gamma Spectroscopy, Neutron Polarization, Laser-produced Plasmas, Laser Spectroscopy, Laser Isotope Separation, Laser Material Processing, Laser Ablation, Environmental Studies using Proton Induced X-ray Emission (PIXE), Laser Guidance and Fiber Optics Gyro (FOG).



## Ahmad, Rafiq

**FELLOW: Elected 1990**

Born in British India, on 2nd November, 1927

Biosaline Research Program, Department of Botany,  
University of Karachi, Karachi-75270

**Tel:** Office, (92-21) 926 1359

**Mob:** 0300-266 7415

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- Education:** Muslim University Aligarh, India: B.Sc., 1949; University of the Punjab, Lahore, Pakistan: M.Sc., 1952; Ohio State University, Columbus, Ohio, USA: Ph.D., 1959.
- Positions Held:** University of Karachi, Karachi: P.I., Biosaline Research Projects, 1987-present; HEC Consultant and Eminent Scholar, 2004-2008; Dean, Faculty of Sciences, 1979-1981; Chairman, Department of Botany, 1972-1975, 1981-1984; Professor, 1974-1987; Associate Professor, 1964-1974; Assistant Professor, 1956-1964; Convener, Institute of Biological Sciences, 1972-1977; Founder Chairman, Department of Biochemistry, 1962-1963; Lecturer, 1953-1956. Graduate Assistant, Ohio State University, Columbus, Ohio, USA, 1956-1959; Lecturer, F.C. College, Lahore, 1952-1953.
- Awards:** Certificate of Appreciation as Principal Investigator "Glycoalkaloids" Research Project of Pakistan's Potatoes, USDA, 1987; Award by Pakistan Botanical Society (in recognition of contribution in Botany), 1990; Certificate for the Accomplishment of Innovate Research Applications under BOSTID-PARC, U.S. National Academy of Sciences Research Program, 1994; Appreciation Certificate under ACIAR Project "Tree Growing on salt-affected Land in Pakistan, Thailand and Australia", 1996; Award of shield as founder member of Technical Committee for establishment of International Center of Biosaline Agriculture (LCBA) Dubai, UAE, 1993-1998.
- Fellowships/ Memberships:** Fellow, The Academy of Sciences for the Developing World (TWAS), 1996; Visiting Professor, German Academy Exchange Program (DAAD), Hohenheim University, Munchin University & Berlin University, Germany, 1976; Member: Sigma Xi., USA, 1959; Member Award Committee on Agriculture, TWANSO, Trieste, Italy, 1999-2000; Member International Committee of Photobiology, Paris, France, 1968-1970; President, Botanical Society of Pakistan, 1974-1978. Regional Director, Halophyte Biotechnology Centre, University of Delaware. USA since 1995. Secretary, Pakistan Academy of Sciences, Sindh Chapter, 2000-2004.
- Research Area:** Plant Physiology with emphasis on Mineral Nutrition and Growth, Arid Zone Coastal and Biosaline Agriculture.



## Ahmad, Viqar Uddin

**FELLOW: Elected 1991**

Born in Meerut, British India, on 6th July, 1940

Senior Professor, H.E.J. Research Institute of Chemistry,  
University of Karachi, Karachi 75270

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- Education:** Allahabad University, Allahabad, India: M.Sc., 1959; University of Karachi, Karachi, Pakistan: Ph.D., 1966; D.Sc., 1992; University of Bonn, Germany: Ph.D. (Dr. rer. nat).
- Positions Held:** HEC Distinguished National Professor, 2004; University of Karachi, Karachi: Professor, HEJ Research Institute of Chemistry, 1976 to date; Dean, Faculty of Science, 1994-2000; Co-Director, H.E.J. Research Institute of Chemistry, 1990-1994; Pakistan Council of Scientific and Industrial Research (PCSIR), Karachi: Senior Research Officer, 1966-1976, Research Officer, 1961-1965, Technical Assistant, 1959-1961.
- Awards:** Gold Medal, Allahabad University, India, in M.Sc. 1959; Gold Medal, Pakistan Academy of Sciences, 1972, 1986; Cash Prize, National Book Foundation, Pakistan, 1988; Scientist of the Year Award, National Book Foundation, Pakistan, 1986; Prime Minister's Gold Medal and Cash Prize, 1986; *Sitara-i-Imtiaz*, Government of Pakistan, 1996; *Hilal-i-Imtiaz*, Government of Pakistan, 2006; Kharazmi Prize (Iran), 1998; DuPont Science Cash Award in Chemistry, 2003; Lifetime Achievement Award by Higher Education Commission, 2009.
- Fellowships/ Memberships:** Senior Fulbright Fellowship, USA, 1993; Alexander von Humboldt Fellowship, Germany, 1975; Fellowship of the German Academy Exchange Service (DAAD), 1966.
- Research Areas:** Natural Products Chemistry, Synthetic Organic Chemistry.



## Ahmed, Wasim

**FELLOW: Elected 2010**

Born in Charsada, KP, Pakistan, on May 2, 1957

Dept of Biochemistry, Faculty of Biological Sciences,  
Quaid-i-Azam University, Islamabad

**Tel:** (Off) (92-51) 9064 3003; (Res) (92-51) 260 1197

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**Email:** wahmad@qau.edu.pk

**Education:** Quaid-i-Azam University, Islamabad, Pakistan: M.Sc. 1981; M.Phil. 1984; University of Cambridge, England: PhD, 1990.

**Positions Held:** Tenured Professor, HEC-Distinguished National Scientist, Department of Biochemistry, Faculty of Biological Sciences, Quaid-i-Azam University, Islamabad, Pakistan.

**Awards:** Distinguished Scientist of the Year in Biochemistry, Pakistan Academy of Sciences, 2013; Pakistan Academy of Science Gold Medal, 2007; Sitara-e-Imtiaz, Govt. of Pakistan, 2002; Dermatology Foundation Award, 1999; HEC Best Teacher Award, 2010; COMCTECH Award in Biology, 2010.

**Fellowships/ Memberships:** Member of Syndicate, Quaid-i-Azam University, Islamabad, 2010-2013; Member of American Society of Human Genetics, 2009; Member of Advanced Studies and Research Board, Quaid-i-Azam University, Islamabad, 2008-2014.

**Research Areas:** Identification of Genes Involved in Human Genetic Disorders.



## Akhtar, M. Salim

**FELLOW: Elected 2001**

Born in Lahore, British India on, 6th July, 1936

725, Shadman House, Shadman Colony-I, Lahore 54000

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**Education:** University of the Punjab, Lahore, Pakistan: MBBS, 1961; Royal College of Obstetricians and Gynecologists (England): M.R.C.O.G., 1969; Royal College of Physicians and Surgeons, Canada: FRCS, 1973; American College of Obstetricians and Gynecologists: FACOG, 1974; Royal College of Obstetricians & Gynecologists: FRCOG, 1984; The University of Lahore, Lahore, Pakistan: Ph.D. Islamic Studies, 2003; FCPS, 2010.

**Positions Held:** Patron, Shadman General Hospital, Lahore: Director General, Institute of Reproductive Medicine, 2010 to date; Chief Executive, Shadman House, House for Innovative Research Systems, 2010 to date; Editor, Pakistan Journal of History and Philosophy of Science; Editor (Medical Sciences), Proceedings of the Pakistan Academy of Sciences, 2011-2014; University of South Asia: Vice Chancellor, 2006-2011; Dean of Science and Provost, 1999-2004; Dean, Sharif Medical City, Lahore, 1998; Professor of Gynecology, King Edward Medical College, Lahore, 1986-1996; Professor and Director, Department of Gynecology, Postgraduate Medical Institute (PGMI), Punjab and Sheikh Zayed Federal Institute, 1979-1985; Chairman, Academic and Research Cell, PGMI, 1995-96; Associate Professor and Director, Perinatology, Calgary University, Alberta, Canada, 1975-1978; Assistant Professor, Memorial University, Newfoundland, Canada, 1972-1974; Visiting Research Fellow, Uppsala University, Sweden, 1974; Resident Fellow, Dalhousie University, Halifax, Canada, 1970-1972; Senior Registrar, Middlesex Med School and Hospital, 1968-69; Senior Resident, Whips Cross Hospital (London) Somerset and Dorset (England), 1965-68; Patron and CEO, Al-Inayat Secondary School Prem Nagar, Kasur; Amna's Home for God's Children, Prem Nagar, Kasur; Ayesha's Home for the Noble Mothers, Prem Nagar, Kasur.

**Awards:** H.K. Detweiler Award, Royal College, Ottawa, Canada, 1974; Mayor of Lahore Award for Outstanding Contribution in Reproductive Medicine, 1986; *Sitara-i-Imtiaz*, Government of Pakistan, 2001; Distinguished Scientist of the Year (Medical), Pakistan Academy of Sciences, 2005; Gold Medals: Pakistan Academy of Sciences, 2002; Golden Jubilee, Nishter Medical College, Multan, 2003; Distinguished Academician of the Year, University Shield, USA, 2005.

**Fellowships/ Memberships:** Member, Board of Governors, Hamdard University, Karachi; Founder Fellow, Perinatal Society of Pakistan, 1984; Fellow, Pakistan Cancer Foundation, 1980; Fellow (L), Gynecological Society of Pakistan, 1985; Fellow, American College of Obstetricians and Gynecologists, 1974; Fellow, Royal College of Obstetricians and Gynecologists, London, 1984; Fellow, Zoological Society of Pakistan, 1986; Chairman, Reproductive Health Advisory Committee, Govt. of Punjab Health Dept., 2000; Member, National Committee on Equity and Access Issues in Reproductive Health, 2002; Fellow, Association for History and Philosophy of Science, 2011; Vice President, Shadman Education Trust.

**Research Areas:** Reproductive Physiology, Gene Transcription, Curriculum Development, Neo-education Methods, Innovative Research Systems, Dangers and limitations for use of Nano-particles in Environment, History of Pre-Islamic & Islamic Era.



## Akhtar, M. Waheed

**FELLOW: Elected 1998**

Born in Lahore, British India on 1st May, 1944

School of Biological Sciences, University of the Punjab, Lahore

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- Education:** University of the Punjab, Lahore, Pakistan: B.Sc. (Hons.), 1965, M.Sc., 1966; University of Strathclyde, Glasgow, Scotland: Ph.D., 1973; Biochemical Separation School, Uppsala, Sweden:
- Positions Held:** University of the Punjab, Lahore; Professor, School of Biological Sciences, December 2013-date; Director, School of Biological Sciences, 2003-2013; Professor Emeritus, 2010 to date; Director, Institute of Biochemistry and Biotechnology, 1996 to 2004; Dean, Faculty of Sciences, 2002-2004; Director, Planning and Development, 1996-2001; Institute of Chemistry: Professor, 1984-1996; Associate Professor, 1982-1984; Assistant Professor, 1970-1982, Lecturer, 1967-1970; Cornell University, Ithaca, USA: Visiting Professor, Department of Biochemistry, Biotechnology Centre, 1989-1990; Visiting Scientist, 1987; United Nations Industrial Development Organization (UNIDO). Consultant, Trinity College, Dublin, Ireland, 1984, Visiting Faculty, 1986, 1988. Diploma in Biochemical Research Methods, 1981.
- Awards:** King Baudouin Award, International Foundation for Science, Sweden, 1993; *Tamgha-i-Imtiaz*, Government of Pakistan, 1999; Senior Fulbright Research Fellowship, 1989-90; British Council Award, 1994; HEC Best Teacher Award, 2003; Meritorious Professor, 2000-2004.
- Fellowships/ Memberships:** Honorary Fellow, Pakistan Society for Biochemistry and Molecular Biology; Member Council, Federation of Asian and Oceanian Biochemists and Molecular Biologists (FAOBMB), 1995 to date; Member Council, International Union of Biochemistry and Molecular Biology; Member FAOBMB Fellowship Award Committee, 2004-2005; Secretary General, Pakistan Society for Biochemistry and Molecular Biology, 1991 to date; Member, Editorial Board, Science, Technology and Development, PCST, Islamabad, 1997 to date; Chairman Organising Committee, 18<sup>th</sup> FAOBMB Symposium, Nov. 20-23, 2005, Lahore, Pakistan; Member, New York Academy of Sciences.
- Research Area:** Engineering enzymes and other biomolecules for improving properties; Characterization of protein markers for early diagnosis of cancer states; Developing fusion proteins for application in diagnosis and therapeutics of tuberculosis.



## Ali, Saqib

**FELLOW: Elected 2012**

Born in Mardan, KP, Pakistan, on 6th February, 1954

Department of Chemistry, Quaid-i-Azam University, Islamabad

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- Education:** University of Peshawar, KP: B.Sc., 1975; M.Sc., 1977; N. Copernicus University Torun, Poland: Ph.D., 1984; University of Bayreuth, Germany: Post-Doc., 1995-1996; 1998-1999; 2001-2002.
- Positions Held:** Department of Chemistry, Quaid-i-Azam University, Islamabad: Professor Emeritus, Professor (on contract), 2015-2017; Visiting Professor, 2014-2015; Tenure Professor, 2007-2014; Chairman, Department of Chemistry, 2009-2012; Professor, (BPS), 2001-2007; Associate Professor, 1999-2001; Assistant Professor, 1988-1999; Lecturer, 1986-1988; Department of Chemistry, University of Peshawar, KP: Lecturer, 1979-1980, 1985-1986.
- Awards:** HEC Distinguished National Professor in Chemistry, 2012; Pride of Performance, 2008; Research Productivity Award, PCST (since its inception).
- Fellowships/ Memberships:** Fellow and Life Member, Chemical Society of Pakistan and Pakistan Institute of Chemists; AvH, Gorg Foster Fellow.
- Research Areas:** Chemistry.



## Ali, Syed Irtifaq

**FELLOW: Elected 1982**

Born in Lucknow, British India, on 14 September 1930

Centre for Plant Conservation, Dr. A. Q. Khan Institute of Biotechnology & Genetic Engineering, University of Karachi, Karachi-75270

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- Education:** University of Allahabad, India: M.Sc. in Botany, 1952; University of London, United Kingdom: Ph.D. 1958; D.Sc. 1979.
- Positions Held:** Professor Emeritus, University of Karachi, Karachi, Pakistan, 2011; Director General, Dr. A. Q. Khan Institute of Biotechnology and Genetic Engineering (KIBGE), University of Karachi, 2008-2011; Distinguished National Professor, 2004; Vice Chancellor, 1990-1994; Professor of Botany, Al-Fatah University, Tripoli, Libya, 1972-1976; Dean, Faculty of Science, 1981-1990; Professor of Botany, 1969-1990; Research Fellow, University of Melbourne, Melbourne, Australia, 1961-1963.
- Awards:** Gold Medal and Certificate of Merit, United States Department of Agriculture (USDA) and Pakistan Agricultural Research Council (PARC), 1985; Gold Medal, University of Karachi, 1987; Open Gold Medal for Biological Sciences, Pakistan Academy of Sciences, 1987; *Sitara-e-Imtiaz*, Government of Pakistan, 1988.
- Fellowships/ Memberships:** Fellow, Linnean Society of London, since 1966; Sectional President, International Legume Conference, Kew, England, 1976; Member, National Science Council of Pakistan, 1982-1985; Fellow, The World Academy of Sciences, 1988; Vice-President, Pakistan Academy of Sciences, 1992-1996, 2004-2008; Member, Species Survival Commission, Indian Subcontinent Plant Specialists Group, IUCN, 1988-2004; Member, World Commission on Protected Areas for South Asia, IUCN, 1994 to date; President, Botanical Society of Pakistan, 1981-82; President, Scientific Society of Pakistan, 1988-89; Vice-President, Institute of Central and West Asian Studies, 1995-2008; Vice-President, Association for History & Philosophy of Sciences, 2000 to 2012; Honorary Vice-President, XVI International Botanical Congress, Saint Louis, Missouri, USA, 1999
- Research Areas:** Systematic Botany, Biosystematics, Reproductive Biology, Conservation Biology, and Flora of Pakistan.



## Anwar-ul-Haq

**FELLOW: Elected 1996**

Born in Ujjain, British India, on 1st January, 1947

Professor & Deputy Vice Chancellor,  
Riphah International University, I-14, Islamabad

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**Education:** University of Karachi, Pakistan: B.Sc. (Hon's.), 1967; M.Sc., 1968; University of Karlsruhe, Germany: Diploma Physics, 1978; Dr.rer.net, 1982.

**Positions Held:** Professor and Deputy Vice Chancellor, Riphah International University, Islamabad, 2012-date; Founding Managing Director, KRL Foundation, Rawalpindi 2007-2008; Director General, Institute of Industrial Control Systems, Rawalpindi, 2005-2008; Chairman, Pakistan Council of Scientific and Industrial Research (PCSIR), 2000-2005; Acting Director General, National Institute of Electronics 2004-2005; Dr. A.Q. Khan Research Labs, Kahuta, 1982-2008: Director General Metallurgy Division, 1998-2000, Director, Metallurgy Division, 1995-1999; Chief Scientist, 1989-1996; Principal Scientific Officer, 1983-1989; Senior Scientific Officer, 1982-1983; Research Fellow, Institute of Applied Nuclear Physics, Nuclear Research Center, Karlsruhe, Germany, 1978-1982; IAEA Fellowship, Institute of Materials Research, 1977-1978; Scientific Assistant, Institute of Microscopy and Cinematography, Karlsruhe, Germany, 1975-1977; Research Officer, Pakistan Institute of Cotton Research and Technology, PCCC, 1969-1975; Senior Research Fellow, PCSIR Labs, Karachi, 1969; Lecturer, Physics Department, University of Karachi, Karachi, 1968-1969;

**Awards:** *Sitara-e-Imtiaz*, 2001; Presidential Award Pride of Performance, 1996; *Tamgha-e-Baqa*, 2001; Coveted "Man of the Year 2003 Award" by South Asia Publications, Pakistan; INFAQ Foundation Gold Medal for Engineering Sciences by Pakistan Academy of Sciences (PAS), 1995; Gold Medal by Pakistan Vacuum Society, 2000; Dr. A.Q. Khan Gold Medal and Cash Prize for outstanding services in the field of Nuclear and Missile Technology, 2000; PAS Golden Jubilee Gold Medal, 2002; Millennium Gold Medal by South Asia Publications, 2003.

**Fellowships/ Memberships:** Fellow, Royal Microscopical Society, London, 1990; Fellow, The Academy of Sciences for the Developing World (TWAS); Elected Treasurer/Secretary, PAHPS, 1998-2002; Councilor, ASIAN Crystallographic Association, IUCR, 1990-2000; Member, Pakistan Crystallographic Society, 1990; Editorial Board Member, Pakistan Journal of Scientific and Industrial Research, 1992-2000; Editorial Board Member, Science Development and Technology, Pakistan, 1992-2000; Editorial Board Member, Science Vision, COMSATS, 1995-2005; Member Organizing Committee, FASAS Symposium, 1992; Technical Committee on Engineering Sciences, Pakistan Science Foundation, 1997; Editor, Proc. ISAM 1989/1991/1993/1995/1997/1999; Co-editor, World Directory of Crystallographers, 9th Edition, 1995; FMMM and C. Engg. Institute of Materials, Minerals and Mining, UK, 2013; Professional Engineer, PEC, 2014.

**Research Areas:** Structure-Property relationship of Materials Sciences; X-ray Diffraction, TEM and SEM Techniques; Dental Materials Computer Based Rehabilitation Techniques.



## Arslan, Muhammad

**FELLOW: Elected 1994**

Born in Multan, British India, on 24th October, 1936

Professor & Dean Faculty of Sciences,  
Center for Research in Molecular Medicine, University of Lahore,  
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**Education:** University of the Punjab, Pakistan: M.Sc. (Hons), 1958; University of Wisconsin, Madison, WI, USA: Ph.D., 1969; Honorary D.Sc. Degree, University of Karachi, 2000.

**Positions Held:** Professor & Consultant, University of Health Sciences, Lahore, 2004 to date; Visiting Scientist, University of Pittsburgh School of Medicine, USA and Institute of Reproductive Medicine, University of Muenster, Germany, 2000-2004; Editor, Proceeding of the Pakistan Academy of Sciences, 1998-1999; Quaid-i-Azam University, Islamabad: Vice Chancellor, 1994-1997, Meritorious Professor, 1993-1996, Professor, 1976-1993, Chairman, Pakistan Council for Science and Technology, 1990; Associate Professor, 1973-1976; Assistant Professor, University of the Punjab, Lahore, 1970-1973; Lecturer, University of the Punjab, Lahore, 1958-1970.

**Awards:** Ford Foundation Fellow, University of Wisconsin, Madison, WI, USA, 1964-1969; Fellow, Training Program in Reproductive Physiology, Worcester Foundation for Experimental Biology, Shrewsbury, MA, USA, 1963-1964.

**Fellowships/ Memberships:** Fellow, Royal Society, UK, 1980; Member, Council of the Royal Society, 1983-1985; Founding Fellow, The Academy of Sciences for the Developing World (TWAS), 1984; Treasurer & Member, TWAS, 1992-1997; TWAS, Medal Lecturer, 1996.

**Research Areas:** Life Sciences, Endocrinology, and Reproductive Biology with special emphasis on primate gonadotropins and fertility regulation.



## Asghar, Saleem

**FELLOW: Elected 1998**

Born in Gujrat, British India, on 2nd July, 1947

COMSATS Institute of Information Technology, Islamabad

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- Education:** University of the Punjab, Lahore, Pakistan: M.Sc., 1969; Quaid-i-Azam University, Islamabad, Pakistan: M.Phil., 1970, Ph.D., 1975.
- Positions Held:** COMSATS Institute of Information Technology (CIIT): Eminent Professor, 2007 to date; Professor, CIIT, 2002 to 2007; Quaid-i-Azam University, Islamabad: Chairman, Department of Mathematics, 1994-1997; Professor, 1993-2002; Associate Professor, 1991-1993; Assistant Professor, 1976-1991; Lecturer, 1973-1976; Visiting Scholar, University of Illinois at Urbana, Champaign, USA, 1996-1997; Visiting Mathematician at ICTP, Trieste, Italy, 1986.
- Awards:** *Sitara-i-Imtiaz*, by Govt. of Pakistan, 2008; Best University Teacher Award by HEC; Member of Task force for Mathematics; *Tamgha-i-Imtiaz*, Govt. of Pakistan, 2000; First Prize for Best Research Work in Mathematics, Govt. of Pakistan, 1987 and 1994; Gold Medal, Pakistan Academy of Sciences, 1993.
- Fellowships/Memberships:** Fulbright Fellow, University of Rhode Island, Kingston, USA, 1991; Fellow, German Academy Exchange Service (DAAD), University of Stuttgart, Germany, 1995; Member, (Associate), ICTP, Trieste, Italy, 1987-1996; Visiting Mathematician ICTP, Italy, 1986; Member, London Mathematical Society; Member, Acoustical Society of America; Member, All Pakistan Mathematical Association; Member, Punjab Mathematical Society.
- Research Areas:** Mathematics.



## Ashfaq, Muhammad

**FELLOW: Elected 2006**

Born in Jhang city, Pakistan, on 16th Nov, 1952

Professor/ Registrar, National Textile University, Faisalabad

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- Education:** University of Agriculture, Faisalabad, Pakistan: B.Sc., 1972; M.Sc., 1975; Ph.D., 1985; University of the Punjab: L.L.B., 1995.
- Positions Held:** Professor/Registrar, National Textile University, Faisalabad, 2014 - date; Pro-Rector, University of Faisalabad, 2012; Professor/Dean Faculty of Agriculture, 2012; Chairman, Dept. of Entomology, 2007-2009; Post Doc., Ibraki University, Japan, 2007. Dean, Faculty of Agriculture, 2003-2006; Chairman, Department of Agri. Entomology, 2002-2004; Principal Officer (Student Affairs), 2003-2004; Head, University Library, 1997-2002; Director Student Affairs, 1991-1995; Acting Vice Chancellor, University of Agriculture, Faisalabad.
- Awards:** Included in top 10 "Most Productive Scientists of Pakistan", PCST 2014; *Sitara-i-Imtiaz* by Government of Pakistan, 2013; Gold Medal by GC University, Faisalabad, 2012; Scientist of the Islamic World by FIUW (O.I.C.), Morocco, 2011; Research Productivity Award, by Govt. of Pakistan, 2011; Award of Honor "Asian Peace Seminar" by India, 2010; Quaid-e-Azam Gold Medal, 2010; Zoologist of the Year Award, by Zoological Society of Pakistan, 2009; Better Incentive Award, by UAF, 2006-2009; 19th Bolan Excellence Award, 2008; AUS-PAK Education Excellence Award, 2008; Shield of Honor, by President of Pakistan, 2006; *Tamgha-i-Imtiaz* by Govt. of Pakistan, 2003; Best University Teacher Award, by HEC, 2002; National Education Award, 2002; "Star Man in Agriculture" by South Asia Publications, 1999; "Role of Honour" by University of Agriculture, Faisalabad.
- Fellowships/Memberships:** Fellow, Member and Diploma holder of TWAS (The World Academy of Sciences), 2011; Member, National Curriculum Committee of Ministry of Education; Managing Editor, Pakistan Entomologist; President, Entomological Society of Pakistan, 2002 to date; Executive Member, International Congress of Entomology, Durban, South Africa, 2008; Member, Society for Advancement of Agricultural Sciences, Pakistan; International Society of Environmental Botanists.
- Research Areas:** Integrated Pest Management with special reference to Biological Control; Stored Grain and Stored Product Acarology; Sericulture.



## Ashraf, Muhammad

**FELLOW: Elected 2000**

Born in Faisalabad, Pakistan on 15th July, 1953

Chairman, Pakistan Science Foundation, Islamabad

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**Education:** University of the Punjab, Pakistan: B.Sc., 1973; University of Agriculture, Faisalabad, Pakistan: M.Sc., 1980; University of Liverpool, UK: Ph.D., 1986; University of Liverpool, UK: D.Sc., 2011.

**Positions Held:** Chairman, Pakistan Science Foundation, 2015 to date; Vice Chancellor, Muhammad Nawaz Sharif University of Agriculture, Multan, 2014-2015; University of Agriculture, Faisalabad: Dean, Faculty of Science, 2006-2014; Professor and Chairman, Botany Department, 2002-2006; Associate Professor, 1999-2002; Bahauddin Zakariya University, Multan: Associate Professor, Botany Department, 1997-1999; Assistant Professor, Botany Department, 1989-1997; Post-doc., 1993-94; Lecturer, Botany Department, 1986-1989; Demonstrator, Botany Department, University of Liverpool, 1985-1986; Post-doc. 1986; University of Arizona, USA.

**Awards:** HEC Lifetime Achievement Award, 2012; Honorary Professor, Lanzhou University, China, 2013; Khwarizmi-Lecture, 2012; FAO Medal for Excellent Research in Plant Stress Biology, 2012; *Sitara-i-Imtiaz* by President of Pakistan, 2006; HEC Distinguished National Professor, 2005; Honorary Scientist for Rural Development Administration, Government of the Republic of Korea, 2005 to 2008; Dr. Agha G.D. Ahmad Medal, University of Agriculture, Faisalabad, 2003; Best Teacher Award, Higher Education Commission, 2002; Presidential Civil Award, Pride of Performance, 2000; Presidential Award, *Izaz-e-Fazeelat*, 1997; Gold Medal, Pakistan Academy of Sciences, 1997; First Award in Biology (Cash Prize Rs. 25,000/-), National Book Foundation, Ministry of Education, Govt. of Pakistan, 1994; Fulbright Research Award, US Educational Foundation, 1993/94; Cash Prize of Rs. 15000/- (2nd Prize) in Biology, National Book Foundation, Ministry of Education, Govt. of Pakistan, 1992; Salam Prize in Science (Biology), 1992; Gold Medal (Biology, under 40), Pakistan Academy of Sciences, 1990; Golden Star, National Farm Guide Council (Hamdard Foundation), Pakistan, 1988; Medal on 1st Position in M.Sc., University of Agriculture, Pakistan, 1980.

**Fellowships/ Memberships:** Fellow, The Academy of Sciences for the Developing World (TWAS), 2003; Member, HEC National Core Group in Life Sciences; Member, Pakistan Botanical Society; Member, Society for the Advancement of Science in Pakistan; Member, HEC National Curriculum Committee, 1998 to date.

**Research Areas:** Stress Biology.



## Aslam, M.

**FELLOW: Elected 1974**

Born in Gurdaspur, British India, on 1st February, 1924

A-23, City Homes, Gulshan-e-Iqbal 13-D/II, Karachi 75300

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**Education:** Bombay University, India: B.Sc., 1943; M.Sc., 1946; West Coast University, USA; Diploma in Plastic Technology, 1950; University of Southern California, USA; B.E. (Chemical), 1951.

**Positions Held:** Professional Member, Institute of Food Technologies, 1987 to date; Technological and Industrial Consultant, 1984 to date; Chairman, Pakistan Council of Scientific and Industrial Research (PCSIR), 1980-1984; Member (Technical), PCSIR, 1976-1980; Director, PCSIR, Karachi, 1972-1976; Director, PCSIR, Lahore, 1966-1972; Principal Research Officer, Senior Research Officer and Research Officer, PCSIR, 1954-1966.

**Awards:** Gold Medal, Pakistan Academy of Sciences, 1974; *Tamgha-i-Imtiaz*, Govt. of Pakistan.

**Fellowships/ Memberships:** Fellow, Royal Institute of Chemistry (FRIC), London, 1965.

**Research Areas:** Organic Chemistry, Plastic Technology, Food Technology, ISO-9000 QA Systems.



## Atta-ur-Rahman

**FELLOW: Elected 1982**

Born in Delhi, British India on 22nd September, 1942

President, Network of Academy of Sciences in Countries of Organizations of Islamic Cooperation (NASIC), Islamabad

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**Education:** University of Karachi, Karachi, Pakistan: B.Sc. (Hons) (Chemistry), 1963, M.Sc. (Organic Chemistry), 1964; Cambridge University, UK: Ph.D. (Chemistry), 1968, Sc.D. 1987 (Cantab); Honorary D.Sc./Ph.D.: Sir Syed University of Engineering, 2003; Gomal University, 2004; University of Karachi, 2005; D.Sc., Bradford University, UK, 2010; Asian Institute of Technology, Thailand, 2010; University of Technology, Malaysia, 2011; Dr. Edn, Coventry University, UK, 2007.

**Positions Held:** HEC Distinguished National Professor (2011); Prof. Emeritus, University of Karachi (2011); Patron-in-Chief, International Centre for Chemical and Biological Sciences, University of Karachi (2008); President, Pakistan Academy of Sciences (2003-2006, 2011-2014); Chairman, Higher Education Commission (HEC) (Federal Minister) (2002-2008); Federal Minister of Science and Technology, Govt. of Pakistan (1999-2002); Federal Minister (incharge) of Education (2002); Coordinator General, Organization of Islamic Countries (OIC), Ministerial Standing Committee for Scientific and Technological Cooperation (COMSTEC) (1996-2012); Director, H.E.J. Research Institute of Chemistry, University of Karachi (1990-2008); Vice-President, Academy of Sciences for Developing World (TWAS) (2010 to date); President, The Network of Academies of Science in Countries of the Organization of Islamic Conference (NASIC) (2004 to date); Advisor to the Prime Minister of Pakistan and Federal Minister (in-charge), Ministry of Science & Technology, Govt. of Pakistan (2003-2004); Professor, University of Karachi (1981-2011); Co-Director, H.E.J. Research Institute of Chemistry (1977-1980); Associate Professor (1974-1981); Assistant Professor (1969-1974); Lecturer (1964-1969); Visiting Fellow, German Academy Exchange Service (DAAD), University of Tubingen, Germany (1979), Consultant, Asia Education Forum (2015-2020).

**Awards:** Friendship Award of China, China (2014), International Cooperation Award, Chinese Academy of Sciences (CAS), (2014); Einstein Professorship by the Chinese Academy of Sciences (2013); ENGRO Excellence Award (2011); TWAS Prize for Building Scientific Institutions (2009); A High Civil Award "Grosse Goldene Ehrenzeischen am Bande", Austrian Government (2007); Gold Medal of the Scientific Partnership Charitable Foundation, Inter Bio Screen Ltd., Moscow, Russia (2004); IESCO Chemistry Award (2001); Economic Cooperation Organization (ECO) Prize 2000 by the President of Iran and a Cash Award of USD 7,500/-; UNESCO Science Prize (Budapest, Hungary) (1999); Govt. of Pakistan civil awards: *Nishan-i-Imtiaz* (2002); *Hilal-i-Imtiaz* (1997); *Sitara-i-Imtiaz* (1991); *Tamgha-i-Imtiaz* (1983); Award of Federation of Asian Chemical Society, Japan (1997); Salimuzzaman Siddiqui Gold Medal, Pakistan Intellectual Forum (1995); *Babai-Urdu* Award, *Baba-i-Urdu* Research Center, Karachi (1994); Gold Medal, Pakistan Academy of Sciences (1977, 1984, 1996); First Khwarizmi Prize, Govt. of Iran (1993); Islamic Organization Prize, Kuwait Foundation for the Advancement of Sciences (1988); Scientist of the Year Award and Prize of Rs. 0.2 million, Govt. of Pakistan (1987); FPCCI Prize for Technology Innovation, Federation of Pakistan Chamber of Commerce and Industries (1985); Gold Medal, Govt. of Kuwait, First World Conference on Islamic Medicine (1980); First Prize for a book on Spectroscopy, Pakistan National Book Council.

**Fellowships/ Memberships:** Fellow: Royal Society (London, UK), 2006; (Don) Kings College, Cambridge University, 1969-1973; Royal Society of Chemistry, London, 1981; The World Academy of Sciences (TWAS), 1985; Islamic World Academy of Sciences, 1988; Foreign Fellow, Korean Academy of Sciences, 2004; Life Time Honorary Fellow, Kings College, Cambridge University, 2007; Vice President (Central & South Asia), TWAS Council, 2009-2012; Honorary Member, Bilim Akademisi, Turkey, 2012; Member, International Advisory Board, ELLTA Conference, 2012; Distinguished Visiting Professor at University of Teknologi Mara, Malaysia, 2012; Honorary Fellowship of the Institute of Chemistry Ceylon, Sri Lanka, 2014; Member of the Board of Governors of Sir Syed University of Engineering, 2014; Member of the Resource and Advisory Committee of *Anjuman Urdu Tartagqi* Pakistan, 2014; Member Board of Governors of Zia-ud-Din – University, Karachi, 2014; Chairman, International Organizing Committee Eurasia, 2014; Senior Member "101 Friends of China", A mega strategic think tank of Pakistan, 2015; Member Global Advisory Board of "World Academy of Chemistry" 55/11, Krishna Nagar, Hojai-782435, India, 2015; Chairman Standing Committee on Science and Technology of Federation of Pakistan Chambers of Commerce and Industry (FPCCI), 2015; President, Karachi School of Business and Learning (KSBL), 2015; Member, Senior Advisory Council of the International Organization for Chemical Sciences in Development (IOCD), 2013; Chairman, Standing Committee on Higher Education Science and Technology of FPCCI, 2014; Chairman, Standing Committee on Higher Education of FPCCI, 2013; UNIDO Expert on Panel of Medicinal Plants, 1984; WHO Expert on Vector Biology and Control, 1983; Chairman, National Committee for South and Central Asian Medicinal and Aromatic Plants, UNESCO, 1982-1985; President, Chemical Society of Pakistan, 1992; Vice President, Pakistan Academy of Sciences, 1997-2001; Scientific Advisor to CIBA Foundation, London, 1995; Member, National Commission for Science and Technology, 1985 to date; Member, Steering Committee for Establishment of Chemistry Center in Trieste, Italy; Editorial Board Member: Journal of Islamic Sciences, Turkey, 1991; Khimiya Prirodnynkh Soedinchii, 1992; Spectroscopy, 1996; Journal of Asian Natural Products Research, 1998; Fitoterapia, 1999; Member Advisory Board, Journal of Pharmacy of Istanbul University, Turkey, 1998; Member: American Chemical Society, American Society of Pharmacognosy, Swiss Chemical Society, New York Academy of Sciences, Russian Academy of Sciences, Academy of Natural Sciences, Republic of Uzbekistan; Founding Editor-in-Chief/Executive Editor/Editor of 8 European Chemistry journals, national/international journals and Editor of "Studies in Natural Product Chemistry", Elsevier, Netherlands.

**Research Areas:** Organic Chemistry and Phytochemistry with emphasis on Novel Natural Products / Clinical Applications, Modern NMR Spectroscopy.



## Badshah, Amin

### Fellow Elected 2013

Born in District Karak, KP, Pakistan, on 15th April 1960.

Professor, department of chemistry, Quaid-i-Azam university, Islamabad.

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**Education:** University of Peshawar B.Sc., 1981; Gomal university, D.I. Khan, M.Sc., 1984., Quaid-I-Azam University, Islamabad, PhD., 1994.

**Positions Held:** Chairman Department of Chemistry, Quaid-i-Azam University, Islamabad, 2012-2015; Acting dean faculty of Natural sciences; 2016-2017; University of Bayreuth, Germany, Post Doc., 2001-2002.

**Awards:** PAS Gold Medal 2013, Civil award (Tamgha-e-Imtiaz) Govt of Pakistan 2014, Best Teacher Award, HEC, Pakistan, 2014.

**Fellowships/ Memberships:** Fellow, Pakistan academy of Sciences, 2013, Chemical Society Pakistan, 2011, Member ACS 2017, Member Senate KUST, 2018, Member DTRC, KUST and University of Gujrat.

**Research Areas:** The inorganic aspects of our research are primarily concerned with the syntheses, spectroscopic characterization and biological activities of inorganic compounds, especially organometallic and transition metal complexes with Nitrogen, phosphorus, oxygen and sulfur donor ligands. A new research area recently initiated involves the synthesis of nanomaterials and transition metal complexes having potential application in the field of catalysis and as surfactants.



## Baig, M. Aslam

### FELLOW: Elected 1996

Born in Karachi, Pakistan, on 1st January, 1950

Distinguished National Professor, National Center for Physics, Quaid-i-Azam University Campus, Islamabad

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**Education:** University of the Punjab, Lahore, Pakistan: B.Sc., 1971; University of Karachi, Pakistan: M.Sc., 1973, M.Phil., 1977; Imperial University, UK: D.I.C., 1979; London University, UK: Ph.D., 1979.

**Positions Held:** Distinguished National Professor, National Center for Physics, 2012 to date; Quaid-i-Azam University, Islamabad: Meritorious Professor, 2004–2010, Dean, Faculty of Science, 2009; Professor of Physics, 1991-2009, Associate Professor, 1987-1991; Assistant Professor, 1986-1987; Director Science, UNESCO funded 16 nation collaborative venture, SESAME, Jordan, 2004 – 2006; UNESCO Consultant on SESAME, 2003 –2004; Research Scientist, Physikalisches Institute, Bonn University, Germany, 1982-1986; SERC Research Fellow, Blackett Laboratory Imperial College, London, UK, 1981-1982; Alexander Von Humboldt Fellow, Bonn University, F.R. Germany, 1980 1981; Post-Doctoral Fellow, Blackett Laboratory, Imperial College, London UK, 1979-1979; Research Assistant, Blackett Laboratory Imperial College, London, UK, 1977-1977; Research Officer, Department of Physics, University of Karachi, 1974-1977.

**Awards:** ZA Hashmi Gold Medal, Pakistan Science Foundation, 2012. *Hilal-i-Imtiaz*, Government of Pakistan, 2009, HEC Distinguished National Professor, 2006; *Sitara-i-Imtiaz*, Government of Pakistan, 2004; Senior ICTP Associate Award, 2004 –2008; Project Director, Masters Trainers in Physics, HEC, 2003-2007; Best University Teacher Award, Higher Education Commission (HEC) 2003; Director, "Preparatory School on Bio-photonics", QAU, Islamabad, 2002; Lecturer, "Synchrotron Radiation Sciences" JAPS, Jordan, 2002; Lecturer, "Winter College on Spectroscopy & Applications", . March 2001, ICTP, Trieste Italy, Lecturer, "Winter College on Quantum Optics", ICTP, Italy March, 1997; Cash Prize, Incentive on Publications, Government of Pakistan, 1997. Gold Medal, Pakistan Academy of Sciences, 1987.

**Fellowships/ Memberships:** Alexander von Humboldt Visiting Professor, Bonn University, Germany (2008); Kaiserslautern University, 1999, 2000, 2001; Fellow, Pakistan Nuclear Society; Member, Institute of Physics, UK; Member, German Physical Society, Germany.

**Research Areas:** Experimental Atomic, Molecular and Laser Physics.



## Beg, Ismat

**FELLOW, Elected 2008**

Born in Pakistan, on 4th January, 1951

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**Education:** University of the Punjab, Lahore, Pakistan: M.Sc., 1973; University of Bucharest, Bucharest, Romania: Ph.D., 1982..

**Positions Held:** HEC Distinguished National Professor, 2017-date; Lahore School of Economics, Lahore: Professor, 2013-date; Honorary Full Professor, Institute for Basic Research, Florida, 2010-date; University of Central Punjab, Lahore: Director, Centre for Applicable Mathematics and Statistics, 2011-2013; Lahore University of Management Sciences (LUMS), Lahore: Scientific Director, Centre for Advanced Studies in Mathematics, 2004-2011; Head, Department of Mathematics, 2001-2004; Professor, 2001-2011; Kuwait University, Kuwait: Professor, 1998-2001; Associate Professor, 1993-1998; Quaid-i-Azam University, Islamabad: Associate Professor, 1991-1993; Assistant Professor, 1984-1991; Lecturer, 1982-1984; Visiting Scholar, Nankai University, Tianjin, P.R. China, 1987; Senior Guest Scientist/ Senior Mathematician/ Visiting Mathematician at ICTP, Trieste, Italy, 2006, 2002, 1997, 1993, 1990.

**Awards:** Gold Medal, Pakistan Academy of Sciences, 2008; First Prize, Govt. of Pakistan (Best Research Work in Mathematics), 1986; Academic Roll of Honor, Government College, Lahore, 1972; Member of Task Force for Mathematics; Member first Board of Governors, School of Mathematical Sciences, GC University, Lahore.

**Fellowships/ Memberships:** Chartered Scientist, The Science Council, UK; Fellow, Institute of Mathematics and Its Applications (IMA), England; Chartered Mathematician; Member (Group Associate), ICTP, Trieste, Italy, 1991-1996; Chartered Member, Society for Mathematics of Uncertainty; Member: American Mathematical Society, European Mathematical Society, London Mathematical Society, International Federation of Nonlinear Analysts, International Rough Set Society, Research Group in Mathematical Inequalities and Applications; Life Member: Punjab Mathematical Society, All Pakistan Mathematical Association, Allahabad Mathematical Society.

**Research Areas:** Multi-criteria group decision making; Artificial intelligence; Big data analysis; Nonlinear functional analysis; Fuzzy mathematics and its applications; Order structure; Best approximation.



## Bhatti, Haq Nawaz

**FELLOW: Elected 2014**

Born in Nankana Sahib Pakistan, on 20th September, 1965

Principal, UAF Community College,  
University of Agriculture, Faisalabad

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**Education:** University of the Punjab, Lahore: B.Sc., 1985; M.Sc., 1987; University of Agriculture, Faisalabad: Ph.D., 2004.

**Positions Held:** Professor, Department of Chemistry, University of Agriculture, Faisalabad; Member BOG, National Centre of Excellence in Analytical Chemistry, University of Sindh, Jamshoro, Sindh; Advisor, International Foundation for Science (IFS), Sweden; University of Winnipeg, Manitoba, Canada: Post-Doc., 2007.

**Awards:** Gold Medal in M.Sc., University of the Punjab, 1987; Muhammad Ali Gold Medal in M.Sc., University of the Punjab, 1987; Badar-ud-Din Gold Medal in M.Sc., University of the Punjab, 1987; Productive Scientist of Pakistan, 2006, 2007, 2008 by Pakistan Council for Science and Technology; Star Laureate 2008 in Science & Technology by South Asia Publications; President's Medal for Science & Technology, 2009; HEC University Best Teacher Award, 2010; PAS Gold Medal in Chemistry, 2011; Research Productivity Award by PCST, 2010-2011, 2012-2013, 2013-2014, 2014-2015; Two Top cited papers award for 2012 by UAF of each cash prize Rs. 50,000/-; Top cited paper award for 2013 by UAF of cash prize Rs. 50,000/-.

**Fellowships/ Memberships:** Member, Association for the Advancement of Science in Pakistan, Lahore; Life Member, Chemical Society of Pakistan; Member, American Chemical Society; Member, Biochemical Society; Fellow, The Chemical Society of Pakistan.

**Research Areas:** Production, purification, characterization, and engineering of enzymes; Bioremediation and biosorption of textile dyes and effluents and heavy metals; Bioleaching of low grade ores by indigenous microbes.



## Bhutta, Zulfiqar Ahmed

**FELLOW, Elected 2004**

Born in Peshawar, Pakistan, on October 12, 1955

Professor & Founding Director,  
Centre of Excellence in Women and Child Health,  
The Aga Khan University Hospital, Stadium Road, Karachi

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**Education:** MBBS, Khyber Medical College (1977); Diploma in Child Health, Royal College of Physicians and Surgeons, London, UK (1980); MRCP Paediatrics, UK (1981); FCPS (Paediatrics) (1987); PhD (Nutrition), Karolinska Institute, Stockholm (1996).

**Positions Held:** The Robert Harding Chair in Global Child Health and Policy and Co-Director, The SickKids Center for Global Child Health Hospital for Sick Children, Toronto, and Senior Scientist Research Institute & Professor (Paediatrics), University of Toronto (2013–date); Founding Director, Center of Excellence in Women and Child Health, the Aga Khan University (2013–date); The Noordin Noormahomed Sheriff Professor & Founding Chair, Division of Women & Child Health, Aga Khan University & Medical Center (2009–2013), Department of Paediatrics & Child Health (2005–2008); Professor, 1997; Director Neonatal Services of the University Hospital, Karachi, (1989–2004); The Husein Laljee Dewraj Professor of Paediatrics, 1999; Associate Professor (1994–1995); Assistant Professor (1987–1992); Senior Instructor and Consultant Pediatrician (1986–1987); Consultant Pediatrician and Neonatologist to the Bakhsh Hospitals Group, Jeddah, Saudi Arabia (1983–1986); Adjunct Professor, Family Medicine & Community Health, Tufts University School of Medicine, Boston, USA (2002) & International Health, Boston University, Boston, USA (2006); Visiting Professor, Harvard School of Public Health, Boston, USA (2011–2013); Visiting Professor, Hospital for Sick Children, University of Toronto, Canada (2011–2013); Visiting Professor, London School of Hygiene & Tropical Medicine (2011–2013).

**Awards:** National Talent Scholarship, Govt of Pakistan (1972–77); Pfizer Gold Medal in Pharmacology, University of Peshawar (1975); Best Graduate of the Year Gold Medal, Khyber Medical College (1977); University of Peshawar Gold Medal (1977); Fellow, Royal College of Paediatrics & Child Health, UK (1997); Fellow (Hon), American Academy of Pediatrics (2009); Fellow (Hon), Royal College of Physicians (London) (2012); Fellow, Royal College of Physicians, Edinburgh (1990); Faculty Development Award, The Aga Khan University (1991, 1995); Scholarship, Swedish Institute, Stockholm, Sweden (1994); Academic Support Scholarship, New England Epidemiology Institute, Tufts University, Boston (1995); Visiting Scientist Support Grant, Swedish Institute, Sweden (1996–98); National Book Foundation Award for Articles in International Journals (1997); Young Investigator Award, International Union of Nutrition Sciences (1997); Nestle Nutrition Research Scholarship (1990, 1999); *Tamgha-i-Imtiaz* by President of Pakistan (2000); Scholarship, Harvard School of Public Health, (2001); President of Pakistan Gold Medal for Services to Child Health (2004); Distinguished Faculty Award for Research, Aga Khan University (2005); Outstanding Paediatrician of Asia Award (2006); HEC Distinguished National Professor (2007); Hillman Memorial Lecturer, University of British Columbia, Vancouver, Canada (2007); Alpert Lecture, Boston University, Boston (2007); Member, Commission for Professional Health Education, Institute of Medicine, USA (2008); Program for Global Pediatric Research, Global Child Health Award (2008); Distinguished Visiting Scholar in Global Health, Boston University (2009); Honorary Fellowship, American Academy of Pediatrics (2009); Windermere Lecturer, Royal College of Pediatrics & Child Health Annual Meeting, University of Warwick (2010); Kenneth Warren Prize for Best Cochrane Review (2011); Global Advocacy Prize, Royal College of Paediatrics & Child Health (UK) (2012); Henderson Lecture, Department of Obstetrics & Gynaecology, University of Toronto (2013); MacDonald Lecture & Professorship, University of Western Australia, Perth, Australia (2013); Christopherson Lectureship, American Academy of Pediatrics, Orlando, USA (2013); WHO Ihsan Dogramaci Prize for Family Health (2014), AAP Samuel J Fomon Award for Lifetime contributions in Nutrition (2014); Harvey Medovy Lectureship, University of Winnipeg, Canada (2014), Professional of the Year Award, Canada Pakistan Business Council (2015).

**Fellowships/ Memberships:** Member: British Paediatric Association & International Child Health Group; Paediatric Research Society (UK); Society for Pediatric Research (USA); Executive Council, Commonwealth Association for Paediatric Gastroenterology and Nutrition (CAPGAN); Central Executive Committee, Asian Conference for Diarrhoeal Diseases; Council, Asian Pan-Pacific Society for Pediatric Gastroenterology & Nutrition; International Society for Infectious Diseases; American Society for Clinical Nutrition & Society for International Nutrition Research; Federation of American Society of Experimental Biologists; Council, Commonwealth Association for Paediatric Gastroenterology & Malnutrition (1994 to date); Steering Committee, Program for Global Paediatric Research (2003); Steering Committee, International Pediatric Association (2004–7); Global Zinc Task Force (2005–2008); Board, Global Alliance for Vaccines & Immunizations (2012–2015); WHO Strategic Advisory Group for Vaccines (2010–2015); Public Health & Population Panel, Wellcome Trust, UK (2010–2014); President, CAPGAN (2003–2006); President (2006–10, 1998–2004); Convener, SAARC Neonatal Forum; Deputy Secretary General, Asia-Oceania Federation of Perinatal Societies (1998–2000); Secretary General & President, Federation of Asia Oceania Perinatal Societies (2002–2006); Treasurer, International Pediatric Association (2008–2010); President, International Pediatric Association (2013–2016); Founding Member, Board of the Partnership for Maternal, Newborn & Child Health (2004–12); Member & Chair, Hilleman Laboratories Advisory Board, Wellcome Trust, UK (2011–2015).

**Research Areas:** Community-based prenatal care, interaction of nutrition and infections, micronutrient malnutrition, and maternal and child health policy issues.



## Butt, M. Zakria

### Fellow: Elected 1997

Born in Lahore, Pakistan, on 9th April, 1949

Registrar, Imperial College of Business Studies, Lahore

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**Education:** University of the Punjab (Government College, Lahore): B.Sc., 1968; M.Sc., 1970; Brunel University, London: Ph.D., 1978

**Positions Held:** Registrar, Imperial College of Business Studies, Lahore, 2017-date; Rafi M. Chaudhari Chair, Center for Advanced Studies in Physics, GC University, Lahore, 2013-2017; Director ORIC, GC University, Lahore, 2012-2015; Professor, Department of Physics, University of Engineering and Technology, Lahore, 2008-2012; Chairman, Board of Intermediate and Secondary Education, Lahore, 2003-2008; Principal, Govt. F.C. College, Lahore, 2002-2003; Principal, Govt. College of Education for Science, Lahore, 2001-2002; Professor and Chairman, Department of Physics, Government College, Lahore, 1993-2001; Director, Centre for Advanced Studies in Physics, Government College, Lahore, 1985-1997, 1998-2000; Vice Principal, Govt. Islamia College, Lahore, 1985; Principal, Govt. College Pind Dadan Khan, 1984-1985; Assistant Professor, Government College, Lahore, 1983-1984; Lecturer: Government College, Lahore, 1974-1983; Government College, Sahiwal, 1972-1974; Govt. College, Bahawalpur, 1971-1972.

**Awards:** Gold Medal, Board of Intermediate and Secondary Education, Lahore, 2004; *Tamgha-i-Imtiaz* by the President of Pakistan, 1997; Gold Medal (Physics), Pakistan Academy of Sciences, 1997; PIP Fellowship Gold Medal, 1997; COT Scholar Award, 1975-1978; Physicist of the Year (Cash Award and Commendation Certificate), National Book Foundation, Islamabad, 1990; *Madre-e-Millat* Award, 2003; Quaid-e-Azam Gold Medal, 2005, and *Sitara-e-Pakistan* Gold Medal, 2007, conferred by *Tehreek Istehqam-e-Pakistan* Council; PCST Research Productivity Award, 2002, 2008, 2010-2012; Certificate of Honourable Mention, 1968, and Academic Roll of Honour, Government College, Lahore, 1969, 1970-71.

**Fellowships/ Memberships:** Fellowship Award by Netherlands Government, 1974; COT Scholar at Brunel University, UK, 1975-1978; Associate Member, International Centre for Theoretical Physics, Italy, 1984-1990; Vice President, Pakistan Physical Society, 1997; President, Pakistan Physical Society, 1998; Vice President, Pakistan Institute of Physics, 1994-1997; President,

**Research Areas:** Physics with emphasis on Lattice Defects and Mechanical Properties of Crystals, Laser-Materials Interaction, Ions Implantation, Thin Films, and Micro-Macro Property Correlation.



## Butt, N. M.

### FELLOW: Elected 1988

Born in Sialkot, British India, on 3rd June, 1936

Scientist Emeritus, PAEC

Chairman, Preston Institute of Nano-Sciences & Technology (PINSAT),

Preston University, 85, St. 7, H-8/4, Islamabad

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**Education:** University of the Punjab (Murray College, Sialkot): BSc, 1955; University of the Punjab (Government College, Lahore): MSc, 1957; University of Birmingham, Birmingham, UK: PhD (Physics), 1965; DSc, 1993.

**Positions Held:** Preston Professor and Chairman, Preston Institute of Nano Science and Technology (PINSAT), Preston University, Islamabad (2009 to date); Chairman, Pakistan Science Foundation (PSF), 2005-2008; Chairman, National Commission on Nano-Science and Technology (NCNST), MoST, 2003-2008; Scientist Emeritus, Pakistan Atomic Energy Commission (PAEC), 1996 (Life Title); Chief Scientist/Director General, PINSTECH, 1995-1996; Director, PINSTECH, 1991-1995; Associate Director, PINSTECH, 1984-1991; Head, Nuclear Physics Division, PINSTECH, 1978-1991; Scientific Officer/ Principal Scientific Officer/Chief Scientific Officer, PAEC, 1961-1978; Lecturer, Government College, Lahore, 1958-1961.

**Awards:** Dux Gold Medal, Murray College, 1955; Youngson Gold Medal, Murray College, 1955; Academic Roll of Honor, Government College, Lahore, 1957; Commonwealth Scholarship, UK, 1961-1964; Associate ICTP Award, Italy, 1970-1975; Alexander von Humboldt Foundation (Germany) Senior Fellowship, 1976-1977; Senior Associate ICTP Award, Italy, 1979-1989; Open Gold Medal, Pakistan Academy of Sciences, 1990; *Sitara-i-Imtiaz*, Government of Pakistan, 1992; 8th International Khwarizmi Prize, 1995; Representative of Pakistan in Meetings of Nobel Laureates in Lindau (Germany), 2003 to date.

**Fellowships/ Memberships:** Fellow: World Innovation Foundation, 2006; Islamic World Academy of Sciences, 1993; Fellow/Life Member, Pakistan Nuclear Society (President), 1995-1997; Life Member, Pakistan Physical Society (Ex-President), 2000 and 2011; Fellow, Pakistan Institute of Physics; Formerly Associate Member, Institute of Physics of London and Member American Physical Society, New York; Founding President, Abdus Salam ICTP-Chapter in Pakistan, 2000.

**Research Areas:** Nuclear/Solid State Physics (Experimental); Neutron-Scattering and Diffraction from Solids; Mossbauer Gamma-Ray Spectroscopy (Transmission and Scattering); Research Reactor Utilization; Lattice Dynamics of Materials; Crystal Structure Properties of Materials; Micro-Macro Property Correlation of Materials; Mossbauer Spectroscopy and Neutron Diffraction of Nano-Materials; Nanotechnology; Nano Education.



## Chaudhry, M. Nawaz

**FELLOW: Elected 2005**

Born in British India, on 29th July, 1942

Professor, College of Earth & Environmental Sciences,  
University of the Punjab, Quaid-i-Azam Campus, Lahore

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- Education:** University of the Punjab, Lahore, Pakistan: B.Sc., 1962, B.Sc. (Hons), 1963, M.Sc., 1964; London University, UK: Ph.D., 1967.
- Positions Held:** University of the Punjab: Professor, 1988 to date; HEC Professor, 2003-2005; Professor, Postgraduate Center for Earth Sciences, 2002-2003; Director, Postgraduate Center for Earth Sciences, 2001-2002; Director, Center for Integrated Research, 1999-2000; Director, Institute of Geology, 1997-2001; Associate Professor, 1980-1988; Assistant Professor, 1976-1980; Consultant, Pakistan Museum of Natural History (MoST), 2002; Guest Scientist, ETH, Zurich, 1996; Demonstrator, Kings College, London, 1965-1967.
- Awards:** Gold Medal, Pakistan Academy of Sciences, 2001; Gold Medal, Pakistan Academy of Geological Sciences, 1997; Gold Medal, Punjab Geological Society, 1992; Gold Medal, University of the Punjab, 1964; Merit Scholarship, 1960-1964; Roll of Honors, Government College, Lahore, 1963 and 1964.
- Fellowships/ Memberships:** Fellow, Pakistan Academy of Geological Sciences; Life Member, National Geological Society of Pakistan, Punjab Geological Society and Pakistan Institute of Physics.
- Research Areas:** Regional and Economic Geology, Tectonostratigraphy, Geological Material and Environmental Sciences.



## Choudhary, M. Iqbal

**FELLOW: Elected: 2003**

Born in Karachi, Pakistan, on 11th September 1959

Director, International Center for Chemical and Biological Sciences  
H.E.J. Research Institute of Chemistry and Dr. Panjwani Center for Molecular  
Medicine and Drug Research  
University of Karachi, Karachi

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**Education:** University of Karachi, Pakistan: B.Sc., 1980, M.Sc., 1983; Ph.D., 1987; D.Sc., 2005.

**Positions Held:** Director, International Center for Chemical and Biological Sciences (ICCBS), 2009–date; Director ICCBS (Acting), 2002–2008; Co-Director (Dr. Panjwani Center for Molecular Medicine and Drug Research), 2002–date; Professor, HEJRIC, 2000 to date; Distinguished National Professor, Higher Education Commission, 2004; Meritorious Professor, University of Karachi, 2013; Associate Professor, HEJRIC, 1994–2000; Assistant Professor, HEJRIC, 1988–1994; Senior Fulbright Fellow, University of California, USA, 1988; Visiting Faculty, Cornell University, USA 1994; Visiting Scientist, Purdue University, USA. 1989; Post Doctor Research Associate, Cornell University, USA 1987–1988; Post-Doctoral Research Associate, Cornell University, USA, 1987–1988; Senior Research Fellow, HEJRIC, 1986–1987; Research Associate, HEJRIC, 1985–1986. Visiting Professor: National Pharmaceutical Chemistry of Human University of Chinese Medicine, China; School of Healthcare Sciences at Manchester Metropolitan University, UK; University Malaysia Pahang, Malaysia; University of Rhode Island (URI), USA; King Abdulaziz University (KAU), Jeddah, Saudi Arabia; King Saud University (KSU), Riyadh, Saudi Arabia; University Teknologi MARA (UiTM), Malaysia; University Kebangsaan Malaysia (UKM), Malaysia; Al-Farabi Kazakh National University, Kazakhstan.

**Awards:** *Hilal-i-Imtiaz*, 2007; *Sitara-i-Imtiaz*, 2001; *Tamgha-i-Imtiaz*, 1998, First Khwarizmi International Award by the President of Iran, 2006; Economic Cooperation Organization (ECO) Award by the President of Azerbaijan, 2006; Distinguished Senior Fulbright Research Award, USA, 1997–1998; Prof. Abdus Salam (Nobel Laureate) Prize in Chemistry, 1990; Prof. M. Raziuddin Siddiqi Gold Medal by Pakistan Academy of Sciences, 1993; Third World 1996;

**Fellowships/ Memberships:** Member, National Commission for Science and Technology (Chaired by the Prime Minister of Pakistan); Fellow, The World Academy of Sciences (2002); Fellow, Islamic World Academy of Sciences (2003); Fellow, LEAD-International (1998); Fellow, The Royal Society of Chemistry (2004); Fellow, Chemical Society of Pakistan (2001); Fellow, International Union of Pure and Applied Chemistry; Fellow, World Innovation Foundation (2006); Member, National Commission for Science and Technology; Vice President, Phytochemical Society of Asia; Member, Executive Board of Pakistan Atomic Energy Commission; Member, National Commission on Nanotechnology; Member, Board of Trustees of Pakistan Science Foundation; Member, National Commission on Biotechnology; Member, Board of Governors of Virtual University, Pakistan, 2008; Member, Board of Governors of Institute of Business and Emerging Sciences, Karachi; Member, American Chemical Society; Member, American Society of Pharmacognosy; Member, The New York Academy of Sciences; Member, Federation of Asian Chemical Societies; Member, Executive Board of the Asian Network of Research on Anti-Diabetic Plants; Member, Steering Committee on Higher Education Pakistan (2002–2003); Member, Executive Council of AFASSA Network; Member, Swiss Chemical Society; Member, Inter Academy Study Panel (IAP), Amsterdam, The Netherlands; Member, Committee for Central Research Fund, Ministry of Health; Member, PTCL Research Board (2001–2004); Member, Syndicate of Federal Urdu University for Arts, Science and Technology; Member, Sectoral Committee on University-Industry Steering Committee (Pharmaceutical), HEC; Member, Selection Board of Pakistan Standards & Quality Control Authority; Member, Board of Studies of COMSATS University; Member, Board of Studies of Lasbella University, Uthal; Member, American Physiological Society, USA.

**Research Areas:** Bioorganic Chemistry, Natural Products Chemistry.



## Fayyazuddin

### FELLOW: Elected 1977

Born in Ludhiana, British India, on 10th November, 1930

HEC Distinguished National Professor of Physics,  
National Centre for Physics, Quaid-i-Azam University campus, Islamabad

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- Education:** University of Punjab, Lahore, Pakistan: B.A. (Hon), 1951, M.Sc., 1952; Imperial College, London, UK: DIC and Ph.D., 1962.
- Positions Held:** HEC Distinguished National Professor of Physics, Quaid-i-Azam University, Islamabad, 2005 to date; Professor of Physics, King Abdul Aziz University, Makkah, Saudi Arabia, 1988-1996; Professor of Physics, Ummal Qura University, Makkah, Saudi Arabia, 1985-1988; Professor of Physics, King Saud University, Riyadh, Saudi Arabia, 1980-1985; Professor of Physics, Quaid-i-Azam University, Islamabad, 1968-1980; Dean, Faculty of Natural Sciences, Quaid-i-Azam University, Islamabad, 1975-1977; Visiting Scientist, CERN, Geneva, Switzerland, 1973-1974; Research Associate, Rutherford Lab, UK, 1972-1973; Research Associate, Enrico Fermi Institute, University of Chicago, USA, 1966-1968; Senior Scientific Officer, Pakistan Atomic Energy Commission, 1962-1966; Lecturer, University of the Punjab, Lahore, 1956-1959.
- Awards:** *Hilal-i-Imtiaz*, Govt. of Pakistan, 2000; Gold Medal (Jointly with Riazuddin), Pakistan Academy of Sciences, 1979; D. Dwyer Bhawani Dass Gold Medal, Govt. College, Lahore, 1951; Al-Khawarizmi International Award in Physics, 2003.
- Fellowships/ Memberships:** Fellow, The Academy of Sciences for the Developing World (TWAS); Member, National Center for Physics, Quaid-i-Azam University, Islamabad, 1999 to date; Associate Member, International Center for Theoretical Physics, Trieste, Italy 1966-1969, 1972-1980, 1983-1993; Member, American Physical Society, 1977; Life Member, Pakistan Physical Society, 1999; Member, Syndicate, Quaid-i-Azam University, 1975-1977.
- Research Areas:** Theoretical Particle Physics with emphasis on Gauge Theories, Chiral Symmetry, Heavy Quark Spin Symmetry and Phenomenology of Particle Interactions.



## Gilani, Anwar-ul-Hassan

### FELLOW: Elected 2002

Born in Faisalabad, Pakistan, on 4th April, 1955

Chairman, Pakistan Council for Science & Technology,  
Shahrah-e-Jamhuriat, G-5/2, Islamabad

HEC Distinguished National Professor, Professor of Pharmacology,  
The Aga Khan University, Karachi

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- Education:** University of Agriculture, Faisalabad: B.Sc. (Hons.) 1976, M.Sc. (Hon.), 1978; University of Sydney, Australia: PhD, 1985.
- Positions Held:** Chairman, Pakistan Council for Science & Technology, 2015-date; Tandem Dean, Health Sciences, College of Health Sciences, Mekelle University, Ethiopia, 2013-2014; Distinguished National Professor, Higher Education Commission, 2004 to date; Pakistan Academy of Medical Sciences: Secretary General, 1999-2002, Scientific Secretary, 2002-2009; International Foundation for Science, Sweden: Scientific Advisor, 2000 to date; World Health Organization, Geneva: Advisor on Essential Medicine, 2006-2010; The Aga Khan University, Karachi: Chairman, Board of Graduate Studies, 2008-2009; Vice Chair, Research and Graduate Studies, 2008-2013, Director, PhD Program in Health Sciences, 2008-2013; Professor of Pharmacology, 1997 to date; Associate Professor, 1992-97; Assistant Professor, 1988-92; Instructor, 1986-88; Lecturer, Bahauddin Zakariya University, Multan, 1979-86.
- Awards:** Merit scholarship, from primary school to PhD; Boehringer International Research Award-1988 (Germany); National Book Foundation Research Awards, Ministry of Education, 1991 and 1994; Salam Prize in Biology, TWAS, The World Academy of Sciences, 1992; Ibn-Al-Hayatham Prize in Biological Sciences, 1995; Outstanding Teacher Award by the Aga Khan University, 1996; Aga Hassan Abedi Gold Medal in Medical Sciences by Pakistan Academy of Sciences, 1999; Presidents Award for Pride of Performance, 2000; Dr. Israr-ul-Haq Award, Alumni Association of the University of Agriculture, Faisalabad; *Sitara-i-Imtiaz* by President of Pakistan, 2004; Professorship, Pakistan Academy of Medical Sciences, 2004; Life-Time Academic Achievement Award by the Higher Education Commission, Government of Pakistan, 2011; Dr Z.A. Hashmi R&D Gold Medal, Pakistan Science Foundation, 2014
- Fellowships/ Memberships:** Fellow, Pakistan Academy of Medical Sciences; Fellow, IbnSina Academy of Medieval Medicine and Sciences; Fellow, TWAS, The World Academy of Sciences; Board Member, International Society of Ethnopharmacology; Member, Drug Registration Board, Ministry of Health, 1999-2002; WHO Advisor on Traditional Medicine and Essential Medicine; Member, British Pharmacological Society, Biochemical Society (London); World Innovation Foundation; International Society for Medicinal Plant Research (Germany), International Society of Pharmacoeconomics and Outcome Research (Founding President, Pakistan Chapter), Pakistan Hypertension League, Pakistan Nutrition and Dietetic Society.
- Research Areas:** Natural Products Pharmacology with special interest on Medicinal Value of Food and Dietary Supplements (antihypertensive, antidiabetic, hepatoprotective, antiinflammatory, antiurolithic, antiasthmatic, cardiotonic, laxative, antidiarrhoeal, prokinetics, antioxidant and anti-Alzheimer's disease) and Lead Detoxifying Potential of Vitamin C. Translational Research in metabolic and cardiovascular studies.



## Haider, Ijaz

**FELLOW: Elected 1997**

Born in Chakwal, British India, on 22nd February, 1941

6-C, Phase-1, Defence Housing Authority, Lahore Cantt.

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- Education:** University of the Punjab, Pakistan: B.Sc., 1962; B.A., 1964; M.B.B.S., 1964; Royal College of Physicians and Surgeons of England (Conjoint Board): D.P.M., 1967; M.R.C., 1972; F.R.C., 1983; University of Edinburgh, U.K.: Ph.D., 1970.
- Positions Held:** House Physician, West Medical Ward Mayo Hospital, Lahore, Pakistan, 1963-1964; Senior House Officer and Registrar of several, Psychiatric Hospitals, Colchester, Essex, UK, 1964-1966; Registrar Psychiatry and EEG, St. Francis Hospital and Hurstwood Park Hospital, Sussex, UK, 1966-1967 and Department of Child & Family Psychiatry, Scotland, UK, 1967; Senior Registrar, Coney Hill and Horton Road Psychiatric Hospital, Gloucester, UK, 1970 and several other hospitals in UK; Assistant Professor, King Edward Medical College, Lahore, 1980-1983 and Alama Iqbal Medical College, Lahore, 1983; Associate Professor, Qaid-i-Azam Medical College, Bahawalpur, 1983-1986; King Edward Medical College, Lahore, 1986-1988; Professor, Punjab Postgraduate Medical Institute, Lahore, 1990-2001.
- Awards:** Ewen's Memorial Gold Medal, 1963-1964; Center Memorial Medical Gold Medal, 1963-1964; Merit Scholarship, King Edward Medical College, 1961-1962; Bursary Award, Royal College of Physicians, Edinburgh, UK, 1968-1969.
- Fellowships/ Memberships:** Fellow, Pakistan Medical Sciences, 1992; Member, Royal Medico Psychological Association, UK; Member, British Medical Association, UK; Life Member, Pakistan Medical Association; Life Member, Pakistan Psychiatric Society; Life Member, Pakistan Medico-Legal Society; Life Member, Lahore Mental Health Association, Lahore; Member, Society for Mentally Handicapped; Member, Pakistan Psychiatric Research Centre, Lahore; Member & Honorary Consultant Psychiatrist, Fountain House, Lahore; President, Pakistan Psychiatric Society.
- Research Areas:** Psychiatry.



## Haleem, Darakhshan J

**FELLOW: Elected 2013**

Born in Pakistan, on 22<sup>nd</sup> February, 1952

Meritorious Professor Neuroscience  
Dr. Panjwani Center for Molecular Medicine and Drug Research  
International Center for Chemical and Biological Sciences  
University of Karachi, Karachi

**Tel:** 021-482 4924, 25

**Email:** djhaleem@uok.edu.pk

- Education:** University of Karachi: MSc and MPhil; London University: PhD
- Positions Held:** Dean, Faculty of Science, University of Karachi (2010-2012 & 2008); Chairperson, Department of Biochemistry, University of Karachi (2005-2008); Coordinator, Natural Science, University of Karachi (2001-2012); Founding Chairperson, Department of Biochemistry, Federal Urdu University of Arts, Science & Technology (1978-1980); Assistant Professor, Department of Biochemistry, University of Karachi (1980-1993); Professor, Department of Biochemistry, University of Karachi (1993-2012).
- Awards:** COT Scholarship by Govt of Pakistan (1986-1988); ORS Award, London (1986-1988); Young Scientist Award, ISTRY, Japan (1991); DSc, International University for Complementary Medicine, Sri Lanka (1996); Open Gold Medal by PAS (1996); Star Woman (1997) and Life Time Achievement Award (2007) by Star Women Foundation; *Ezaz-e-Fazeelat* Presidential Award of Pakistan (1999); RPA by PCST (2001- 2012); *Nishan-e-Zafar* (1996) and *Nishan-e-Azmat Danish* (1997) by University of Karachi.
- Fellowships/ Memberships:** Life Member, Pakistan Society of Biochemists; Life Member, Pakistan Pharmacological Society; Life Member and Organizer of ISBBP; Life Member, International Brain Research Organization; Member Editorial Board, International Archives of Addiction Research and Medicine, Newark, USA.
- Research Areas:** Neurotransmitter receptor function; Neuronal plasticity & neurodegeneration; Behavioral neuroscience; Preclinical research on Nutraceuticals Neuroendocrinology.



## Haq, Ikramul

### FELLOW: Elected 2006

Born in Lahore, Pakistan, on 5<sup>th</sup> March, 1952

Professor Emeritus/Director, Office of Research Innovation and Commercialization (ORIC), GC University, Lahore

**Tel:** +92 (42) 9921 4601, +92 (42) 9921 1634

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**Email:** lkmhaq@yahoo.com

- Education:** B.Sc., 1973 & M.Sc., 1975, Government College, Lahore; Ph.D., 1992, University of the Punjab, Lahore.
- Positions Held:** Government College University, Lahore: Acting Vice Chancellor, 2011, 2012; Dean, Faculty of Science and Technology, 2010–2012; Professor Emeritus, 2015 to date; Director, ORIC, 2015 to date; Director, Institute of Industrial Biotechnology, 2005–2013; Professor, 2000–2014; Post Doc, Cornell University, NY, USA (2006); Associate Professor, 1998–2000; Assistant Professor, 1993–1998; Lecturer, 1983–1993; F.C. College, Lahore: Lecturer, 1981–1983; Govt. Islamia College, Kasur: Lecturer, 1981; Govt. T.I. College, Chenabnagar: Lecturer, 1979–1981.
- Awards:** HEC Best Teacher Award, 2002; Productive Scientist of Pakistan by PCST, (2002–2004, 2006, 2008–2012); *Sitara-i-Imtiaz*, Govt. of Pakistan, 2004; Fulbright scholarship, Cornell University, New York, USA, 2005; 2nd Asia's B-School Award for outstanding contribution to education by CMO Asia, Singapore (2011); Education Leadership Award (2013) by World Marketing Summit, Malaysia; Dr. Z. A. Hashmi R&D Gold Medal by PSF for Productive Principal Investigator for the last one decade.
- Fellowships/ Memberships:** Member, College Implementation Committee for New System (1997–1999); Chairman, Award Committee (1997–1998); Chairman, Societies Board, GC University, Lahore (2001–2007); Pakistan Botanical Society: Joint Secretary (1990–1992); General Secretary (1998–2000); Vice President (2000–2002); President (2008–2011); General Secretary, Biological Society of Pakistan (2000 to date); Executive Member, Phytopathological Society of Pakistan (1992 to date); Vice-Chairperson, International Organization for Biotechnology and Bioengineering (2007–2008); Life-Member, Pakistan Botanical Society; Member, International Association of Science and Technology for Development (IASTED) (2003–2006); Member, Academic Council, GCU, Lahore; Member, Technical Committee of Biological Science, Pakistan Science Foundation; Member, American Chemical Society; Biological Society of Pakistan; Member, Biotechnology Society of Pakistan; Member, Board of Studies (Botany), Quaid-i-Azam University, Islamabad; GC University, Lahore: Member, Core Group on Life Sciences; Convener, Board of Studies in Board of Intermediate and Secondary Education, Lahore; President, Pakistan Chapter of Federation of Asian Biotech Associations; Member, Board of Trustees & Selection Board, Pakistan Science Foundation; Member, Selection Committee, Nawaz Sharif Agriculture University, Multan; Member, Selection Board and Syndicate, GC University, Faisalabad; Member, Board of Studies and Academic Council, Biotechnology and Microbiology, BZ University, Multan; Member, Selection Board and Syndicate, UVAS, Lahore; Member, Board of Studies in Biotechnology, LCW University, Lahore.
- Research Areas:** Industrial Biotechnology and Microbiology.



## Hashmi, Manzur-ul-Haque

### FELLOW: Elected 1973

Born in Gujranwala, British India, on 22nd August, 1928

Consultant, United Nations, 5-Linkers Colony, St John Park, 1 Abid Majid Road, Lahore

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- Education:** University of the Punjab: B.Sc., 1950, M.Sc. 1952; London University, UK: Ph.D., 1955; Imperial College, London, UK: D.I.C., 1955; London University, UK: D.Sc., 1975.
- Positions Held:** Advisor/Consultant, International Organizations, 1987 to date; Senior Officer, UN Environment Program, Nairobi, Kenya, 1975–1987; Scientist, Pakistan Council of Scientific and Industrial Research (PCSIR) Labs, Lahore, 1956–1974; Director, PCSIR Labs, Lahore, 1971–1972; Visiting Professor, City University, London, UK, 1974–1975.
- Awards:** Fulbright Postdoctoral Fellowship, MIT Cambridge, Mass, USA, 1960–1961; Nuffield Research Fellowship, City University, London, UK, 1969–1970. Alexander von Humboldt Senior Fellowship at Saarbrücken University, West Germany, 1974–75.
- Fellowships/ Memberships:** Fellow, The World Academy of Sciences and Arts, Minneapolis, USA, 1997; Honorary Senior Visiting Fellow, City University, London, UK, 1985.
- Research Areas:** Analytical Chemistry; current emphasis on Emerging Environmental Issues.



## Hashmi, Tajammal H.

**FELLOW: Elected 1977**

Born in Gujrat, British India, on 1st January, 1924

House No. 4, Street 12, Sector F-7/2, Islamabad

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- Education:** Michigan State University, USA: MS, 1948; Administrative Staff College, Lahore, Pakistan: Course in Administration and Management; UK, Road Research Laboratory: Three Special Courses.
- Positions Held:** Inter-Regional Advisor, United Nations Department of Technical Cooperation for Development, 1981-1991; Federal Secretary, Govt. of Pakistan, 1973-1980; Joint Secretary, Govt. of Pakistan, 1971-1973; Assistant Chief Engineer, Ministry of Railways and Communications, Govt. of Pakistan, 1949-1970.
- Awards:** Two Civil Awards, Government of Pakistan.
- Fellowships/ Memberships:** Past President & Fellow, Institute of Engineers Pakistan; Fellow, American Society of Civil Engineers; Executive Member, International Road Federation.
- Research Areas:** Bridge Design, Road Transport, Utilization of Sub-surface Space, Control of Water Logging Salinity, and Soil Mechanics.



## Hasan, Rumina

**FELLOW: Elected 2011**

Born in Pakistan, on February 15, 1955

Professor, Department of Pathology and Microbiology,  
Aga Khan University, Karachi

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- Education:** MBBS, University College Hospital, University of London; MSc, (Medical Microbiology), London School of Hygiene and Tropical Medicine and The Royal Post Graduate Medical School, University of London; PhD, (Immunology), London School of Hygiene and Tropical Medicine, University of London; MRC (Path), Medical Microbiology, UK; FRC (Path), Medical Microbiology, UK.
- Positions Held:** Senior Instructor, Dept Microbiology, Aga Khan University (AKU), Karachi, 1985–1991; Assistant Professor, Dept Microbiology, AKU, 1991-1997; Associate Professor and Section Head, Clinical Microbiology, AKU, 1997- 2004; Acting Chairperson, Dept Pathology and Microbiology, AKU, 2003- 2004; Professor and Chairperson, Dept Pathology and Microbiology, AKU, 2004-2010; Professor, Dept Pathology and Microbiology, AKU, 2010 to date.
- Awards:** Honorary Professor, Dept of Infectious and Tropical Diseases, London School of Hygiene and Tropical Medicine, UK, 2005 to date; Endowed Chair; Sultanali Kamruddin Jessani; Chair Dept of Pathology & Microbiology, AKU, 2008-2011; Adjunct Professor, University of Health Sciences, Lahore, 2008 to date; The Abdulaziz Hussainali Shariff Professor, Dept of Pathology & Microbiology, AKU, 2011.
- Fellowships/ Memberships:** Fellow, Royal College of Pathologists, UK; Fellow, College of Pathologists Pakistan; Member, International Union Against Tuberculosis and Lung Diseases; Member, American Society of Microbiology; Member, Scientific Board, Asian African Society of Mycobacteriology; Member, Infectious Diseases Society of Pakistan; Member, Pakistan Biological Safety Association; Vice Chair, Core Group of the Global Laboratory Initiative, Stop-TB Partnership; Member, New Diagnostic Working Group, Stop-TB Partnership; Member, WHO Eastern Mediterranean Regional Green Light Committee; Associate Editor, BMC Microbiology; Editorial Board Member, The Scientific World Journal; Editorial Board Member, The International Journal of Mycobacteriology; Member, Editorial Committee, Journal of Pakistan Medical Association.
- Research Areas:** Antimicrobial Resistance; Tuberculosis.



## Hassan, Mashooda (Mrs)

**FELLOW: Elected 2001**

Born in Lucknow, British India, on 17th July, 1939

Apartment No. 03, Block No. 22,  
PHA Apartments, G-7/1, Islamabad

**Tel:** (92-51) 289 0432

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- Education:** Lucknow University, Lucknow, India: M.Sc., 1959; Johann Wolfgang University, Frankfurt/Main, Germany: Diploma Chem., 1966; Ph.D. (Dr.phil.nat.), 1968.
- Positions Held:** HEC Professor, Department of Chemistry, Allama Iqbal Open University, Islamabad, 2006-2008; Member, Federal Public Service Commission: 1999-2005; Adjunct Professor, HEJ Research Institute, University of Karachi, 1998-1999; Quaid-i-Azam University, Islamabad: Distinguished Professor 1998-1999; Acting Dean, Faculty of Natural Sciences, 1999; Meritorious Professor, 1993-1998; Chairperson, Department of Chemistry, 1975-1977, 1990-1993; Professor, 1977; Associate Professor, 1968; Pakistan Council of Scientific and Industrial Research (PCSIR), Karachi: Senior Research Officer, 1968; Research Officer, 1966-1968; Research Chemist, 1962-1965; Central Govt. College for Women, Karachi: Lecturer, 1960.
- Awards:** Pakistan Academy of Sciences Silver Jubilee Gold Medal, 1978; South Asia Publications (SAARC) Star Women of the Year Award, 1994; UNESCO "Scientist Role Model" for Girl Students of South Asia, 1988; *Izaz-i-Kamal*, 1995; *Tamgha-i-Imtiaz*, 1999.
- Fellowships/ Memberships:** DAAD Scholarship (Germany), 1965-68 (Ph.D. scholar); Alexander von Humboldt Foundation, (Germany), (Post Doc), Junior & Senior Fellowships, 1972-1973; Post-Doc Fellowship, United Kingdom Royal Society and Nuffield Foundation Bursary, UK, 1981-1982; United States Fulbright, Visiting Professor Fellowship, 1990-1991; Fellow and Life Member, Chemical Society of Pakistan; Member, GDCh, 1968-1974; Member, Nobel Technical Committee, Sweden, 1983 and 1990; American Chemical Society, 1990-1999; UN Anti-Narcotic Task Force, 1992; Fellow, The World Academy of Sciences (TWAS), 1999; World Academy of Art and Science, USA, 2004; World Innovation Foundation, 2006.
- Research Areas:** Isolation, synthesis and stereo-selective synthesis of pharmacologically active compounds and study of their stereochemistry and structure activity relationship.



## Hayat, Tasawar

**FELLOW: Elected 2006**

Born in Khanewal, Pakistan, on January 01, 1969

Distinguished National Professor, Department of Mathematics,  
Quaid-i-Azam University, Islamabad

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- Education:** Quaid-i-Azam University, Islamabad, Pakistan: M.Sc., 1992, M.Phil., 1994; Ph.D., 1999.
- Positions Held:** Quaid-i-Azam University, Islamabad: Professor, Dept. Mathematics, 2009 to date; Associate Professor 2005-2009; Assistant Professor, 2000-2005, Lecturer, 1998-2000; Senior Research Associate, 1995-1998, Alexander Von Humboldt Fellow, Darmstadt University, F. R. Germany, 2001-2002; Visiting Mathematician, ICTP, Trieste, Italy, 2004 to date; Visiting Scholar, University of Illinois, Urbana-Champaign, USA, 1999; Visiting Scholar, University of Witwatersrand, Johannesburg, South Africa, 2004-2005; Visiting Scholar, Mabatho University, Mafikeng, South Africa, 2005; Honorary Associate Professor, University of Witwatersrand, Johannesburg, South Africa, 2007 to date.
- Awards:** *Tamgha-i-Imtiaz*, Govt. of Pakistan, 2005; M. Raziuddin Siddiqi Gold Medal, Pakistan Academy of Sciences, 1999; Prof. Abdus Salam Prize in Mathematics, 1999; TWAS Young Scientist Award, 2000; Silver Medal in B.Sc., 1988; Gold Medal (Mathematics), Pakistan Academy of Sciences, 2006; 17th Khwarizmi International Award, Govt of Iran, 2004; ISESCO International Prize, 2004.
- Fellowships/ Memberships:** Alexander von Humboldt Fellow, Darmstadt University, F.R. Germany, 2001-2002; ICTP Associate, International Centre for Theoretical Physics, Italy, 2004; Associate Editor, Islamabad Journal of Science, 2005 to date; Member of Prof. Abdus Salam Prize Committee, 2005 to date; Member, Task Force for Mathematics, Higher Education Commission, Pakistan; Member, Editorial Board, The Open Mechanical Engineering Journal, 2007; Member, Syndicate, Quaid-i-Azam University, 2006 to date; Fellow, Islamic World Academy of Sciences, 2012.
- Research Areas:** Wave Mechanics, Newtonian and Non-Newtonian Fluid Mechanics, Mathematical Modeling and Biomechanics.



## Hussain, Rabia

**FELLOW: Elected 2006**

Born in British India, on August 8, 1946

Department of Pathology and Microbiology, The Aga Khan University (retired)

17/3/A, Hashim Tabba Road, Mohammed Ali Housing Society, Karachi, Pakistan

**Tel:** (92-21) 343 86257

**Mob:** 0300-829 2022

**Email:** professorsorrabiahussain@gmail.com

**Education:** University of Karachi: B.Sc (Hons) 1966; M.Sc. 1967; University of Western Ontario, Canada: PhD, 1973; MRC (Path) 1989; FRC (Path) 1997.

**Positions Held:** Ghulamali Hirji Professor of Microbiology, The Aga Khan University, 1990-2012; Chair, Department of Microbiology, The Aga Khan University, 1999-2003; HEC Distinguished National Professor, 2004; Visiting Professor: London School of Hygiene and Tropical Medicine, London UK, 1995-2012; Case Western University, Cleveland, Ohio, USA, 1995; AQ Khan Institute of Biotechnology and Genetic Engineering (KIBGE), University of Karachi, 2004; Associate Professor and Acting Chair, Department of Microbiology, The Aga Khan University, 1986-1990; Senior Staff Fellow, National Institutes of Allergy and Infectious Disease, National Institute of Health (NIH), USA, 1981-1985; Collaborative Researcher NIH, 1979-1981; Instructor, Department of Medicine, Johns Hopkins University, 1976-1979; National Research Council (USA) Research Associate, Naval Medical Research Institute, National Naval Medical Center, USA, 1973-1975; Teaching Assistant, Department of Bacteriology and Immunology, University of Western Ontario, Canada, 1970-1972; Assistant Lecturer, Department of Microbiology, University of Karachi, 1968-1969.

**Awards:** Listed in 'Top-20 Most Influential Women in Science in the Islamic World', Muslim-Science.Com, 2014; Lifetime Achievement Award, Pakistan Association of Pathology (Immunology), 2012; The Aga Khan University "Excellence in Research" Award, 2006; *Sitara-e-Imtiaz*, National award for Research/Education in Medicine, Government of Pakistan, 2005; Abdus Salaam Third World Academy of Sciences, (TWAS) Award in Basic Medical Sciences, 2000; *Tamghe-e Imtiaz*, National award for Research/Education in Medicine, Government of Pakistan, 1999; Rockefeller Biotechnology Fellowship, The Rockefeller Foundation, USA, 1986-1988; Berson-Yellow Award for developing a radioimmunoassay technic, American Society of Nuclear Medicine, 1980; National Research Council Associateship Award, Washington DC, 1973-1975; Commonwealth Scholarship for PhD, Government of Canada, 1969-1973; Gold Medal for First position in M.Sc, University of Karachi, 1968; Merit Scholarship for First position in B.Sc. (Hons), University of Karachi, 1966-1967.

**Fellowship/ Membership:** Pakistan Society of Immunology, Fellow/ Elected Patron, 2012-2017; Islamic World Academy of Sciences, 2008; Elected Council Member, International Leprosy Association, 2007 to date; Pakistan Association of Medical Sciences, 2000; The Academy of Sciences for Developing World (TWAS), Trieste Italy, 2001; Royal College of Pathologist, 1997; Member: International Basic Sciences Program of UNESCO, 2015-2018; Elected Council Member and Vice President (South and Central Asian region), TWAS, 2013-2016; Governing Body of Marie Adelaide Leprosy Center, Pakistan, 1990 to date; International Leprosy Association, 1990; American Society of Tropical Medicine and Hygiene, 1985; American Association of Immunology, 1980; Academy of Allergy and Immunology, 1979; New York Academy of Science, 1978; Editor, Medical Journal of Islamic World Academy of Sciences (IAS), 2011 to date; Editor, Mycobacterial Diseases OMICS Publishing Group, 2007-2011; Associate Editor, Journal of Immunology, 1984-1986.

**Research Areas:** Immunology of Infectious Diseases, Biomarkers, Cytokines and Antibodies.



## Ibne Rasa, Khairat M.

**FELLOW: Elected 1979**

Born in Kashmir, British India on 5th October, 1926

Bungla No. 7-P, Model Town Extension, Lahore

**Tel:** (92-42) 3516 2035

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**Email:** ibnerasas@hotmail.com

**Education:** Muslim University, Aligarh, India: M.Sc., 1949; Brown University, Providence, R. I., USA: Ph.D., 1959.

**Positions Held:** Vice Chancellor, Al-Khair University (AJK), 2000; Deputy Director General, Islamic Educational, Scientific and Cultural Organization (ISESCO), 1984-1991; Vice Chancellor, University of the Punjab, Lahore, 1976 to 1984; Vice Chancellor, Bahauddin Zakaria University, Multan, 1975-1976; Visiting Professor, Brown University, Providence, R. I., U.S.A., 1972-1975; Professor, University of the Punjab, Lahore, 1969-1986; Associate Professor, University of the Punjab, Lahore, 1964-1969; Assistant Professor, Brown University, Providence, R. I., USA, 1962-1963; Research Associate and Postdoctoral Fellow, Brown University, USA, 1960-1962; Associate Professor, Chairman, F.C. College, Lahore, 1959-1960; Predoctoral Fellow, Member, Faculty of the Brown University, USA, 1956-1959.

**Awards:** *Sitara-i-Imtiaz*, Govt. of Pakistan, 1978; Iqbal Centenary Medal, Govt. of Pakistan, 1978; Potter Prize, Brown University, USA, 1959.

**Fellowships/ Memberships:** Fellow, Chemical Society of Pakistan, Patron-in-Chief, Pakistan Institute of Chemists; Member, Society of the Sigma Xi; Member, Pakistan Association for the Advancement of Science; Member, American Chemical Society, 1961-1966; Member, Board of Governors, Lahore Medical College; Member, Board of Trustees, Khalid Educational Trust; Chairman, Board of Advisors, Leeds System of Education; Chairman, Board of Governors, Islamabad Medical College; Director, West Pakistan Urdu Academy; Treasurer, Pakistan Academy of Sciences, 2003-2005.

**Research Areas:** Organic Chemistry.



## Iqbal, Mohammad Perwaiz

**FELLOW: Elected 2002**

Born in Pakistan, on 12 August, 1949

Department of Biological & Biomedical Sciences, The Aga Khan University, Medical College, Stadium Road, Karachi-74800

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**Education:** University of the Punjab, Lahore, M.Sc., 1970; New York University, M.S., 1978; New York University, Ph.D., 1981.

**Positions Held:** Aga Khan University, Karachi: Professor of Biochemistry, 1992 to date; Director FHS-PhD Program, 2013 to date; Interim Chair, Department of Biological & Biomedical Sciences, 2009-2010 & 2015 to-date; Acting Chair, Department of Biochemistry, 1983-86; Associate Professor of Biochemistry, 1986-91; Assistant Professor of Biochemistry, 1983-86; Assistant Professor, SUNY-Downstate Medical Center, New York, 1982-83; Instructor, SUNY-Downstate Medical Center, New York, 1980-82; Research Assistant, New York Medical College, New York, 1974-80; Research Assistant, Pakistan Medical Research Center; International Center for Medical Research & Training, University of Maryland, USA, 1971-74.

**Awards:** *Sitara-i-Imtiaz*, Government of Pakistan, 2002; *Award of Excellence in Education*, Aga Khan University, 2006; *Outstanding Teacher Award*, Aga Khan University, 2010, 2004 and 1995; *PAS/INFAQ Gold Medal in Medical Sciences* 2001 and in *Biological Sciences* 1995, Pakistan Academy of Sciences; *Second Prize for International Publications*, National Book Council, 1993; *Academic Roll of Honor*, Government College, Lahore, 1970.

**Fellowships/ Memberships:** NUST Distinguished Visiting Professor, National University of Science & Technology, Islamabad, 2013 to date; Fellow, Pakistan Society for Biochemistry and Molecular Biology, 2003; Chairman, Medical Research Society of Pakistan, 2000-2003; General Secretary, Medical Research Society of Pakistan, 1998-2000; Fellow, Pakistan Academy of Medical Sciences, 1992; Member, Biochemical Society, London, 1988 to date; Member, International Association of Medical Science Educators, 2004 to date; Life member Pakistan Pharmacological Society, 1991; Life Member, Pakistan Society for Biochemistry & Molecular Biology, 1991; Editor, Pakistan Journal of Biochemistry and Molecular Biology; Member, Board of Studies, Institute of Biochemistry & Biotechnology, University of the Punjab, 2001-2003; Member, Board of Studies, National Center for Proteomics, University of Karachi, 2010-2014; Adjunct Professor, Dr.Punjabwani Center for Molecular Medicine and Drug Research, University of Karachi, 2010 to date.

**Research Areas:** Folate Metabolism, Enzymology, Gene Polymorphism, Vitamins' Deficiency and Development of Coronary Artery Disease, Vitamin D and Diabetes Mellitus, Heavy Metal Pollution and Human Health, Hyperhomocysteinemia.



## Iqbal, Muhammad

**FELLOW: Elected: 2011**

Born in Gujrat, Pakistan, on 15 June, 1958

Director General, National Physical and Standards Laboratory,  
Plot no. 16, Sector H-9, Islamabad

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- Education:** University of Karachi, Karachi, Pakistan; B.Sc. (Hons), 1981; M.Sc., 1982; Quaid-i-Azam University, Islamabad, Pakistan: M.Phil., 1985, University of Sheffield, Sheffield, UK; Ph.D., 1990.
- Positions Held:** Director General, National Physical and Standards Laboratory, 2016- date; Member (Science), PCSIR, Ministry of Science and Technology, Islamabad, 2015-2016; Director General, Centre for Applied Molecular Biology (CAMB), Ministry of Science and Technology (MoST), Lahore, 2011-2015; Chief Scientific Officer/Head, Food & Biotechnology Research Centre, Pakistan Council of Scientific and Industrial Research (PCSIR), Lahore, 2008-2011; Principal Scientific Officer, PCSIR, Lahore, 2003-2006; Postdoctoral Research Associate, University of Sheffield, UK, 2002-2003; Post-doc, 2006-2007; Principal Scientific Officer, PCSIR, Lahore, 2000-2002; Senior Scientific Officer, PCSIR, 1998-2000; Postdoctoral Research Associate, University of Kiel, Kiel, Germany, 1996-1998; Post-doc, 1996-1998; University of Alaska, Fairbanks, Alaska, USA; Senior Scientific Officer, PCSIR, Lahore, 1990-1996; Research Associate, University of Sheffield, Sheffield, U.K., 1986-1990; Junior Research Associate, Quaid-i-Azam University, Islamabad, 1983-1985; Research Fellow, Quaid-i-Azam University, Islamabad, 1982-1983.
- Awards:** *Sitara-i-Imtiaz*, 2016; *Tamgha-i-Imtiaz*, 2009 by President of Pakistan; Ranked Category "A" Productive Scientist of Pakistan, Pakistan Council of Science and Technology, (PCST), 2010-2011; Gold Medal, Pakistan Academy of Sciences, 2008; Senior Fulbright Postdoctoral Award, USA, 2006-2007; Research Productivity Award, by PCST, 2002-2013; Alexander von Humboldt Postdoctoral Award, Germany, 1996-1998; Young Scientist of the Year in South Asia, TWAS, Italy, 1995; Overseas Research Student Award, UK, 1986-1989; S&T National Talent Pool Scholarship Award, Government of Pakistan, 1986-1990; Academic Merit Certificate - M.Phil. (First Position), Quaid-i-Azam University, Islamabad, 1985; Certificate of Appreciation, United States Department of Agriculture (USDA), USA, 1984; Academic Merit Certificate - M.Sc. (2nd Position), University of Karachi, Karachi, 1982.
- Fellowships/ Memberships:** Member, Board of Trustees of Pakistan Science Foundation, GoP, 2017-2020; Member, Expert Group of Ministry of Science and Technology, GoP, 2015-2017; Member, Pakistan Madrassah Education Board, Ministry of Religious Affairs and Interfaith Harmony, GoP, 2016-2018; Associate Secretary General, Pakistan Academy of Sciences, 2015-2017; Life Member, Pakistan Botanical Society; Member, American Society of Microbiology, 2006; Member, American Chemical Society, 2006; Member, Water Resources Association, Alaska, USA, 2007.
- Research Areas:** Plant/Microbial/ Environmental Biotechnology.



## Iqbal, Muhammad Zafar

**FELLOW: Elected 1998**

Born in Rawalpindi, Pakistan, on 8th January, 1949

Advisor, Department of Physics, COMSATS Institute of Information Technology, Chak Shahzad, Islamabad

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- Education:** University of the Punjab, Pakistan: B.Sc., 1966, M.Sc., 1968; Quaid-i-Azam University, Pakistan: M.Phil., 1969; University of Manchester, UK: Ph.D., 1974.
- Positions Held:** Quaid-i-Azam University, Islamabad, Chairman, Department of Physics, 1999-2001, Professor of Physics, 1991-2009, Associate Professor of Physics, 1985-1991, Senior Lecturer/Assistant Professor in Physics, 1970-1985; Visiting Scientist, Technical University, Berlin, Germany, June 1995-Sep.1995, Jun. 1997-Sep. 1997; Visiting Scientist Electrotechnical Laboratory, Tsukuba, Japan, Jan. 1996-Aug.1996; Visiting Scientist, Department of Physics, King's College, London, 1992-1993; Visiting Scientist, Department of Solid State Physics, University of Lund, Sweden, 1983-1984; Post-Doctoral Fellow, University of Manchester, UK, 1974; Research Fellow, Physics Dept., University of Islamabad (Quaid-i-Azam University), 1969-1970.
- Awards:** First Prize, National Book Council of Pakistan, Ministry of Education, Govt. of Pakistan, 1988; Gold Medal, Pakistan Academy of Sciences, 1993; Pride of Performance Award, Govt. of Pakistan, 1998; National Education Award, Pakistan Education Forum, 1997-98.
- Fellowships/ Memberships:** Fellow, Institute of Physics, UK, 1996; Member, American Physical Society; Member, Institute of Electronics Engineers (IEEE), USA; Founding Member and Chairman, Pakistan Society for Semiconductor Science and Technology; Member, American Association for the Advancement of Science (AAAS), USA; Member, Editorial Advisory Board of Materials Science Forum Trans. Tech. Publication, Switzerland, 1996 to date; Associate of International Centre for Theoretical Physics, Trieste, Italy, 1985-1991; Associate of International Centre for Science and High Technology, Trieste, Italy, 1991.
- Research Areas:** Experimental Solid State Physics (semiconductor physics): characterization of semiconductor materials and devices with particular focus on defect studies, silicon and a variety of compound semiconductors using DLTS, photoluminescence, photoluminescence and related techniques, growth of single crystals of semiconductors using Czochralski technique, synthesis and characterization of new high temperature superconductors.



## Jan, M. Qasim

**FELLOW: Elected 1990**

Born in Hangu, KP, British India, on 10th January, 1944

Adviser, COMSTECH Secretariat, 3-Constitution Avenue, G-5/2, Islamabad & Distinguished National Professor (Emeritus), University of Peshawar, Peshawar

**Tel:** (92-51) 922 5159

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- Education:** University of Peshawar, Pakistan: B.Sc. (Hons), 1964; Univ. of Oregon, Eugene, Oregon, USA: M.S., 1967; Univ. of London, UK: Ph.D., 1977; King's College London: DSc (Hon), 2009; University of Leicester, UK: DSc (Hon), 2013.
- Positions Held:** Adviser, COMSTECH, Islamabad, 2011 to date; Distinguished National Professor (of HEC), 2004; Prof. Emeritus, University of Peshawar (UoP), 2010; Vice President, Pakistan Academy of Sciences (PAS), 2011-2012; Secretary General, PAS, 2007-2010; Secretary General, Association of the Academies of Sciences in Asia, 2008-2012; Vice Chancellor, Quaid-i-Azam University, Islamabad, 2005-2009; Vice Chancellor, Sarhad University, Peshawar, 2001-2003; Vice Chancellor, UoP, 1997-2000; Dean Faculty of Science, UoP, 1997; Director, National Center of Excellence in Geology, UoP, 1988-2000; Visiting Professor, Univ. of Oregon, USA, 1994-1995; Professor UoP, 1983; Associate Professor, 1979.
- Awards:** *Hilal-i-Imtiaz*, 2010; *Sitara-i-Imtiaz*, 1999; *Tamgha-i-Imtiaz* and *Izaz-i-Fazeelat*, 1993 by Govt. Pakistan; ISESCO Prize in Science & Technology (Geology), 2010; PAS Awards: Gold Medals, 1980, 1997; Distinguished Scientist of the Year, 2009; Ministry of S&T Prize for best paper, 1996. National Book Foundation Awards: Scientist of the Year, 1990; Earth Scientist of the Year, 1986; Best Book in Natural Sciences for 1995-1999 period; and many others.
- Fellowships/ Memberships:** Emeritus Fellow of the Mineralogical Society of Great Britain and Ireland, 2009; Honorary Fellow, Nepal Geological Society, 2007; Fellow, Islamic World Academy of Sciences, 2013; Fellow, The World Academy of Sciences (TWAS), 2002; Fellow, Pakistan Academy of Geological Sciences, 1995; Fellow, Mineralogical Society of America, 1990; Fellow, Geological Society of London, 1989. Chairman, Himalayan Regional Committee of the International Lithosphere Program, 1998-2004; Co-Chair, Solar Radiation Management Governance Initiative (of TWAS-Royal Society Environment Defense Fund), 2015-2017.
- Research Areas:** Geology, Mineralogy, Petrology, Geochemistry, Tectonics.



## Jan, Rasul

### Fellow Elected: 2014

Born in Swat, Khyber Pakhtunkhwa, Pakistan, on 24th June 1952

Vice-Chancellor, University of Poonch, Azad Kashmir, Pakistan

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**Web:** [www.upr.edu.pk](http://www.upr.edu.pk)

**Education:** M.Sc. (Chemistry) 1976, M.Phil. (Chemistry) 1979, University of Peshawar; Ph.D. 1983, University College Cork, Ireland.

**Positions Held:** Post-Doctoral Research Fellow, University College Dublin, Ireland, 1983-1985; Assistant, Associate and Professor, University of Peshawar, 1985-2012; Professor Emeritus, University of Peshawar, 2013; Chairman, Department of Environmental Science, University of Peshawar, 1999-2001; Director, Institute of Chemical Sciences, University of Peshawar, 2005-2008; Fulbright Scholar, New Mexico State University, USA, 2003-2004; Visiting Scientist, the Bio Design Institute, Arizona State University, USA, 2005; Vice Chancellor, University of Malakand, 2008-2012; Vice Chancellor, University of Peshawar, 2013-2017; Vice Chancellor, University of Poonch, Rawalakot, Azad Kashmir, 2017-date.

**Awards:** Presidential Award "Pride of Performance" in Chemistry, 2010; Presidential Award *Sitara-e-Imtiaz*, 2016.

**Fellowships/Memberships:** Fellow, Chemical Society of Pakistan, 1994.

**Research Areas:** Method Development for Determination of Chemical Species of Environment & Biological Importance, Recycling, Electro Analytical Chemistry & Fabrication of Sensors.



## Khalid, Ahmad Mukhtar

### FELLOW: Elected 2005

Born in Lahore, British India, on 1st March, 1945

Department of Biotechnology, University of Sargodha, Sargodha

**Mob:** 0300-865 1900

**Email:** [amkhalid1945@gmail.com](mailto:amkhalid1945@gmail.com)

**Education:** Government College, Lahore: M.Sc. (Hon's), 1965; University of New South Wales, Australia: Ph.D. (Biotechnology), 1979.

**Positions Held:** Vice Chancellor, Government College University, Faisalabad, 2009; National Institute for Biotechnology and Genetic Engineering (NIBGE): Advisor to Member, 2006 to 2009; Director, NIBGE, 2000 to 2006; Chairman, School of Biotechnology, Quaid-i-Azam University, Islamabad, 2000 to 2006; Member BOG, International Centre for Genetic Engineering and Biotechnology, (ICGEB) Trieste, Italy; Liaison Officer, ICGEB, Trieste, Italy; Visiting Professor of Biotechnology, University of Kentucky, Lexington, 1985-89; Senior Scientist, CSIRO and School of Biological Sciences, Maquire University, NSW, Australia; Project Scientist (Academic), University of NSW, Australia.

**Awards:** Roll of Honor, Government College, Lahore; Presidential Medal for Science & Technology, 2008.

**Fellowships/Memberships:** Member, National Commission on Biotechnology; Member, National Commission on Nano-Technology; Member BOG School of Biological Sciences, University of the Punjab; Member BOG, Institute for Biotechnology and Genetic Engineering (IBGE), University of Peshawar; Member, Senate, University of Agriculture, Faisalabad; Vice President, The Pakistan Society for Biochemistry and Molecular Biology, Vice President, Pakistan Society for Biotechnology; Life Member, Student Union, University of New South Wales, Australia.

**Research Areas:** Bioprocess Technology, Fermentation Technology; Biotechnology of Fossil Fuels; Biotechnology of Non-replenishable Resources (Minerals, etc), Bioelectronics and Biosensors.



## Khalid, Fazal Ahmad

**FELLOW: Elected 2007**

Born in Kasur, Pakistan, on 31 December, 1957

Vice Chancellor, University of Engineering and Technology, Lahore

**Tel:** +92 42 9925 0201

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- Education:** D.Phil. (Metallurgy and Materials Engineering), University of Oxford, UK, 1991; B.Sc. (Metallurgical Engineering), University of Engineering and Technology, Lahore, 1980; CEng, London, UK, 2005; LLB, University of Karachi (Islamia College), Karachi, 1985.
- Positions Held:** Vice Chancellor, University of Engineering and Technology, Lahore, 2014 to date, and Additional Charge of KFUEIT, RYK, 2014-15 and MNSUET, Multan, 2014-2016; GIK Institute of Engineering Sciences & Technology, (GIKI), Topi, Pakistan: Pro-Rector (Academic), 2007-2014; Acting Rector, 2007-2008; Dean, Faculty of Materials Science and Engineering, 2003-2011; Professor of Materials Engineering, 2001 to date; Interim Dean 1997 to 2003; Convener, Graduate Program, 2004-2007; Assistant Executive Engineer (AXEN), Pakistan Steel Mills, Karachi, 1980-1986; Research Engineer, Rolling Process Laboratory, Central Laboratories, Zaporozhaye Steel Plant Zaporozhaye, Ukraine, 1980-1981; Senior Engineer, PCSIR, Lahore, 1986-1987; Post Doctoral Research Fellow, University of Oxford, UK, 1992-1993; Research Fellow, University of Leeds, UK, 1993-1994; Visiting Professor, EMPA Dübendorf, Switzerland.
- Awards:** *Sitara-i-Imtiaz* by the President of Pakistan, 2007; Merit Certificate (GIKI) and Cash Prize, 2005-2007; PCST Research Productivity Award, 2011 & 2012; International Award DVS, Aachen, Germany, 2004; Gold Medal by Pakistan Academy of Sciences, 1999; International Vanadium Award by The Institute of Materials, London, UK, 1994.
- Fellowships/ Memberships:** Fellow of Royal Microscopical Society (FRMS), Oxford, UK; Fellow of Institute of Materials, London; Member of ASM, USA; Member of The Minerals, Metals and Materials Society, USA; Member of Institute of Nanotechnology; Member of Pakistan Engineering Council (PEC); Member of Board of Trustees, Pakistan Science Foundation (PSF); Member of Engineering Accreditation and Quality Evaluation Committee; Inspector of Examinations, Pakistan Engineering Council; Governing Body PEC; Member of National Commission on Nanoscience and Technology, Government of Pakistan, Member of BoT/BoG/Syndicates – LUMS, NCA, KEMU, UET Taxila, MUET, KFUEIT.
- Research Areas:** Advanced Materials, Nanomaterials and Nanotechnology, Electron Microscopy, Accreditation and Quality assurance of Engineering Programs.



## Khan, Abdul Quadeer

**FELLOW: Elected 1988**

Born in Bhopal, British India on 1st April, 1936

H. No. 207, Hillside Road, E-7,  
Islamabad

**Tel:** (92-51) 835 7060

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- Education:** University of Karachi: B.Sc., 1960; Technical University, Berlin, West Germany: Metallurgical Engineering Courses, 1962-1963; Delft Technological University, Delft, Holland: M.Sc., 1967; University of Leuven, Belgium: Doctor of Engineering, 1972.
- Positions Held:** Special Advisor to the Prime Minister on Strategic Program, KRL Affairs, 2001-2004; President, Pakistan Academy of Sciences, 1997-2002; Chairman, Dr. A. Q. Khan Research Labs, Kahuta, Pakistan, 1998-2001; Project Director, Dr. A. Q. Khan Research Labs, Kahuta, Pakistan, 1976-1998; Project Director, GIK Institute of Engineering Sciences & Technology, Topi, Pakistan, 1990-2002; Senior Metallurgist/Deputy Manager, FDO Eng. Consultants, Amsterdam, Holland, 1972-1975; Research Fellow, Leuven University, Belgium, 1968-1972; Research Assistant to Professor Burgers at Delft Technological University, Holland, 1967-1968; Inspector of Weights & Measures, Govt. of Pakistan, 1959-1961; Practical Trainee with Siemens Pakistan Eng., 1958-1959; Tech. Asst., Star Eng. Works, Karachi, Pakistan, 1956-1958; Chief Coordinator for Guided Missile Program, 1990-2000.
- Awards:** *Nishan-i-Imtiaz* and Bar, Govt. of Pakistan, 1996, 1998; *Hilal-i-Imtiaz*, Govt. of Pakistan, 1989; D.Sc., University of Karachi, 1993; D.Sc., Baqai Medical University, Karachi, 1998; D.Sc., Hamdard University, Karachi, 1999; D.Sc., Gomal University, D.I. Khan, 1999; D.Sc., University of Engineering & Technology, Lahore, 2000; D.Sc., Sir Syed University, Karachi, 2001; D.Sc., Balochistan University, Quetta, 2003; D.Sc., M.A. Jinnah University, Karachi, 2012; D.Sc., NED University of Engineering & Technology, 2014; Distinguished Alumnus of the famous Technical University of Berlin, Germany; Delft University of Technology, The Netherlands; and University of Leuven, Belgium; 66 Gold Medals and 3 Gold Crowns from various National Organizations; Acclaimed as *Mohsin-e-Pakistan* by the whole nation; A large number of Institutes, Auditoriums and Research Centers have been named after Dr. A. Q. Khan within Pakistan and abroad.
- Fellowship/ Memberships:** Fellow: Islamic World Academy of Sciences, Kazakh National Academy of Sciences, Pakistan Institute of Metallurgical Engineers, Pakistan Institute of Engineers, Institute of Central and West Asian Studies; Chartered Engineer and Member, The Institute of Materials, London; Member, American Society of Metals (ASM), The Metallurgical Society of the American Institute of Mining, Metallurgical and Petroleum Engineers, Canadian Institute of Metals (CIM), Japan Institute of Metals (JIM).
- Research Areas:** Metallurgy, Materials Science, Nuclear Technology with keen interest in Physical Metallurgy, especially Structure-Property Relationships in High Strength Alloys, Ballistic Missiles and Enrichment Technologies.



## Khan, Arshad M.

**FELLOW: Elected 1992**

Born in Malegaon, District Nasir, British India, on 29th May, 1938

House No. 8, Main Double Road, F-10/2, Islamabad

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**Education:**

University of Karachi: B. Sc. (Hons), 1958, M. Sc., 1959; University of Birmingham, UK: Ph.D., 1964.

**Positions Held:**

Executive Director, Global Change Impact Studies Centre, Islamabad, 2002-2015; Senior Nuclear Power Planner/Energy Economist, International Atomic Energy Agency, 1996-2001; Acting Head, Planning and Economic Studies Section, International Atomic Energy Agency, 1996-1997; Chief Scientist, Pakistan Atomic Energy Commission (PAEC), 1992-1998; Director, Applied Systems Analysis Group, PAEC, 1980-1996; Research Scholar, International Institute of Applied Systems Analysis, Austria, 1978-1980; Post Doctoral Research Fellow, Chalk River Nuclear Laboratories, Atomic Energy of Canada Ltd, 1965-1968; Demonstrator in Physics, University of Karachi, 1959-1960.

**Awards:**

Gold Medal (1st Position), Karachi Board, 1953; Merit Award for Outstanding Performance, International Atomic Energy Agency, 1998; Gold Medal, Pakistan Academy of Sciences, 1986.

**Fellowships/**

**Memberships:**

Member, Board of Trustees, Asian and Pacific Energy-Environment Planning Network (APENPLAN), Asian and Pacific Development Center, Kuala Lumpur, 1993-1996; Member and National Team Leader, Energy and Nuclear Power Planning Study of Pakistan, PAEC/IAEA, 1994-1996, Member and Team Leader/ Coordinator, IAEA Project on Development of Indicators for Sustainable Energy Development, 1999-2001; Member/Secretary, Pakistan Planning Commission's Task Force on Climate Change, 2008-2010; Member, Committee for Formulation of Pakistan's National Climate Change Policy, 2010-2012.

**Research Areas:**

Nuclear Physics; Energy-economy-environment Systems Analysis and Planning for Sustainable Energy Development; Power System Expansion Planning; Nuclear Power Planning; Global Climate Change and Its Implication for Pakistan.



## Khan, Hameed Ahmed

**FELLOW: Elected 1990**

Born in Rangoon, Burma, British India, on 1st May, 1942

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**Education:**

University of the Punjab, Lahore, Pakistan: B.Sc. (Hon's), 1963, M.Sc., 1964; Birmingham University, UK: MS, 1969, Ph.D., 1972, D.Sc., 1994.

**Positions Held:**

Executive Director, COMSATS, 2000-2008; Pakistan Institute of Nuclear Science and Technology (PINSTECH): Scientist Emeritus; Director General, 1996-2000; Associate Director, 1994-1996; Head, Radiation Physics Division, 1992-1994; Chief Scientific Officer, 1986-1994; Principal Scientific Officer, 1977-1986; Senior Scientific Officer, 1972-1977; Scientific Officer, 1965-1972; Chief Scientist, Pakistan Atomic Energy Commission (PAEC), 1994; Visiting Professor, Bahauddin Zakariya University, Multan, Pakistan.

**Awards:**

*Hilal-i-Imtiaz*, (1999) and *Sitara-i-Imtiaz*, (1984), Govt. of Pakistan; International TWNSO Prize in Technology, Third World Network of Scientific Organizations (TWNSO), Trieste, Italy, 1998; Khwarizmi Prize, Govt. Iran, 1993; Gold Medal, Pakistan Academy of Sciences, 1975 and 1994; 1st Prize in Physics, National Book Foundation, Govt. of Pakistan, 1991, 1992, 1993.

**Fellowships/**

**Memberships:**

Fellow, Islamic Academy of Sciences, 1988; President, International Nuclear Track Society, UK, 1985; Fellow, Alexander von Humboldt (AVH), Philips University, Marburg, Germany, 1975; Member, Board of Studies in Physics, Quaid-i-Azam University, Islamabad, Pakistan; Member, Editorial Board, Radiation Effects (an International journal), Gordon and Breach Science, UK; Member, Radiation Measurements, a journal published in UK; Editor-in-Chief, The Nucleus, (published by Pakistan Atomic Energy Commission), 1993; Member, Editorial Board, Science International (a Pakistani Scientific journal), 1993; National Counterpart, Joint UNDP/ PCA/ IAEA Project, "Better Management of Environment, National Resources and Industrial Growth through Isotopic and Radiation Technology", 1997.

**Research Areas:** Nuclear Physics, Radiation Physics, SSNTDs Reactor Physics.



## Khan, Iqar Ahmed

**FELLOW: Elected 2007**

Born in Sheikupura, Pakistan, on 8<sup>th</sup> December, 1953

Vice Chancellor, University of Agriculture,  
Faisalabad, Pakistan

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- Education:** PhD, University of California, Riverside, USA, 1988; MS, University of California, Riverside, USA, 1984; M.Sc (Hons), University of Agriculture, Faisalabad, Pakistan, 1976; B.Sc (Hons), University of Agriculture, Faisalabad, Pakistan, 1974.
- Positions Held:** Vice Chancellor, 2008 to date; Professor of Horticulture, University of Agriculture, Faisalabad (UAF), 1995-2013, Associate Professor, UAF, 1990-1995; Assistant Professor, UAF, 1988-1990; Research Assistant, University of California, Riverside, 1983-1988; Lecturer, UAF, 1977-1983; Chief Scientist/Director NIAB/Director General (Agriculture and Biotechnology), Pakistan Atomic Energy Commission, 2005-07; Founder/ Director, Center for Agricultural Biochemistry and Biotechnology, UAF, 1996-97; Director, Agricultural Experiment Station/Assistant Dean, SQU-Muscat, 1999-2000; Founder/Officer In charge, Plant Tissue Culture Cell, UAF, 1989-1997.
- Awards:** Sitara-e-Imtiaz by Government of Pakistan; Honor Rolls, University of California, Riverside, USA, 1988; Sigma Xi, 1988; Gamma Sigma Delta, 1984; Phi Beta Kappa - MS, University of California, Riverside, USA, 1984; Silver Medal - M.Sc (Hons), University of Agriculture, Faisalabad, 1976; Bronze Medal - B.Sc (Hons), University of Agriculture, Faisalabad, 1974.
- Fellowships/ Memberships:** Postdoctoral Fellowship in Cell Biology, University of California, Riverside, USA, 1988; Rockefeller Foundation Biotechnology Career, Fellowship University of California, Riverside, 1990-1993; Visiting Fellow, Cambridge University, Cambridge, UK, 1996; DAAD Fellowship in Tropical Agriculture, University of Kassel, Germany, 2001; Summer Visiting Professorships in Citrus Genetics and Breeding, University of Florida-Citrus Research and Education Center, Lake Alfred, 2000-2005; Executive, International Society for Citriculture (USA), since 1992; Member, Federal Agriculture Committee, 2006-07; Member, Pakistan Central Cotton Committee, 2006-07; Elected Member, University Syndicate, UAF, 1994-95; Elected Member, University Senate, UAF, 1980-83; Member, International Organization of Citrus Virologists (USA), International Society for Horticultural Science (Belgium), European Association for Potato Research (Netherlands), Florida State Horticultural Society, Botanical Society of Pakistan, Pakistan Association for Advancement of Sciences, Punjab Cooperative Fruit Development Board, Farmers Association of Pakistan, Soil Science Society of Pakistan, Pakistan Phytopathological Society, American Society for Horticultural Science, Botanical Society of America, American Association for Advancement of Sciences-Pacific Division, Cucurbit Genetics Cooperative, Apomixis Research Group, CYMMIT (Mexico), Islamic Development Network/IDB, Human Development and Capability Association/HDCA, Civic Bodies (USA, Oman, Pakistan); Life Member, Pakistan Botanical Society and Pakistan Zoological Society.
- Research Areas:** Citrus Genetic, Biotechnology and Virology.



## Khan, Khalid Mahmood

**FELLOW: Elected 2000**

Born in Faisalabad, British India, on 15th June, 1941

Professor Emeritus, University of Agriculture (UAF), Faisalabad

Pakka Mari, Tariq Abad, Faisalabad

**Mob:** 0300-856 7687

**Email:** khalidmkhan41@yahoo.com

- Education:** University of the Punjab, Lahore, Pakistan: M.Sc. (Biochemistry), 1966; University of Edinburgh, UK: PhD (Biochemistry), 1970.
- Positions Held:** Professor Emeritus, University of Agriculture, Faisalabad; Vice President, Pakistan Academy of Sciences; Secretary General, Network of Academies of Sciences in OIC Countries (NASIC), 2004 to date; Vice Chancellor, University of Arid Agriculture, Rawalpindi, 2001 to 2012; Chairman, Pakistan Science Foundation, 1996-2001; Chairman, Pakistan Council for Scientific and Industrial Research, Islamabad, 1998-1999 (additional charge); Director Research, University of Agriculture, Faisalabad, 1994-1996; Director, Center for Biochemistry and Biotechnology, University of Agriculture, Faisalabad, 1994-1996; Professor and Chairman, Department of Biochemistry, University of Agriculture, Faisalabad, 1993-1996.
- Awards:** *Sitara-i-Imtiaz*, Government of Pakistan, 2000; P.E. Lender Award, Alumni Association, University of Agriculture, Faisalabad, 2000.
- Fellowships/ Memberships:** FAO Postdoctoral Fellowship, 1989; President, Pakistan Society for Biochemistry and Molecular Biology, 2001-2002; Member, Pakistan Society for Advancement of Sciences; Life Member, Pakistan Society of Biochemistry and Molecular Biology; Life Member, Scientific Educational Social Council of Biochemists; Secretary General, Pakistan Academy of Sciences, 2003-2006.
- Research Areas:** Enzymatic elucidation of the structure of starch molecule and its components; Assessment of molecular configuration of starch molecules; Developed a new enzymatic method for determination of the number average degree of polymerization (DP<sub>n</sub>) of the linear amylase-type polysaccharides; Detection and quantification of soil enzymes and their correlation with soil fertility; Enzymes present in rhizosphere as exudation from plant roots and biological activity of soil microflora and fauna; Assessment of soil fertility and presence of soil microflora on enzyme basis; Study of molecular factors involved in HCV infection and interferon therapy.



## Khan, Khalid Mohammed

**FELLOW: Elected 2010**

Born in Nawabshah, Pakistan, on 12 January, 1960

Professor, University of Karachi, Karachi

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- Education:** University of Karachi, Pakistan, Ph. D., 1992; Quaid-i-Azam University, Islamabad, Pakistan; M.Sc., 1985; B.Sc. University of Sindh, Jamshoro, Pakistan, 1981.
- Positions Held:** Professor, University of Karachi, Karachi, 2008 to date; Associate Professor, University of Karachi, Karachi, 2003 to 2008; Assistant Professor, University of Karachi, Karachi, 1997 to 2003; Senior Quality Control Officer, Lederle Laboratories Division, Cyanamid (Pakistan), Karachi, 1996 to 1997; Postdoctoral Fellow, Tübingen University, Tübingen, Germany, 1992-1995.
- Awards:** *Sitara-i-Imtiaz*, Government of Pakistan, 2010; *Tamgha-i-Imtiaz*, Government of Pakistan, 2004; Research Productivity Award (RPA) from the Pakistan Council for Science and Technology, 2001-2016; UNESCO-TWAS Associateship, 2013-2016; Pakistan Academy of Sciences Gold Medal, 2010; Most Cited Paper during, 2005-2008; Award from Elsevier Publishers, 2008; *Nishan-e-Azmat-e-Danish* Plaque, University of Karachi, 2005; Pakistan Academy of Sciences Gold Medal, 2004; South Asia Star Award, 2003; South Asia Star Award, 2004; Justice Qadeeruddin Gold Medal, 2003; Leader and Trainer of 20 Bronze Medals and one Honorable Mention Winner Pakistani Chemistry Olympiad Teams which Participated in International Chemistry Olympiads in different countries, 2007-2017.
- Fellowships/ Memberships:** Member, Steering Committee of International Chemistry Olympiad, 2016; National Representative of IUPAC for Organic and Bioorganic Chemistry Division, 2012-2013; Member, Board of Studies, National Centre for Excellence in Analytical Chemistry, University of Sindh, Jamshoro, 2012-2013; Member, Board of Faculty of Sciences, Allama Iqbal Open University, Karachi, 2011-2014; Elected Secretary General, The Chemical Society of Pakistan, 2006, 2010-2014; Fellow, The Chemical Society of Pakistan, 2008; Member, American Chemical Society; Member, The Chemical Society of Pakistan; Member, Board of Studies, University of Peshawar, since 2008; Member, Board of Studies, Quaid-i-Azam, University Islamabad, since 2008; Associate Editor, International Journal of Biological and Chemical Sciences, since 2007; Member, Board of Studies, University of Karachi, Karachi 2005; Member, Curriculum Committee, Urdu University, Karachi, since 2004; Coordinator, National Chemistry Talent Contest (STEM Careers Program) under Higher Education Commission, since 2003; Member, PCST Peer Review Committee for R&D Institutions, 2002; Secretary, National Core Group in Chemistry under Higher Education Commission, 2002-date.
- Research Areas:** General Synthetic Organic Chemistry, Bio-organic and Medicinal Chemistry.



## Khan, M. Ajmal

**FELLOW: Elected 2001**

Born in Karachi, Pakistan, on 19th April, 1953

**Vice Chancellor**

University of Karachi, Karachi  
Distinguished National Professor, Institute of Sustainable Halophyte Utilization,  
University of Karachi, Karachi-75270

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**Web:** www.uok.edu.pk / www.halophyte.org

**Education:** University of Karachi, Karachi, Pakistan: B.Sc. (Hons.), 1973; M.Sc., 1974; D.Sc., 2011; Ohio University, Athens, Ohio, USA: Ph.D., 1985.

**Positions Held:** Qatar Shell Chair in Sustainable Development and Coordinator of Food Security Program, Centre for Sustainable Development, Qatar University, 2012-2016. University of Karachi, Karachi: Meritorious Professor, 2011-date, Professor & Founding Director, Institute of Sustainable Halophyte Utilization, 2007-2012; HEC Distinguished National Professor, 2005-date; Professor, Department of Botany, 1996-date; Associate Professor, Department of Botany, 1989-1996; Assistant Professor, Department of Botany, 1985-1989; Lecturer, Department of Botany, 1977-1985; Adjunct Professor, Department of Botany and Range Science, Brigham Young University, Provo, USA, 1997-1998; Visiting Scientist, Department of Environmental and Plant Biology, Ohio University, Athens, USA, 1994-1996; Visiting Scientist, Institute of Applied Botany, University of Munster, Germany, 1994; Research Scientist, Brigham Young University, Provo, USA, 1984-1985; Research Assistant, Department of Environmental and Plant Biology, Ohio University, Athens, USA, 1980-1984.

**Awards:** Life Time Achievement Award by Pakistan Botanical Society, 2016; Distinguished Scientist of the Year, Pakistan Academy of Sciences, 2008; *Sitar-i-Imtiaz*, by Govt. of Pakistan, 2007; Presidential Award of Pride of Performance, 2001; Gold Medal, Pakistan Academy of Sciences, 1999; 1st Position in M.Sc., University of Karachi, Pakistan.

**Fellowships/ Memberships:** Fellow: The Islamic World Academy of Sciences (IAS), 2011; The World Academy of Sciences (TWAS), 2003; Fulbright Research Fellowship, 1994; German Academy Exchange Services (DAAD), Germany, 1994; Member: Botanical Society of America, 1984-date; International Ecological Society (INTECOL), 1998-date; Life Member, Pakistan Botanical Society, 1975; Sigma Xi, USA, 1984-date; National Curriculum Committee, University Grants Commission, 2001-date; Secretary: Karachi Chapter, Pakistan Academy of Sciences, 2004-2007.

**Research Areas:** Ecological Management of Inter-tidal, Coastal and Inland Saline Ecosystems, Specific Research Interests include Seed Dormancy, Salt Tolerance, Demography of Salt Marsh and Salt Desert Species and Evaluation of Cash-crop Halophytes.



## Khan, M. Asif

**FELLOW: Elected 2009**

Born in Chakwal, Pakistan, on November 19, 1954

Vice Chancellor, University of Peshawar, Peshawar

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**Email:** vice\_chancellor@uop.edu.pk, masifk9@gmail.com

**Education:** D.I.C. & PhD (Imperial College London), 1988; B.Sc. (Hons) & MSc., Department of Geology, University of Peshawar.

**Positions Held:** Vice Chancellor, University of Peshawar, Khyber Pakhtunkhwa, 2017-date; Vice Chancellor, Karakoram International University, 2014-2017; Tenured Professor and Director, National Centre of Excellence in Geology, University of Peshawar, Khyber Pakhtunkhwa, Pakistan.

**Awards:** Distinguished National Professor, Higher Education Commission, 2012; Pakistan Academy of Sciences, Gold Medal in Earth Sciences, 2002; Civil Award, *Tamgha i Imtiaz*, 2000; National Book Foundation, Scientist of Year Award, 1990.

**Fellowships/ Memberships:** Secretary, Peshawar Chapter, Pakistan Academy of Sciences, 2010-2014; Elected Honorary Fellow (Life Time), Geological Society, London, Since 2008.

**Research Areas:** Tectonics & Mountain Building Processes Himalayas, Kohistan, Karakoram & Hindu Kush. Structural Geology of the Himalayan Foreland Thrust-Fold Belt in N. Pakistan. Tectonics of the India-Afghan Collision Zone, Kurram-Waziristan Tribal Belt, NW Pakistan. Natural Hazards of Earthquakes, Mass Movements (Landslides, Debris Flow) and Floods. Natural Hazard Management & Preparedness.



## Khan, Mohammad Aslam

### FELLOW: Elected 2008

Born in Jhelum, British India, on March 07, 1945

Department of Physics, COMSATS Institute of Information Technology,  
Physics Block, Park Road, Chak Shahzad, Islamabad

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**Education:** University of the Punjab, Lahore (Gordon College, Rawalpindi), BSc, 1965; University of the Punjab, Lahore, Physics, MSc 1967; University of Hull, Physics, England, PhD, 1974.

**Positions Held:** HEC Foreign Professor, COMSATS Institute of Information Technology (CIIT), Islamabad, since 2007; Head, Department of Physics, CIIT, Islamabad, 2008-10; Professor of Physics & Senior Research Scientist, Physics Department & Center for Applied Physical Sciences, King Fahd University of Petroleum & Minerals (KFUPM), Dhahran, Saudi Arabia, 1995-2008; Associate Professor & Research Scientist, KFUPM, 1984-1995; Assistant Professor, KFUPM, 1981-1984; Assistant Professor of Physics, Al-Fatah University, Tripoli, Libya, 1978-1981; Senior Scientific Officer, PINSTECH, Islamabad, 1974-1978; Visiting Scientist, CISE, Milan, Italy, 1976; Scientific Officer, AEC, Lahore, 1968-1970. Visiting Positions (Short-Term): University of Virginia, Charlottesville, USA (1988, 1993), Frie University, Berlin, Germany (1988, 1989, 1992); University of Freiburg, Germany (1990); Max Planck Institute, Garching, Germany (1984); Australian National University, Canberra, Australia (1982); University of Hull, England (1976, 1979, 1980, 1981, 1985).

**Awards:** Gold Medal, First Class First Position, BSc, University of the Punjab, 1965; Saigol Foundation Overseas Merit Scholarship, 1970-1973; Prince Muhammad Award (shared) for Research; Distinguished Service Award, KFUPM, 2008.

**Fellowships/ Memberships:** Chartered Physicist and Member, Institute of Physics, London (1974-2007); Life Member, Pakistan Institute of Physics; Former Member, Optical Society of America; American Society for Non-Destructive Testing (ASNT); American Chemical Society (Saudi Arabian Chapter).

**Research Areas:** Lasers and their Applications, Plasma Physics, Atomic and Molecular Spectroscopy, Ultrasonics, Materials Processing.



## Khan, Shaukat Hameed

**FELLOW: Elected 2002**

Born in Lahore, British India, on 4th September, 1941

Coordinator General, COMSTECH,  
3 Constitution Avenue, G-5/2, Islamabad

**Tel:** 051-922 0681-3

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- Education:** Oxford University, UK: B.A., 1964; B.Sc., 1965; D.Phil., 1968. Rhodes Scholar, Oxford, 1962-65; Research Grant, Culham Labs, UK for PhD studies. Gordon College, Rawalpindi, University of the Punjab: B.Sc. (Hons), 1961.
- Positions Held:** Coordinator General, COMSTECH, 2014 to date; Executive Director, SOPREST (Society for the Promotion of Engineering Sciences and Technology) – the parent body of GIKI. 2. Other Current Positions: ·Chairperson, Rhodes Selection Committee, Pakistan; Technical Advisor, Planned Technical University, Sialkot; Member BoG, Aiwan-i-Quaid, F-9, Islamabad; Member , Board of Directors, HMC, Taxila; 3. Recently Held: Member of The Industrial Policy Group, Ministry of Industries, Government of Pakistan; 2010-11; Member, Board of Directors TUSDEC ( PIDC); Rector, GIK Institute, Topi, 2008-09; Member, Planning Commission, Pakistan Government, 2005-9; Project Director and principal author (2006-7) “Pakistan in the 21st Century: Vision 2030”; Convener of several ‘Task Forces’ (2007-09) for implementation of Vision 2030; Chief Scientist/ DG CC / DG SPS , Pakistan Atomic Energy Commission (PAEC), 1997 to 2005; Scientific Associate, CERN, Geneva, 1999-2001; President, of several Oxford societies (Walter Raleigh Club, Oxford Majlis, Pakistan Society); 4.Earlier: Director, Optics Labs, PAEC, Nilore, 1985–2001; Founder, Laser Group, PAEC, 1969.
- Awards:** Pride of Performance, Govt of Pakistan, 1993; Technology Gold Medal, Pakistan Academy of Sciences, 1993 Rhodes Scholar, Oxford, 1962; Gold Medal University of the Punjab, 1961; Best All-Round Student, Gordon College Rawalpindi, 1961; National Talent Scholar, 1959-61.
- Fellowships/ Memberships:** Member of: Board of Trustees, Pakistan Science Foundation. 2005-7; President’s Steering Committee on Higher Education, 2002; Member /Secretary, Electronics Sub-Committee (Prime Minister’s High Level Review Commission , 1995); National Counterpart / World Bank Team: “Reforms in Higher Education and Research” (1994); Res. Adv. Board, National Institute of Electronics, 1991-97; National Commission of Science & Technology, 1987-1995; Fellow, Pakistan Nuclear Society. Res. Adv. Board, National Institute of Electronics, 1991-97; National Commission of Science & Technology, 1987-1995; Fellow, Pakistan Nuclear Society.
- Research Areas:** Laser Based Position Monitoring System for the massive CMS detector, (LHC, CERN); Radiation Damage Studies of Optical Glasses, Cements, and Coatings; Atomic & Molecular Spectroscopy/Laser Isotope Separation; Lasers and Optonics for Defense; Laser Produced Plasmas; Ultrafast High Voltage Switching.



## Khanum, Azra

### FELLOW: Elected 2005

Born in Karachi, Pakistan, on 9th February, 1949

Dean, Barani Institute of Management Sciences (BIMS)  
2F Malikabad Complex, Main Murree Road (Near 6th Road)  
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akhanum@hotmail.com, azkiak@yahoo.com

- Education:** University of Karachi, Karachi, Pakistan: M.Sc. 1971; Quaid-i-Azam University, Islamabad, Pakistan: M.Phil., 1976; Ph.D., 1982; National Institute of Health, Bethesda, MD, USA.
- Positions Held:** Dean, Barani Institute of Management Sciences (BIMS), Rawalpindi - a joint venture with Pir Mehr Ali Shah Arid Agriculture University, Rawalpindi (PMAS); Director, Institute of Natural and Management Sciences (INAM), Rawalpindi, affiliated with Sargodha University, Sargodha, 2012-2015; University of Arid Agriculture, Rawalpindi: Research Consultant, Department of Biochemistry, 2009-2012; Dean, Faculty of Sciences, 2007-2009; Chairperson, Department of Biochemistry, 2003-2007; Chairperson, Department of Biological Sciences, 1998-2003; Professor, 2002-2009; Associate Professor, 1998-2002; National Institute of Health, USA: Visiting Scientist, 1995-1997; Netherlands Cancer Institute, Amsterdam: Guest Scientist, 1993-1994; Quaid-i-Azam University, Islamabad: Assistant Professor, 1984-1991; Lecturer, 1979-1984; Post Doctorate, 1984-1987; Research Officer, 1977-1978; University of Karachi, Karachi and Quaid-i-Azam University, Islamabad; Research Associate, 1974-1976; University of Karachi, Karachi, 1972-1974.
- Awards:** *Tamgha-i-Imtiaz*, 2008; HEC Best Teacher Award, 2001; Gold Medal, Pakistan Academy of Sciences, 2003; International Fogarty Post-Doctoral Fellowship, NIH, MD, USA, 1984-1987; Consultant-TOKTEN (Transfer of Knowledge through Expatriate Nationals) Program at Quaid-i-Azam University, Islamabad, sponsored by UNDP-NTP (National Talent Pool), Ministry of Labor, Manpower and Overseas Pakistanis, 1997-1998.
- Fellowships/Memberships:** Fellow, Pakistan Academy of Medical Sciences; Fellow, Zoological, Society of Pakistan; Fellow, Society for Biochemistry and Molecular Biology of Pakistan; Member, New York Academy of Sciences, USA; Member, American Association for the Advancement of Science, USA; Member, American Society for Biochemistry & Molecular Biology; Member, Endocrine Society, USA; Member, Pakistan Botanical Society; Member, Organization for Women in Science for the Developing World (OWSD).
- Research Areas:** Cloning of genes in livestock and human health; Identification of antimicrobial peptides from edible/non-edible parts of vegetables for use against poultry, livestock and human health; Development of DNA-based vaccine and multiplex based diagnosis for tuberculosis.



## Luqman, Muhammad

### FELLOW: Elected 2007

Born in Rawalpindi, Pakistan, on 4th August, 1950

Head, Pathology Department, Foundation University Medical College,  
Defense Mall, Jinnah Avenue, Rawalpindi

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- Education:** Nishtar Medical College, Multan/University of the Punjab (Lahore): MBBS, 1974; Jinnah Postgraduate Medical Centre/University of Karachi: M.Phil., 1980; College of Physicians & Surgeons Pakistan, FCPS, 1991.
- Positions Held:** Professor of Pathology/Head of Department, Foundation University Medical College, Rawalpindi, 2004 to date; Professor of Pathology, Armed Forces Institute of Pathology (AFIP), Rawalpindi, 2000 -2004; Army Medical College, Rawalpindi: Professor of Pathology, 1999-2000; Research Director, Pakistan Medical Research Council (PMRC) Research Centre, 1999-2000; Technical Director, Pakistan US Laboratory for Seroepidemiology (PULSE), 1999- 2000; Assistant Professor, Pathology Department, 1980 to 1992; Ex-Dean, Faculty of Pathology, College of Physicians & Surgeons Pakistan.
- Awards:** Bukhari Gold Medal for Best Research Paper as a Junior Pathologist in 11th National Scientific Conference of Pakistan Association of Pathologists (PAP), Abbottabad, 1987; Co-author of a paper awarded President Gold Medal and Award in 3rd Biennial Congress of Pakistan Medical Research Council (PMRC), Lahore, 1986; Pakistan Academy of Medical Sciences (PAMS), Junior Gold Medal and Award, Rawalpindi, 1989; Iftikhar Gold Medal and Burki Gold Medal for outstanding performance in FCPS – II Examination, 1991, CPSP, Karachi.
- Fellowships/Memberships:** Life Member, Pakistan Association of Pathologist; Founding Editor, Pakistan Journal of Pathology (1999-2004); Editor, Pakistan Armed Forces Medical Journal (1993-2002).
- Research Areas:** Cancers in Pakistan, Medical Education.



## Malik, Kauser Abdulla

**FELLOW: Elected 1995**

Born in Lahore, British India, on 7th July, 1945

Department of Biological Sciences, F.C. College, Lahore

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- Education:** Government College, Lahore; University of the Punjab, Lahore, Pakistan: B.Sc. (Hon's), 1964, M.Sc. (Hon's), 1965; University of Aston, Birmingham, UK: Ph.D., 1970.
- Positions Held:** Distinguished National Professor, Dept. of Biological Sciences, F.C. College, Lahore, 2008 to date; Member (Food & Agri.), Planning Commission, Government of Pakistan, 2006-2008; Member (Bio and Admin), Pakistan Atomic Energy Commission (PAEC), 2001-2006; Honorary Secretary, National Commission on Biotechnology (NCB), 2001-2008; Chairman, Pakistan Agricultural Research Council (PARC), Islamabad 1998-2001; Director General/Chief Scientist, National Institute for Biotechnology and Genetic Engineering (NIBGE) and Nuclear Institute for Agriculture and Biology (NIAB), Faisalabad, 1997-1998; Chief Scientific Officer/Principal Scientific Officer/ Senior Scientific Officer, NIAB, 1971-1998; Head, Soil Biology Division, NIAB, 1980-1991; Visiting Scientist, Institute of Biophysics, University of Hanover, West Germany, 1986.
- Awards:** *Hilal-i-Imtiaz*, Govt. of Pakistan, 2004; *Sitara-i-Imtiaz*, Govt. Pakistan, 1998; *Tamgha-i-Imtiaz*, Govt. Pakistan, 1988; ISESCO Prize in Biology, 1997; Gold Medal, Pakistan Academy of Sciences, 1993; Certificate of Commendation for Scientific Research in Biology, Govt. of Pakistan, 1989; Distinguished National Professor, HEC, 2006 to date.
- Fellowships/ Memberships:** Fellow, The Academy of Sciences for the Developing World (TWAS), (1997); Fellow, Pakistan Academy of Sciences, (1995); Secretary (Lahore Chapter), Pakistan Academy of Sciences (2010-2012); Alexander von Humboldt Fellow (1974-1975); Member, Board of Trustees, International Foundation for Sciences (IFS), Stockholm, Sweden (1997 to date); Board of Governors, ICGEB (1993 to 2008); Standing Advisory Group on Nuclear Applications (SAGNA), IAEA, 2000 to 2010; Biotechnology Action Council (BAC), UNESCO, Paris, France, 2004 to 2006; Board of Trustees WWF-Pakistan (2004 to 2010); Editorial Board, Pakistan Journal of Botany and Nucleus, Pakistan; President, Biotechnology Society of Pakistan, 1994 to date; Consultant, FAO/IAEA Joint Division in Malaysia (1990), Bangladesh (1991), Iran (1991), Algeria (1991), Turkey (1993), Sri Lanka (1996), Tanzania (1999), Senegal (1997, 1999); Bangladesh, Malaysia and several other countries; FAO/IAEA Joint Division in Malaysia (1990), Bangladesh (1991), Iran (1991), Algeria (1991), Turkey (1993), Sri Lanka (1996), Tanzania (1999), Senegal (1997, 1999); Bangladesh, Malaysia and several other countries.
- Research Areas:** Plant-Microbe Interaction, Plant Biotechnology, Rhizospheric Microbiology, Bioenergy.



## Mansoor, Shahid

### Fellow: Elected 2014

Born in Karachi, Pakistan on Oct. 27th, 1962

Director, National Institute for Biotechnology and Genetic Engineering (NIBGE), Faisalabad, Pakistan

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**Fax:** 92-41-265 1472

**Email:** [director@nibge.org](mailto:director@nibge.org); [shahidmansoor7@gmail.com](mailto:shahidmansoor7@gmail.com)

- Education:** University of Karachi: B.Sc. (Hon.), 1986, M.Sc., 1987; Ph.D., Department of Virus Research, The John Innes Centre Norwich, U.K and the degree awarded by Department of Biological Sciences, University of East Anglia, 1999.
- Positions Held:** Research Fellow, National Institute for Biotechnology and Genetic Engineering (NIBGE), Faisalabad, 1988-1989; Scientific Officer, NIBGE, Faisalabad, 1989; Visiting Scientist, Department of Health Effect ENEA CRE Casaccia, Rome, Italy, 1990-1991; Visiting Scientist, Department of Virus Research, John Innes Centre, 1993-1993; Senior Scientific Officer, NIBGE, Faisalabad, 1994; Post-Doctoral Fellow, Sainsbury Laboratory, Norwich, UK under Royal Society Fellowship, 2000; Principal Scientific Officer, NIBGE, Faisalabad, 2002; Head Agricultural Biotechnology Division, NIBGE, Faisalabad 2006-2013; Fulbright Scholar at Plant Genome Mapping Laboratory, University of Georgia, Athens, 2011-2012; Deputy Chief Scientific, NIBGE, Faisalabad, 2012; Director, NIBGE, Faisalabad, 2013 to date.
- Awards:** First class position in B.Sc. (Hons) Biochemistry and M.Sc. Biochemistry, University of Karachi; Awarded Royal Society UK Fellowship; *Sitara-e-Imtiaz* by President of Pakistan, 2009; HEC Outstanding Performance Award (Research Paper 2005, 2006, 2011; Research Productivity Award for PCST for the last ten years; HEC Distinguished National Professor, 2014.
- Fellowships/ Memberships:** Royal Society UK Fellowship 2000, One year sponsored by The Royal Society, UK in the laboratory of Prof. David, Baulcombe, Sainsbury Laboratory, John Innes Centre, Norwich, UK on "Manipulation of Rx gene for resistance against geminiviruses and characterization of begomoviruses and small circular DNA molecules associated with cotton leaf curl virus and Ageratum yellow vein virus in Pakistan. Fulbright Scholar 2011-12, one year at Plant Genome Mapping Laboratory, University of Georgia, Athens, under the leadership of Prof. Andrew Paterson on genomics of cotton.
- Research Areas:** Molecular characterization of economically important geminiviruses, their gene function, geminivirus-host interactions and development of novel sources of virus resistance, genomic characterization of whitefly biotypes and development of insect resistant plants; Novel uses of RNA interference technology, Genome biology of cotton, whitefly and livestock in Pakistan and their applications in novel traits development.



## Maqsood, Asghari

**FELLOW: Elected 2010**

Born in Jhang, Pakistan on 15th September, 1947

Dean, Faculty of Basic and Applied Sciences,  
Air University, PAF Complex, E-9, Islamabad

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- Education:** Dhaka University: BSc (Hons) in Physics (1966-1970); University of the Punjab: MSc in Physics (1972); Oxford University: MSc in Experimental Solid State Physics (1979); Gothenburg University, Sweden: PhD (1982).
- Positions Held:** Lecturer, Quaid-i-Azam University (1973-1982); Asst. Professor (1982-1987); Associate Professor (1987-1993); Professor (1993 -2005); Professor and Chairperson of the Department of Physics (2001-2002); Meritorious Prof. of Physics (2005 to present); Tenured Professor (July 2007); Regular Visiting Faculty Professor, NUST (2008 -2013); Head of Department of Materials Eng (2008); Head of Physics UG Program at NUST (2008-2009); Professor of Physics, Center for Emerging Sciences and Technology, Islamabad (2013 -2014); Professor of Physics, Air University, Islamabad (2014-2015); Dean Faculty of Basic and Applied Sciences, Air University, Islamabad (2015 to date); Prof. Emeritus, Air University (2015).
- Awards:** Dr. Z.A. Hashmi Gold Medal by Pakistan Science Foundation (2014); Life Time Achievement Award by Pakistan Vacuum Society (2013); *Sitara-i-Imtiaz* by President of Pakistan (2011); *Izaz-i-Fazeelat* by Government of Pakistan (2005); Prime Minister Gold Medal on World Teacher Day (2004); HEC Best University Teacher Award (2002); PCST Research Productivity Award (2002-2014); Pride of Performance, by Government of Pakistan (2001); Gold Medal by Pakistan Academy of Sciences and INFAQ Foundation Prize (2000); South Asian Publication Award 'Star Women 1994'; Gold Medal by University of the Punjab on 1<sup>st</sup> position in MSc (1972); Academic Roll of Honour, University of the Punjab (1972); Merit Scholarship from primary school to PhD.
- Fellowships/ Memberships:** Associate Member of ICTP (1992-1997); Member, International Crystallographic Society; Fellow, World Innovation Foundation since (2002); Life Member, Pakistan Institute of Physics; Life Member, Pakistan Physical Society; Life Member, Pakistan Vacuum Society; Fellow, Pakistan Nuclear Society (2002); Elective Member, Thin Film Division (TFD) of the IUVTSA (2010); Member, Oxford and Cambridge Society, Pakistan.
- Research Areas:** Transient Hot Strip (THS) and Transient Plane Source (TPS) techniques; Thermal transport properties of solids and liquids; High-Tc superconductors, Nanoferrites, Nanoparticles, electrical, dielectric and magnetic properties; Thin films of group II-VI semiconductors; Solar cells .Single crystal growth by flux method; Nano-composites.



## Marwat, Khan Bahadar

### FELLOW: Elected 2014

Born in Lakki Marwat, KP, Pakistan, on August 15, 1953

Address: House 114, St 2, Professors Colony  
Peshawar-25130

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**Education:** University of Illinois at Urbana-Champaign (USA): PhD (Weed Science), 1988; University of Peshawar, Peshawar: PhD (Botany), 1985; MSc (Botany) 1975; BSc, University of Peshawar, 1973.

**Positions Held:** Vice Chancellor, The Agriculture University, Peshawar/SBBU, Sheringel, Dir Upper; Meritorious Professor, 2004-2010; Professor, 1995-2004; Associate Professor, 1987-1995; Assistant Professor, 1982-1986; Lecturer, 1977-1982; Plant Taxonomist, 1976-1977, Agriculture University, Peshawar.

**Awards:** *Sitara-i-Imtiaz* by Government of Pakistan, 2012; President of Pakistan's Medal for S&T, 2008; HEC Best University Teacher Award for 2005; Outstanding Weed Science Award from Governor Punjab, 1993; Quaid-e-Azam Gold Medal, 2011; Research Productivity Award by Pakistan Council of Science & Technology.

**Fellowships/ Memberships:** Chairman, Agriculture Steering Committee of Italian sponsored Agriculture Development Project, Swat, Pakistan; Life Member and President, Weed Science Society of Pakistan; Life Member, International Weed Science Society; Member, Pakistan Botanical Society; Member & Founding President, Pakistan Ethnobotanical Society; Member, Pakistan Council for Science and Technology; President, Asia Pacific Weed Science Society (2007-2010); Executive Member Near-East, Weed Science Society (2007-date); Weed Science Society of Japan (2003-2010); Member, Weed Science Society of Philippine (2003-05); Member (Honorary), New York Academy of Sciences; Member (Honorary), Research Board of Advisors, The American Bibliographic Institute; Member, Weed Science Society of America (1984-91); Member, Core Group in Biological Science, HEC, Islamabad; Member, The University of Peace Foundation UNESCO CR; Principal Signatory of Memorandum of Sino-Pakistan Collaboration with Chinese Academy of Sciences for Biodiversity; Former Member, Pakistan Science Foundation; Member, Himalayan University Consortium; Member, Executive Committee of National Commission for Science and Technology, Pakistan.

**Research Areas:** Weed Ecology, Parasite Weeds, Invasive Weeds, Plant Taxonomy, Weed Management, Medicinal Plants, Ethnobotany.



## Miana, Ghulam Abbas

**FELLOW:** Elected 1998

Born in Dera Ismail Khan, British India on 2<sup>nd</sup> February, 1939

Rector/Director Research,  
Riphah Institute of Pharmaceutical Sciences, 7th Ave., G-7/4, Islamabad

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**Education:** University of Peshawar, Peshawar (Government College, D.I. Khan), Pakistan: B.Sc., 1959; M.Sc. (Chemistry), 1961; University of Calgary, Alberta, Canada: Ph.D., 1967.

**Positions Held:** Rector, Riphah International University, Islamabad, 2003 to date; Director Research, Riphah Institute of Pharmaceutical Sciences, Riphah International University, 2006 to date; Associate Dean, RARE Research Division, 2007-2013; Director, Hamdard Institute of Pharmaceutical Sciences, Hamdard University, 1999-2003; Whole Time Member, University Grants Commission, Islamabad, 1996-1999; UNIDO Expert on Botanical Pesticide, 1967 (China), 1996 (Thailand), 1990 (Germany); Gomal University, D.I. Khan: Vice Chancellor, 1987-1990, 1990-1993; Professor, 1974-1999; Chairman, Dept. of Chemistry, 1980-1981, 1993-1996; Chairman, Dept. of Pharmacy, 1974-1981; Visiting Professor, Institute of Herbal Medicine and Pharmacology, Hamdard University, Karachi, 1998 to date; Visiting Professor, HEJ Research Institute of Chemistry, University of Karachi, 1994 to date, Professor, King Saud University, Riyadh, Saudi Arabia, 1981-1986; Associate Professor, Quaid-i-Azam University, 1971-1974; Senior Research Officer, PCSIR Labs, Peshawar, 1961-1971. Secretary General, Pakistan Academy of Sciences, 2011-2012; Postdoctoral Research, 1970-1971; University of Calgary, University of Bonn, Germany: Humboldt Research Fellow; Postdoctoral Fellowship, 1973-74; German Cancer Research Centre, Heidelberg, Germany: Humboldt Research Fellow Postdoctoral Research, 1976; Pennsylvania State University, USA: Postdoctoral Research, 1978-79; London School of Pharmacy, University of London, UK: Postdoctoral Research, 1984.

**Awards:** *Sitara-i-Imtiaz*, Govt. of Pakistan, 1988; Gold Medal in M.Sc., University of Peshawar, 1961; Cash Prize for the best book by National Book Foundation, 1989.

**Fellowships/ Memberships:** Fellow, Chemical Society, UK; Fellow, Chemical Society of Pakistan, 1994; Fellow, Pharmaceutical Society of Pakistan, 1997; Fellow, Pakistan Institute of Chemistry, 1997; Member, Pakistan Nuclear Regulatory Board, 1998-2000; Member, Pakistan Academy of Sciences, 1983; Member, American Society of Pharmacognosy; Member, Scientific Society of Pakistan; Member, Pakistan Association of Scientists and Scientific Professions; Member, Pharmaceutical Society of Japan; Member, Phytochemical Society of Europe, UK; Member, American Chemical Society, USA; Member Executive Council, Society of Pakistan; Member and Executive Secretary, Chemical Society of Pakistan; Member of Syndicates and Boards of Governors of several Universities and R&D Organizations.

**Research/Areas:** Organic chemistry with special interest in alkaloid chemistry, pharmacological and pharmaceutical applications of medicinal plant derivatives.



## Mubarakmand, Samar

**Fellow: Elected 2003**

Born in Rawalpindi, British India, on 17th September, 1942

Chairman, Board of Governors (BoG)  
Underground Coal Gasification (UCG) Project, Govt. of Sindh  
Liaison Office: H. No. 28, Street No. 3, Sector E-11/4, Islamabad

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- Education:** Govt. College Lahore, University of the Punjab: M.Sc. (Physics) with academic roll of honour, 1962; University of Oxford, England: D.Phil. (Experimental Nuclear Physics), 1966.
- Positions Held:** Chairman, BoG, UCG Project, Thar; Co-Chairman, BoG, Balochistan Copper-Gold Project; Chairman, BoDs, Punjab Mineral Company; CEO, Board of Directors Thar Coal Power Company; Member (Science & Technology) Planning Commission, Govt. of Pakistan; Special Assistant to Prime Minister on Science & Technology, 2007-2008; Founding Chairman, National Engineering & Scientific Commission (NESCOM); Member (Technical), Pakistan Atomic Energy Commission (PAEC), 1995-2000; Director General, PAEC, 1994-1995; Director, PAEC 1985-1994; Chief Scientific Officer, PAEC, 1979-1985; Principal Scientific Officer, PAEC, 1973-1979; Senior Scientific Officer, PAEC, 1966-1973; Scientific Officer, PAEC, 1962-1966.
- Awards:** *Nishan-i-Imtiaz* (2003); *Hilal-i-Imtiaz* (1998); *Sitar-i-Imtiaz* (1992); Dr. Nazir Ahmed Award (2005); International Scientist of the Year (2007).
- Fellowships/Membership:** Life Member, Pakistan Nuclear Society; Founding Member, Society for Promotion of Engineering Science & Technology in Pakistan (SOPREST) and Board of Governors, GIK Institute, TOPI; Life Patron & Member, Board of Governors of Al-Shifa Trust; Member, Board of Governors, Muhammad Ali Jinnah University (MAJU); Member, Board of Governors, FAST National University; Member, Council of the Pakistan Academy of Science 2006-2008, 2011-2012; Member Syndicate, Govt. College University (GCU), Lahore; Member, BoG, Capital University of Science & Technology; Member, BoG, COMSATS.
- Research Areas:** Nuclear instrumentation; Nuclear Structure; Fiber Optics; Application of LASERS; Nuclear Weapon Systems; Nuclear Diagnostics; Aero Space Technology; Underground Coal Gasification; Power Generation and Mineral Exploration, Missile Technology.



## Muhammed, Amir

**FELLOW: Elected 1979**

Born in Udaipur, British India on 4th February, 1930

Rector, National University of Computer and Emerging Sciences, FAST House,  
Rohtas Road, G-9/4, Islamabad

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- Education:** University of the Punjab, Pakistan: B.Sc. (Hons), 1952; M.Sc. (Hons), 1953; Oxford University, UK: D.Phil., 1959.
- Positions Held:** Rector, National University of Computer and Emerging Sciences, Islamabad, 2000 to date; President, Asianics Agro-Development International, 1990 to date; Founder Chairman, Pakistan Agricultural Research Council (PARC) and Federal Secretary, Ministry of Agriculture, Govt. of Pakistan, 1978-1990; Advisor to President (Federal Minister), 1977-78; Vice Chancellor, University of Agriculture, Faisalabad, 1974-1978; Director, Nuclear Institute for Agriculture and Biology (NIAB), Faisalabad, 1969-1974; Research Associate, Biology Division, Oak Ridge National Laboratory, Oak Ridge, Tenn. USA, 1963-66; Principal Scientific Officer and Head Biology Division, Pakistan Atomic Energy Center, Lahore, 1966-1969; Senior Research Officer, Pakistan Council of Scientific and Industrial Research (PCSIR), Lahore, 1959-1961.
- Awards:** Gold Medal by Prime Minister (1989); PARC Silver Jubilee Award (2006); FAO Life Time Achievement Award (2002); Gold Medal in M.Sc. (1953) and Oman Prize in B.Sc. (Hons) (1952) from University of the Punjab; Academic Roll of Honor, Government College, Lahore; Merit Scholarship, Postgraduate Research, Oxford University, UK, 1956-1959.
- Fellowships/Memberships:** President, Pakistan Association for the Advancement of Science, 2000-2002; President, Pakistan Academy of Sciences, 1992-1996; President, Scientific Society of Pakistan, 1976-1977; Member, BOG International Centre for Integrated Mountain Development (ICIMOD, Kathmandu); Chairman BOG, Sustainable Development Policy Institute (SDPI); Chairman BOG, ISNAR (The Hague); Member, Technical Advisory Committee, CGIAR; Member, BOG of ICARDA (Syria), IWMI (Colombo), CIP (Lima), IFDC (USA); Member, BOG, PARC; Member, Scientific Planning Group of APN (Kobe); Member, Scientific Steering Committee of START (Washington); Chairman, Pakistan Vice Chancellors' Committee, 1976-1977.
- Research Areas:** Biochemistry, Molecular and Radiation Biology, Agricultural Development.



## Murtaza, Ghulam

**FELLOW: Elected 1991**

Born in Amritsar, British India, on 3<sup>rd</sup> January, 1939

Distinguished National Professor, Salam Chair, Government College University, Lahore.

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- Education:** Government College, Lahore / University of the Punjab, Lahore, Pakistan: B.Sc., 1958; M.Sc., 1960; Imperial College London / London University, UK: Ph.D./ D.I.C., 1966.
- Positions Held:** Salam Professor of Physics, Govt. College University, Lahore; Director, National Centre for Mathematics GC University, Lahore (2004-2006); Quaid-i-Azam University, Islamabad: Dean, Faculty of Natural Sciences (1996-1999), Chairman, Department of Physics (1977-1979, 1990-1993); Meritorious Professor (1993-2000); Professor (1976-1999); Associate Professor (1967-1976); Scientific Officer/Senior Scientific Officer, Pakistan Atomic Energy Commission (1962-1969); Lecturer, Mathematics Department, University of the Punjab, Lahore (1960-1962).
- Awards:** HEC Distinguished National Professor, 2010; PCST Research Productivity Award, 2002, 2003, 2005, 2007, 2008, 2010-2012; Senior Associate ASICTP, 1998-2004; Kharazmi International, 1997; *Sitara-e-Imtiaz* by the President of Pakistan, 1996; Cash-Prize for Research Publications by the Ministry of Science & Tech., 1996; Physicist of the Year, 1991; Gold Medal for Physical Sciences by the Pakistan Academy of Sciences, 1986; Academic Roll of Honour, Govt. College, Lahore (B.Sc., 1958, M.A. 1960).
- Fellowships:** Alexander von Humboldt Fellow, 1983; Commonwealth Academic Staff Fellow, 1971-1972.
- Research/Areas:** Theoretical Plasma Physics; Particle Physics.



## Nasim, Anwar

**FELLOW: Elected 2007**

Born in Pasrur, British India, on 7th December, 1935

President, Pakistan Academy of Sciences,  
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- Education:** University of the Punjab, Lahore: B.Sc., 1955; M.Sc., 1957; University of Edinburgh, UK: Postgraduate Diploma in Genetics, 1963; Ph.D., 1966.
- Positions Held:** Secretary General, Pakistan Academy of Sciences, 2013-2014; Founding President, Federation of Asian Biotech Associations (FABA), 2007; Patron, Pakistan Biotechnology Information Center (PABIC), 2006 to date; Patron, Pakistan Biological Safety Association (PBSA), 2008-date; Chairman, National Commission on Biotechnology of Pakistan, 2002-2009; Advisor Science, Organization of Islamic Conference (OIC) Standing Committee on Scientific & Technological Cooperation (COMSTECH), Islamabad, 1996 to 2011; Executive Secretary, Pakistan Academy of Sciences, Islamabad, 1994-1996; Adjunct Professor, Dept. of Microbiology and Immunology, University of Ottawa, 1983-1989; Dept. of Biology, Carleton University, Ottawa, 1984-1989; Principal Scientist and Head, Molecular Genetics Group, King Faisal Specialist Hospital and Research Center, Riyadh, Saudi Arabia, 1989-1993; Visiting Scientist, Max Planck Institute, Tubingen, Germany and the Biology Department, Stanford University, California, USA, 1978-1979; Senior Research Officer, National Research Council of Canada, 1973-1989; Research Officer, Atomic Energy of Canada Ltd, Chalk River, Canada, 1966-1973; Lecturer in Botany, Education Department, West Pakistan, 1957-1962.
- Awards:** Gold Medal in M.Sc., University of the Punjab, 1957; Academic Roll of Honor, Govt. College, Lahore, 1957; Overseas Pakistanis Institute Award for Outstanding Services in the Cause of Science in Pakistan, 1995; Pride of Performance in Molecular Genetics, Govt. of Pakistan, 1995; *Sitara-i-Imtiaz*, Govt. of Pakistan, 1999.
- Fellowships/ Memberships:** Fellow, Islamic World Academy of Sciences, 1998; Fellow, The World Academy of Sciences (TWAS), 1987; Member, Editorial Board, Mutation Research, 1975-81; Member, Editorial Board, Eubios Journal of Asian and International Bioethics, Japan, 1994 to date.
- Research Areas:** Molecular Genetics, Mechanisms of DNA Repair in Eukaryotes, Environmental Mutagenesis, Biotechnology and Bioethics.



## Qadir, Asghar

**FELLOW: Elected 1992**

Born in British India, on 23rd July, 1946

Department of Physics  
School of Natural Sciences (SNS)  
National University of Science & Technology (NUST)  
Sector H-12, Islamabad

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**Email:** aqadirmath@yahoo.com

**Education:** London University: B.Sc. (Hons.), 1967; Imperial College, London: A.R.C.S., 1967; D.I.C., 1968; London University: Ph.D., 1971.

**Positions Held:** Professor Emeritus, School of Natural Sciences, National University of Sciences & Technology (NUST), H-12, Islamabad, 2012-date; Professor, CAMP, 2004-2012 and Director General CAMP, 2004-2011; Professor, CAMP, NUST, Rawalpindi, 2003-2012; Distinguished National Professor (HEC) 2004-date; Professor, Department of Mathematics and Statistics, King Fahd University of Petroleum & Minerals, Dhahran, Saudi Arabia, 1994-1997 and 2000-2002, Adjunct Professor 2002-2015; Quaid-i-Azam University, Islamabad: Meritorious Professor, 2000-2004; Dean, Faculty of Natural Sciences, 1999-2000; Professor, 1987-2000; Professor, Associate Professor, 1982-1987; Chairman, Department of Mathematics, 1983-1986, 1988-1994, 1997-1999; Assistant Professor, 1973-1982; Research Associate, 1971-1972; Ghulam Ishaq Khan Institute of Engineering Sciences and Technology, Topi, Swabi, NWFP, 1993-1994; Professor, Department of Mathematics and Statistics, King Fahd University of Petroleum and Minerals, Dhahran, Saudi Arabia, 1994-1997; Vacation Worker, Rutherford High Energy Laboratory, Didcot, Oxfordshire, UK, 1966, 1967.

**Awards:** Lifetime Achievement Award by Abdus Salam School for Mathematics and National Centre for Mathematics, 2013; Visiting Professor at School for Computational & Applied Mathematics, University of the Witwatersrand, January 2013 and award from there 2012; Conference held in honour of 70<sup>th</sup> birthday and 65<sup>th</sup> birthday at Salento University of Lecce, Italy, 2016 and 2011 and at University of the Punjab, Lahore, 2011; *Hilal-i-Imtiaz*, 2008; Distinguished National Professor, 2004; Best Researcher of the Year, NUST, 2007; ISESCO Award, 2003; *Sitara-i-Imtiaz*, Govt. of Pakistan, 1999; Gold Medal, Pakistan Academy of Sciences, 1996; Khwarizmi First Prize, Govt. of Iran, 1995; Prize, National Book Council of Pakistan, 1991; Senior Fulbright Fellowship, University of Texas at Austin, Texas, USA, 1986-87; Fulbright Hayes Award, 1978-79; First Prize in General Knowledge Contest for High School Students, 1961.

**Fellowships/Memberships:** Senior Research Fellow, Pakistan Institute of Development Economics (PIDE), 1980-88, 1988-94; Joint Secretary, Al-Kindi Society for the Advancement of the Philosophy of Science, Islamabad, Pakistan, 1980; Associate Member and Senior Associate of the International Centre for Theoretical Physics, Trieste, Italy, 1980-1991, 1992-1999; Life Member and Vice-President, Albert Einstein Society (of Pakistan), 1985, 1987-date; Life Member, Joint Secretary and Secretary, Pakistan Physical Society, 1990, 1992, 1993; Life Member and President, Fulbright Alumni Association, 1992, 1993. Member, Editorial Board of several national and international journals.

**Research Areas:** Relativity, Astrophysics, Cosmology, Lie Analysis, Special Functions, High Energy Physics, Mathematical Economics.



## Qaiser, Mohammad

**FELLOW: Elected 2004**

Born in Saharanpur, British India, on 15th August, 1946

Vice Chancellor, University of Karachi, Karachi-75270

**Tel:** 021-9926 1336 & 37

**Mob:** 0334-317 4624

**Email:** qaismd@gmail.com, vc@uok.edu.pk

**Education:** University of Karachi, Karachi, Pakistan: M.Sc., 1967; Ph.D., 1976.

**Positions Held:** Vice Chancellor, University of Karachi, Karachi; Vice Chancellor, Federal Urdu University, Karachi; 2008-2013; University of Karachi: Dean, Faculty of Science, 2004; Chairman, Department of Botany, 2001-2004; Professor, 1985-2006; Associate Professor, 1982-1985; Assistant Professor, 1977-1982; Lecturer, 1973-1977; Assistant Lecturer, 1967-1973. Postdoctoral Fellow and Visiting Scientist, Botanischer Garten Museum, Frei University, Berlin, 1984-1985; Assistant Professor, Department of Botany, Al-Fateh University, Tripoli, Libya, 1978-1982.

**Awards:** Gold Medal, Pakistan Academy of Sciences, 2004; Gold Medal, Ministry of Education, Government of Pakistan, 2005. Life Time Award, Pakistan Botanical Society, 2012.

**Fellowships/Memberships:** Fellow, TWAS (The World Academy of Sciences); Alexander von Humboldt Fellow (AvH), Germany; Member, International Society of Plant Biosystematics (IOPB).

**Research/Areas:** Plant Systematics, Flora of Pakistan, Phytogeography, Pollen Morphology and Conservation Biology.



## Qamar, Raheel

### FELLOW: Elected 2009

Born in Abbottabad, Pakistan on 14th January, 1962

Tenured Professor of Biochemistry, Dean of Research, Innovation & Commercialization, COMSATS Institute of Information Technology, Park Road, Islamabad

**Tel:** (92-51) -9249 5036

**Mob:** 0321-511 9494

**Email:** draaheel@gmail.com, raheel\_qamar@comsats.edu.pk

**Education:** BSc, 1982; MSc, 1985; PhD, 1992.

**Positions Held:** Tenured Professor of Biochemistry & Molecular Biology, COMSATS Institute of Information Technology (CIIT), Islamabad, 2009-Present; Dean, Research, Innovation & Commercialization, CIIT, 2011 to date; In-charge (Director), CIIT Islamabad Campus, 2010 to date; Distinguished NUST Professor (Visiting), Atta-ur-Rahman School of Applied Biosciences, National University of Science and Technology (NUST), 2012-2015; Professor of Biosciences, CIIT, 2005-2009; Dean, Faculty of Science, CIIT, 2008-2011; Chairman Department of Biosciences, CIIT, 2005-2008; Director Research & In charge PCR Labs, Shifa College of Medicine, 2003-2012; Lecturer, The Human Genome Project (HUGO), UK, 1998-Present.

**Awards:** *Tamgha-i-Imtiaz* by President of Islamic Republic of Pakistan, 2008.

**Fellowships/ Memberships:** Member Editorial Board, World Journal of Ophthalmology; Vice Chairman/Member Ethics Committee/Institutional Review Board, Shifa International Hospital and Shifa College of Medicine, Islamabad, 2012-2013; Wellcome Trust Fellowship, UK, 1998-2001; Robert A. Welch Foundation Fellowship, USA, 1987-1988.

**Research Areas:** Molecular Genetics, Molecular Pathology, Enzymology.



## Qureshi, Riaz Hussain

### FELLOW: Elected 2003

Born in Tehsil Kharian, Gujrat, British India, on 17th May, 1943

House No. 24, St. No. 25, Korang Town, Islamabad

**Tel:** (92-51) 595 8183

**Mob:** 0337-749 7786

**Email:** rqureshi@hec.gov.pk

**Education:** University of Agriculture (WPAU, Lyallpur), Faisalabad: B.Sc. Agri., 1962; M.Sc. Agri., 1964; University of Bangor, Wales, UK: Ph.D., 1969.

**Positions Held:** Advisor (Human Resource Development), Higher Education Commission (HEC), 2010-2013; Advisor (QA & LI), HEC, 2004-2010; Vice Chancellor, University of Agriculture Faisalabad (UAF), 1999-2004; Professor Emeritus, UAF, 2004 to date; Dean, Faculty of Agriculture, UAF, 1998-1999; Director Research, UAF, 1996-1997; Chairman, Department of Soil Science, UAF, 1991-1997; Professor, Dept. of Soil Science, UAF, 1987-2004; Salinity Expert, Islamic Development Bank, Sultanate of Oman, 1994-1995; Nominee of HEC on Selection Board, Syndicate and Senate of various Universities; Postdoc, 1983; Colorado State University, Fort Collins, USA: Postdoc, 1989.

**Awards:** Pride of Performance (Agri), 1997; Dr. Norman E. Borlaug Award, 1994; Sir William Roberts Shield, 1992; Golden Star by National Farm Guide Council of Pakistan, 1987; 11th Golden Star Award for Man of the Year, 2000; Agha Hassan Abedi Prize by Pakistan Academy of Sciences for Best Scientist of the Year, 2000; Research Productivity Allowance, Pakistan Council for Science & Technology; Nominee of Govt. of Pakistan for World Food Prize, 2005.

**Fellowships/ Memberships:** President, Soil Science Society of Pakistan; Member, of all important national committees and institutional committees on Soil Salinity; Chief Editor (8 years), Pakistan Journal of Agricultural Sciences; Member, Syndicate University of Agriculture, Faisalabad; Member, Steering Committee, International Irrigation Management Institute; Member, Research Advisory Committees of PARC and NIBGE.

**Research Areas:** Saline Agriculture, Soil Salinity, Drought Tolerance of Plants.



## Raouf, Abdul

**FELLOW: Elected 1997**

Born in Jullundur, British India, on 15th January, 1929

HEC Distinguished National Professor

**Tel:** ( 042)-3516 3236; (Off) 042) 3518 4793

**Mob:** 0300-847 4674

**Email:** abdulraouf@umt.edu.pk

- Education:** University of Windsor, Ontario, Canada: Ph.D.; University of Toledo, Ohio, USA: M.S.I.E.; University of Michigan, USA; Purdue University, USA; University of Toronto, Canada; Wayne State University, USA.
- Positions Held:** Distinguished National Professor, HEC; Patron & Advisor, The Orbit Group, Lahore; Advisor & Professor, UMT (till 2012) Professor Emeritus, UMT; Rector, GIK, 1984-1994; Professor, Department of Systems Engineering, 1983-1984; Professor, University of Windsor, Canada, 1976-1982; Professor & Head, Department of Industrial Engineering, 1975-1976; Visiting Professor, Middle East Technical University, Ankara, Turkey, 1968-1974; Associate Professor, Industrial Engineering, University of Windsor, Canada, 1966-1968; Assistant Professor, Industrial Engineering, University of Windsor, Canada, 1965-1966; Quality-Method Engineer, Canadian Acme Screw & Gear, Toronto, Canada.
- Awards:** *Sitara-i-Imtiaz*, Govt. of Pakistan, 1998; Agha Hasan Abedi Prize, Pakistan Academy of Sciences, 2011; Long Life Scholarship Award by University of Management and Technology, 2011; Best Book on Quality Award by Pakistan Institute of Quality Control, 2011; Best Research Paper Award by HEC; Best Engineer of the Year Award.
- Fellowships/ Memberships:** Fellow, Institute of Engineers (Pakistan); Fellow, Institute of Management Services; Fellow, Ergonomics Society (UK); Senior Member, American Institute of Industrial Engineers; Member, Human Factors Society; Member, Human Factors Association of Canada; Professional Engineer, Pakistan Engineering Council; Professional Engineer in the Province of Ontario, Canada; Member, National Productivity Council, Govt. of Pakistan, 1966-1999; Member, Executive Committee, Pakistan Engineering Council, 1966-1999; Member, Vice Chancellors, Committee, Engineering Universities/Institutions, Govt. of Pakistan, 1996-99; Chairman, National Quality Assurance Committee, HEC, 2001 to date. Chairman, National Quality Assurance Committee at HEC.
- Research Areas:** Maintenance Engineering & Control, Prediction of Human Performance in Man-machine System, Occupational Safety; Application of Operations Research in Optimizing Man-machine System and Total Quality Management.



## Rashid, Abdul

**FELLOW: Elected 2013**

Born in Faisalabad, Pakistan, on 4th April, 1950

Editor-in-Chief  
Pakistan Academy of Sciences, 3-Constitution Avenue, G-5/2, Islamabad

**Tel:** (Off) 051 920 7140, (Res) 051 444 9191

**Mob:** 0308-520 3032

**Email:** dr.rashid50@gmail.com

- Education:** PhD (Agronomy & Soil Science), 1986, University of Hawaii, Honolulu, Hawaii, USA – as East West Center scholar; MSc (Hons) Soil Science, 1972, University of Agriculture, Faisalabad.
- Positions Held:** Editor-in-Chief, Pakistan Academy of Sciences, Islamabad, 2011–present; Member (Bio-Sciences), Pakistan Atomic Energy Commission (PAEC), Islamabad, 2008–2011; Chief Scientist & Director General, National Agricultural Research Center (NARC), Islamabad, 2006–2008; Chief Scientific Officer & Deputy Director General/Program Leader, NARC, Islamabad, 2000–2006; Crawford Fund Fellow at CSIRO Land & Water, Adelaide, Australia, 2000; Visiting Scientist, International Center for Agricultural Research in the Dry Areas (ICARDA), Aleppo, Syria, 2001; Principal Scientific Officer & Program Leader, NARC, Islamabad, 1987–2000; East-West Center (Hawaii, USA) Joint Doctoral Research Intern 1984–86; Senior Scientific Officer, NARC, Islamabad, 1979–1987; Scientific Officer, Nuclear Institute for Agricultural & Biology (NIAB), Faisalabad, 1973–1979.
- Awards:** International Plant Nutrition Science Award by International Plant Nutrition Institute, USA, 2017; J. Benton Jones Award, by Soil and Plant Analysis Council, USA, 2017; IFA Norman Borlaug Award for excellence in crop nutrition research, by International Fertilizer Association (IFA), Paris, 2013; East-West Center (Hawaii, USA) Distinguished Alumni Award, 1998; Best Article Award, by International Rice Research Institute (IRRI), 2004; PARC Silver Jubilee Award, by President of Pakistan, 2006; Dr. Norman Borlaug Award, by Government of Pakistan, 2005; PARC Scientist of the Year Award, by Pakistan Agricultural Research Council, 1999; National Book Foundation Award, 1997; Research Productivity Award, by Pakistan Council for Science & Technology, 2002, 2012; and multiple Awards by PARSA (Pakistan Agricultural Research Council Scientists Association), 1995–2004.
- Fellowships/ Memberships:** Fellow, Indian Society of Soil Science, 2006; Fellow, Soil Science Society of Pakistan, 2008; President, Soil Science Society of Pakistan, 2005–2006. Editorial Board Member, European Journal of Agronomy, 2001–date and Communications in Soil Science & Plant Analysis, 2003–date; Guest Editor, Communications in Soil Science & Plant Analysis, 2016; Member, Technical Advisory Committee (TAC) of BoD of ALP, PARC, 2017–date.
- Research Areas:** Soil Fertility & Crop Nutrition, Micronutrients, Agronomic Biofortification, Soil Resource Evaluation.



## Riazuddin, Sheikh

**FELLOW: Elected 1997**

Born in Lahore, British India, on 15th April, 1944

HEC Distinguished National Professor

**Mob:** 0321-842 9448

**Email:** riazuddin@aimr.org

- Education:** Government Collage, Lahore/ University of the Punjab, Lahore, Pakistan: M.Sc., 1965; University of Reading, UK: Ph.D., 1970.
- Positions Held:** Executive Director A-IMB & Visiting Professor, Seoul National University, Seoul, South Korea, 2009–2013; Distinguished National Professor, Higher Education Commission, 2004 to date; Meritorious Professor, 2002; Professor (Rtd), National Center of Excellence in Molecular Biology, University of the Punjab, Lahore, 1985; Visiting Professor, Department of Biochemistry, University of Washington, Seattle, USA, 1988–2004; Principal Scientific Officer, Nuclear Institute for Agriculture and Biology (NIAB), Faisalabad, 1977–1985; Senior Scientific Officer, NIAB, Faisalabad, 1970–1977; Scientific Officer, PAEC, Lahore, 1966–1970.
- Awards:** LIARC Senior Postdoctoral Award, 1977; Swiss Prize (Isabelle De Caze De Nue), IARC, Lyon, France, 1978; Gold Medal, Pakistan Academy of Sciences, 1982; *Tamgha-i-Imtiaz*, 1984; Gold Medal, Johns Hopkins Society of Scholars and Member, since 1989; Rockefeller Foundation's Biotechnology Career Fellow, 1989–2004; *Sitara-i-Imtiaz*, 1994; Khwarizmi International Prize by Iranian Govt., 1997; Carlos J. Finally Prize for Microbiology, UNESCO, 1997; *Izaz-i-Kamal*, 1998; *Hilal-i-Imtiaz*, 2004; Distinguished Scientist of the Year 2004 by Pakistan Academy of Sciences.
- Fellowships/ Memberships:** Fellow, Pakistan Academy of Medical Sciences, 1997; The Academy of Sciences for the Developing World (TWAS), 1993; National Academy of Medical Sciences, 1995; The Chemical Society of Pakistan, 2003; American Academy of Microbiology, 2004; Member: American Phytopathological Society, 2001; American Society for Biochemistry and Molecular Biology, 2001–2003; New York Academy of Sciences; 1991–1998; HUGO 1997; Asia Pacific IMBN, 2000.
- Research/Areas:** Molecular Biology, Molecular Genetics.



## Saleem, Hamid

### Fellow: Elected 2012

Born in Rawalpindi, Pakistan, on 5th June, 1954

Professor, Dept. of Space Science, Institute of Space Technology (IST), Islamabad  
Director (Honorary), Theoretical Research Institute, Pakistan Academy of Sciences (TRIPAS), Islamabad

**Tel:** 051-236 0265

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**Email:** saleemh@hotmail.com, Ncp-office@ncp.edu.pk

**Education:** Ph.D. (Plasma Physics), Quaid-i-Azam University, Islamabad (Research work done in Germany under DAAD Fellowship), 1996; M.Sc. (Nuclear Engineering), 1980; M.Sc. (Mathematics), 1978; M.A. (Urdu Literature), University of the Punjab Lahore, 1978; B.Sc. (Math, Phys) 1974.

**Positions Held:** Director General, National Center for Physics (NCP), Quaid-i-Azam University Campus, Islamabad, 2008-2014; Director, Theoretical Physics Department, NCP, 2008-2014; Adjunct Professor in Department of Physics, COMSATS Institute of Information and Technology (CIIT), Islamabad; Adjunct Professor in Department of Mathematics, QAU, Islamabad; Adjunct Professor in Department of Physics, Pakistan Institute of Engineering and Applied Sciences (PIEAS), Nilore; Post-doc Fellow, National Institute for Fusion Science, Toki, Japan, 1996-1998.

**Awards:** Dr. M. Raziuddin Siddiqi Prize for Young Scientists under 40 for Physics by Pakistan Academy of Sciences (PAS), 1993; Gold Medal/Performance Award, by PINSTECH, 2001; PAS Gold Medal in Physics, by Pakistan Academy of Sciences, 2004; *Tamgha-i-Imtiaz* by Govt. of Pakistan, 2004; Pride of Performance by Govt. of Pakistan, 2013.

**Fellowships/ Memberships:** Senior Associate at AS-ICTP, Trieste, Italy, 2001 to date; Member, German Alumni Forum, Islamabad; General Secretary, "Pakistan Chapter of AS-ICTP" for the year 2001.

**Research Areas:** Plasma Physics and Astrophysics.



## Saleem, Muhammad

### FELLOW: Elected 1999

Born in British India, on 14th December, 1937

Surgeon General Army & Director General Medical Services

**Home Address:** H. No. 1-H 115, Falcon Complex ,  
PAF Officers Housing Colony, Gulberg-II, Lahore

**Tel:** 042-9923 0098

**Mob:** 0321-842 8721

**Education:** University of the Punjab, Lahore, Pakistan: M.B.B.S., 1959, DCP, 1966; London: MRC Path, 1975, FRC Path, 1987; Pakistan: FCPS, 1990; Edinburgh: FRCP, 1996.

**Positions Held:** Surgeon General Army & Director General Medical Services (Inter-Services), 1996-1997; Professor and Head Department of Haematology, Armed Forces Institute of Pathology, Rawalpindi, 1994-1996; Professor and Head of Lab Division, Army Medical College, Rawalpindi, 1992-1994; Deputy Commandant, Armed Forces Institute of Pathology, Rawalpindi, 1988-1992; Visiting Professor, Army Medical College, Rawalpindi, 1982-1992; Consultant Haematologist, Riyadh Military Hospital, Riyadh, Saudi Arabia, 1980-1982; Director, Clinical Laboratory, MH Taif, Saudi Arabia, 1978-1980; Instructor in Pathology, Armed Forces Medical College, Rawalpindi, 1975-1978; Honorary Research Assistant (Haematology), Royal Postgraduate Medical School, Hammersmith Hospital, London, UK, 1975; Instructor, Armed Forces Medical College, Rawalpindi, 1972-1975; Senior Registrar and Honorary Clinical Tutor, Queen Elizabeth Hospital, UK, 1970-1972; Registrar, Dryburn Hospital, Durham, UK, 1969-1970; General Duty Medical Officer, Pakistan Armed Forces, 1960-1962.

**Awards:** *Hilal-i-Imtiaz*, (Military), Govt. of Pakistan.

**Fellowships/ Memberships:** President, Pakistan Association of Pathologists; Founding President, Pakistan Society of Haematology; Member, Executive Council, Asia-Pacific Association of Societies of Pathologists; Member, World Association of Societies of Pathologists; Member, Pakistan Medical Association; Member, Pakistan Medical & Dental Council; Member, Pakistan Science Foundation; Managing Editor, Pakistan Journal of Pathology; Chairman Editorial Board, Pakistan Armed Forces Medical Journal, 1996-1997.

**Research/Areas:** Haematology.



## Shah, S. Riaz Ali

**FELLOW: Elected 1974**

Born in Lahore, British India, on 20th October, 1924

Company Director, Pakistan (PVC), Karachi

**Tel:** (92-42) 572 3351

**Mob:** 0300 402 2914

**Email:** bwpak@brain.net.pk

**Education:** University of the Punjab, Lahore, Pakistan: B.Sc. (Hon's), M.Sc. (Chem. Tech.); Birmingham University, UK: Ph.D., London, A.R.I.C., F.S.S.P.; U.S.A., M.I.T.

**Positions Held:** Company Director, Pakistan, (PVC), Karachi, 1992; Consultant, Pakistan Science Foundation, 1984-1987; Director, PASTIC, 1983; Director General, Pakistan Museum of Natural History, 1982-1984; Director, Pakistan Council for Scientific and Industrial Research Labs. (PCSIR), Karachi, 1981-1982; Director PCSIR, Peshawar, 1972-1981; Acting Director, 1972; Head, Mineral Research Division, 1970; PCSIR, Karachi: Acting Head, Chemistry Research Division, Acting Head, Physics Research Division, Principal Scientific Officer, 1964-1970; Senior Research Officer, 1959; Research Officer, 1958; In charge, Pakistan Mint Department, Lahore, 1952-1954; Lecturer, University of the Punjab, Institute of Chemical Technology, 1947-1952; Teaching Position, University of Birmingham.

**Awards:** Academic Roll of Honor, Govt. College, Lahore; Open Gold Medal of Pakistan Academy of Sciences.

**Fellowships/ Memberships:** Fellow, Pakistan Academy of History & Philosophy of Science; Fellow, Institute of Chemical Engineers (F.I.Ch.E.); Associate, Royal Institute of Chemistry.

**Research Areas:** Analytical Chemistry with contributions in areas of research in glass & ceramics, minerals & building materials.



## Shakoory, Abdul Rauf

**FELLOW: Elected 1991**

Born in Sialkot, British India, on 1st October, 1942

Director, School of Biological Sciences, University of the Punjab, New Campus, Lahore 54590

**Tel:** (92-42) 9923 0133

**Mob:** 0333 467 3255

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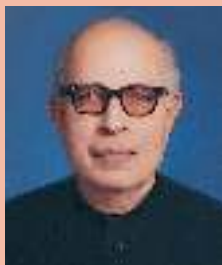
**Education:** University of the Punjab, Lahore, Pakistan: B.Sc., 1960; M.Sc., 1962; University of Hohenheim, Stuttgart, West Germany: D.Sc. (Dr.rer.net.), 1972.

**Positions Held:** Member, Board of Governors, Punjab Curriculum and Textbook Board, 2015-date; Chairman, Apex Committee, Punjab Curriculum and Textbook Board, 2015-date; Member, Board of Directors, Punjab Education Foundation (PEF), 2016-date; Member, Executive Council, PEF, 2016-date; Visiting Professor, King Saud University, Riyadh, KSA, 2013 to date; University of the Punjab, Lahore: Professor Emeritus, 2009 to date; Distinguished National Professor, 2005 to date; Meritorious Professor and Director School of Biological Sciences, 2000 to date; Professor, 1987-2000; Chairman, Department of Zoology, 1996-1999, 2002; Chairman, Department of Microbiology and Molecular Genetics, 2000-2002; Associate Professor, 1979-1987; Assistant Professor, 1972-1979; Lecturer, 1963-1972; Co-Director, Center for Advanced Molecular Biology, 1984-1991; Director, B.Sc. Hons. Program, 2000-2002; Visiting Professor: University of Massachusetts Medical Center, Worcester, USA, 1989-2012; University of Marburg, Germany, 1996; Kings College, London, 1997; University of Essex, UK, 1999; Lecturer, Govt. Degree College, Jhelum, 1962-1963.

**Awards:** Roll of Honor, Govt. College, Lahore, 1962; Cash Prize and Commendation Certificate for Research Work, University of the Punjab, Lahore, 1979, 1983; Cash Prize, National Book Council of Pakistan, 1988; Scientist of the Year Award, Govt. of Pakistan, 1986, 1997; Senior Fulbright Fellowship, 1992-93; Award of Honor, Zoological Society of Pakistan, 1995; Senior DAAD Fellowship, 1996; *Aizaz-i-Kamal*, Govt. of Pakistan, 1996; Zoologist of the Year Award, 1997; Fellowship of Royal Society, UK, 1998; *Tamgha-i-Imtiaz*, Govt. of Pakistan, 1999; Research Productivity Award, 2002-2008, 2010-2013; Distinguished Scientist of the Year, 2011; Rated at first position among Zoologists of the country and among the top five biologists of the country by PCST in 2011; ECO Award, 2012; rated top most Productive Scientist in Biological Sciences in 2013 by PCST.

**Fellowships/ Memberships:** Fellow, The World Academy of Sciences for the Developing World (TWAS), 2004 to date; Zoological Society of Pakistan, 1968-date; New York Academy of Sciences; President, Zoological Society of Pakistan, 2002-2009, 2013-2016, 2017-2020; Secretary General, Zoological Society of Pakistan, 1991, 2009-2012 and Pakistan Association for Experimental Biologists, 1979-1980; Chief Patron, Zoologists Association of Pakistan, 1987-1990; Pakistan Journal of Zoology, Editor, 1980-2016; Chief Editor, 2016-date.

**Research Areas:** Cell and Molecular Biology with special interest in Gene Expression, Cancer Biology, Biochemical Toxicology and Environmental Biotechnology, Molecular Basis of Hereditary Diseases.



## Shami, Misbah-ud-Din

**FELLOW: Elected 1982**

Born in Jullundur City, British India, on 1st October, 1930

Vice President, Islamic World Academy of Sciences; Treasurer, Pakistan Academy of Sciences, 3-Constitution Avenue, G-5/2, Islamabad

**Tel:** (92-51) 920 4657

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**Fax:** (92-51) 920 6770

**Email:** Shami1930@yahoo.com

**Education:** University of the Punjab, Lahore: B.Sc., 1950; M.Sc., 1952; Washington State University, USA: Ph.D., 1964.

**Positions Held:** Advisor to the Chancellor, Hamdard University, Karachi, Pakistan, 1998 to date; President, Pakistan Academy of Sciences, 1988-92; Secretary General, Pakistan Academy of Sciences, 1984-88, 1992-96, 1998-2002; Treasurer, Pakistan Academy of Sciences, 2005-2008; Associate Secretary General, Pakistan Academy of Sciences, 2009-2010; Vice-President, Pakistan Academy of Sciences, 2011-2014; Project Coordinator for the World Bank-assisted Project on "Higher Education and Scientific Research", 1993-1996; Chairman, Pakistan Science Foundation, Ministry of Science & Technology, Government of Pakistan, 1980-1990; Whole-time Member, University Grants Commission, Islamabad, (Status of Vice Chancellor), 1976-1980; University of the Punjab, Lahore: Pro-Vice Chancellor, 1974-1976; Dean, Faculty of Science, Engineering and Pharmacy, 1973; Director, Institute of Chemical Engineering and Technology, 1972-1974; Professor, 1970-1974; Reader (Associate Professor), 1966-1970; Postdoctoral Fellowship by the Royal Society of UK at Imperial College of Science & Technology, London, 1969; Lecturer, 1952-1966; Member, Advisory Committee on Education, Government of Pakistan, 2014 to date.

**Awards:** *Sitara-i-Imtiaz* by President of Pakistan, 1990; First Pakistani to receive International UNESCO Kalinga Prize, 1990; Niels Bohr Medal by UNESCO, 1990; Pakistan Talent Forum National Award, 1987; Allama Iqbal Centenary Commemorative Medal, 1974; Pakistan Academy of Sciences Golden Jubilee Medal, 2002; Legend of Institute of Chemical Engineering & Technology, University of the Punjab, 2001; Medal by the Higher Council for Science and Technology, Jordan; Lifetime Achievement Award by the Pakistan Institute of Chemical Engineers (PICH), Lahore, 2010.

**Fellowship/Membership:** Former President, Vice President and Secretary General, Pakistan Academy of Sciences; Founding Fellow and Vice-President, Islamic World Academy of Sciences; Fellow and Former President, Pakistan Institute of Chemical Engineers; Fellow and Former Vice-President, The Chemical Society of Pakistan; Member and Former President, Pakistan Association of Scientists and Scientific Professions; Life Member and Former President, Pakistan Association for the Advancement of Science; Member, Syndicates/Boards of Governors, Selection Boards, Finance & Planning Committees of several Public and Private Universities and R&D Organizations; First Pakistani Member, International Advisory Panel of East-West Center, Hawaii, USA; Member, Editorial Boards of six Scientific Journals.

**Research Areas:** Inorganic Analytical Chemistry, Chemical Process Technology and Chemical Crystallography.



## Sharif, Muhammad

**FELLOW: Elected 2010**

Born in Pakistan, on June 15, 1962

Department of Mathematics, University of the Punjab, Quaid-e-Azam Campus, Lahore

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**Fax:** (92-42) 9923 0329

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**Email:** msharif.math@pu.edu.pk

**Education:** Islamia University Bahawalpur, B.Sc., 1983; Quaid-i-Azam University, Islamabad, M.Sc. 1985; Quaid-i-Azam University, Islamabad, M.Phil., 1987; Quaid-i-Azam University, Islamabad, Ph.D., 1991.

**Positions Held:** Chairman, Department of Mathematics, University of the Punjab, Lahore, 2013, Tenured Professor, 2012; Professor, University of the Punjab, Lahore, 2005 to date; Associate Professor, University of the Punjab, Lahore, 2001 to 2005; Assistant Professor, University of the Punjab, Lahore, 1994 to 1995; Research Officer, Quaid-i-Azam University, Islamabad, 1989 to 1992; Senior Research Assistant, Quaid-i-Azam University, Islamabad, 1987 to 1991; Junior Research Assistant, Quaid-i-Azam University, Islamabad, 1985 to 1987.

**Awards:** HEC Distinguished National Professor, 2010; Pakistan Academy of Sciences Gold Medal, 2009; Best Research Paper Award, 2009; Best University Teacher Award, 2008; *Tamgha-i-Imtiaz*, Govt. of Pakistan, 2008; *Izaz-i-Fazeelat*, Govt. of Pakistan, 2007; Dr. Raziuddin Siddiqi Prize 2002; Research Productivity Award, 2001-2012.

**Fellowships/** Dr. Raziuddin Siddiqi Research Fellowship 1987; Post-Doctoral Fellowship, 2000 -2003.

**Memberships:**

**Research/Areas:** Gravitational Theory, Astrophysics and Cosmology.



## Sheikh, Muhammad Akram

**FELLOW: Elected 2012**

Born in Phagwara, British India, on 15th June 1943

Senior Advisor, National University of Sciences & Technology (NUST), Islamabad, Founder, Co-Chair & Distinguished Senior Fellow, Global Think Tank Network (GTTN) & Founding Co-Chair, Corporate Advisory Council (CAC), NUST, Islamabad

**Director**, Allied Bank Ltd, Tricon Boston Consulting (Pvt) Ltd (Sapphire Group), Quality Schools Foundation

**Tel:** 051-225 5061

- Education:** University of Engineering and Technology, Lahore: B.Sc. Engg. (Hons), 1962; SEATO Graduate School of Engineering, UK: Post Graduate Certificate in Soil Mechanics, 1963; The University of Leeds, UK: M.Sc. (Structural Engg), 1965; The University of Calgary, Alberta, Canada: Ph.D., (Structural Engg), 1967.
- Positions Held:** Professor Emeritus, NUST; Advisor to the Army on Planning & Development in Nation Building & Welfare Activities, Islamabad, 2009-2015; Advisor, International Steels Ltd., 2008-2016; Federal Minister / Deputy Chairman, Planning Commission of Pakistan, 2004-2008; Executive Director, Higher Education Commission, 2003-2004; Federal Secretary, Ministry of Industries & Production, 2001-2003; Chairman / CEO, Engineering Development Board, 2002-2004; Chairman, Pakistan Engineering Council, 2002-2008; Federal Secretary, Ministry of Water & Power, 2000-2001; Federal Secretary, Ministry of Communication, 1998-2000; Vice Chairman / Chief Executive, Engineering Development Board, 1995-2002; Chairman, State Engineering Corporation, 1991-1998; Chief Executive, Special Technical Cell/Experts Advisory Cell, 1989-1991; Managing Director, Pakistan Steels, 1985-1989; Managing Director / Chief Executive, Heavy Foundry & Forge Engineering Ltd., 1974-1984; General Manager/ Chief Engineer, PIDC, 1968-1974; Research Associate / Lecturer, McGill University, Montreal, Canada, 1967-1968; Post Graduate Fellow/ Teaching Assistant, 1965-1967; Design Engineer, WAPDA, Lahore, 1962-1964.
- Awards:** Gold Medal in B.Sc. Engineering, UET Lahore; Commonwealth Scholar in M.Sc., The University of Leeds, UK; The Institution of Engineers Pakistan Life Time Achievement Award, 2007; Public Service Award of *Hilal-i-Imtiaz*, Government of Pakistan, 2005; Ph.D Degree Honoris Causa by UET, Lahore, 2010.
- Fellowships/ Memberships:** Member / Fellow, Institute of Engineers, Pakistan; Member / Fellow, Pakistan Engineering Council; Distinguished Senior Fellow, NUST (GTTN).
- Research Areas:** Science and Technology-driven Economic Development; Engineering Goods Manufacturing; Management of Public Sector Large Organizations; Synthesizing Diverse and Conflicting National Requirement to Formulate Long-term Holistic & Integrated Strategic Plans, National Vision and Public Sector Policies; Co-Founder of China-Pakistan Trade, Transport, Energy and Industrial Corridor (renamed CPEC); Rapid & Sustainable Social, Economic, Strategic and Ethical Development using Knowledge Inputs.



## Shinwari, Zabta Khan

**Fellow: Elected 2008**

Born in Kohat, Pakistan, on 3rd March, 1959

Secretary General Pakistan Academy of Sciences 3-Constitution Avenue, Islamabad  
Chairman, Biotechnology Department, Quaid-i-Azam University, Islamabad  
Treasurer, The Association of Academies and Societies of Sciences in Asia (AASSA)  
Fellow, Islamic World Academy of Sciences

**Tel:** 051 906 44187, 051 906 44129, 051-920 4843

**Email:** shinwari2008@gmail.com, shinwari@qau.edu.pk

- Education:** University of Peshawar, Pakistan: BSc, 1980; MSc, 1983; Quaid-i-Azam University, Pakistan: MPhil, 1986; Kyoto University, Japan: PhD, 1994.
- Positions Held:** Treasurer, The Association of Academies and Societies of Sciences in Asia (AASSA) 2016-2018; Quaid-i-Azam University, Islamabad: Dean, Faculty of Biological Sciences, Quaid-i-Azam University, Tenured Professor & Chairman, Biotechnology Department, 2009-2018; President, National Council for Tibb, 2015-2020; Secretary General, Pakistan Academy of Sciences, 2015-2017; Chief Executive, Qarshi Research International/ Vice Chancellor/Project Director, Qarshi University, Lahore, 2006-2009; State Dept /Inst. Int. Edu, USA Leadership Program, 2006; Vice Chancellor/Project Director (Additional charge), University of Science and Technology, Bannu, KP, Pakistan, 2005-2006; Vice Chancellor, Kohat University Science and Technology, KP, Pakistan, 2004-2006; Programme Leader, COMSTECH-PTCL Frontier Technologies Research Center (CPC), 2003-2004; Technical Coordinator Applied Ethnobotany Project, WWF Pakistan, 2001-2003; Senior Scientific Officer, National Agricultural Research Centre, Islamabad, 1995-2001; JIRCAS Fellow, 2001; STA Fellow, 1999 (JIRCAS-Japan); Post Doc Fellow, 1996-98, Japan International Research Center for Agricultural Sciences (JIRCAS); Research Associate, Pakistan Museum of Natural History, Islamabad, 1985-1995; Research Officer, Herbarium Quaid-i-Azam University, Islamabad, 1983-1985.
- Awards:** National Civil Award Tamgha-e-Imtiaz, 2011; Best University Teacher Award by Higher Education Commission-Pakistan, 2012; Declared Number One Biologist by Pakistan Council for Science and Technology (PCST), 2014; Research Productivity Award in Category "A" by PCST; UNESCO Laureate (Avicenna Gold Medalist for Ethics in Science, 2015 – Cash Prize of the UNESCO Award donated to Pakistan Academy of Sciences for establishing Prof. Zabta K. Shinwari Gold Medal in Biotechnology for Scientists under 50.
- Fellowships/ Memberships:** Fellow, Islamic World Academy of Sciences Member, 2016; World Commission of Ethics in Science and Technology (COMEST), 2016-2019; Member, Board of Governors, WWF Pakistan, 2011-2014; Member, Governing Council of A.Q. Khan Institute of Biotechnology and Genetic Engineering (KIBGE), University of Karachi, 2010-date; Member, Selection Board, KIBGE, Karachi University and Federal Urdu University of Arts, Science & Technology; Member, IAP-Biosecurity Working Group (BWG), 2012-date; Member, Senate, Swat University, 2013-2016; Member, Senate SBBU-Shringel, KP, 2015-2018; President, South Asian Federation of Japanese Universities Alumni Associations (SAFJAAA), 2011-2014; President & Vice President, Pakistan Botanical Society, 2011-12 & 2013-date; Chairperson, Quality Assurance Committee of PhD and M.Phil of HEC; Elected Member, Steering Committee of WHO-Eastern Mediterranean Health Genomics and Biotechnology Network (EMHGBN), 2014-2018; Member Advisory Board Ethnobotanical Society of Nepal; Member, IUCN Medicinal Plant Specialist Group Society for Conservation Biology, Editor, Pakistan Journal of Botany.
- Research Areas:** Bioethics & Dual Use Education, Molecular Systematics, Agricultural Biotechnology, Medicinal Plants Ecology, Sustainable Development.



## Siddiqui, Bina Shaheen

### FELLOW: Elected 1997

Born in Allahabad, India, on 2nd February, 1948

HEJ Research Institute of Chemistry,  
ICCBS, University of Karachi, Karachi

**Tel:** (Off) 021-9926 1716

**Mob:** 0300-820 6366

**Fax:** 021-3481 9018, 3481 9019

**Email:** siddiqui\_bina@yahoo.com

**Education:** University of Karachi, Karachi, Pakistan: B.Sc., 1967; M.Sc., 1969; M.Phil., 1978, Ph.D., 1980; D.Sc., 2001.

**Positions Held:** HEJ Research Institute of Chemistry, University of Karachi: Director (Acting) 1999-2000 to date, Co-Director, 1999-2000; Professor, 1996 to date; Associate Professor, 1990-1996.

**Awards:** Dr. Abdus Salam Prize in Chemistry 1986; *Nishan-e-Azmat-e-Ilm* Plaque, University of Karachi, 1989; *Nishan-e-Azmat-e-Danish* Plaque, University of Karachi, 1993; *Nishan-e-Danish* Plaque, University of Karachi, 1998; First Prize of the National Book Foundation 1997; Star Woman of the Year 1997 Award and Gold Medal by Star Girls and Women's Foundation; *Tamgha-i-Imtiaz*, Government of Pakistan, 2000; Khwarizmi Award by the President of Islamic Republic of Iran, 2001; *Sitara-i-Imtiaz* by the Govt. of Pakistan, 2004; Distinguished National Professor (HEC). Life Time Academic Award by HEC of Pakistan, 2011.

**Fellowships/Memberships:** Member, Scientific Society of Pakistan, 1970; Full Member of the Third World Organization for Women in Science, (TWOWS), 1989; Fellow, Academy of Sciences for the Developing World (TWAS), 1989; Fellow of the Pakistan Academy of Sciences, 1998; Member, Membership Committee of TWAS for Chemistry, 1999; Life Member, Chemical Society of Pakistan, 1988; Fellow of the Chemical Society of Pakistan, 2000; Member, American Chemical Society, 2005.

**Research/Areas:** Natural Products Chemistry with Special Focus on Constituents of Medicinal Plants Having Medical, Antibacterial and Pesticidal Applications.



## Tahirkheli, Rashid Ahmad Khan

### FELLOW: Elected 1983

Born in Ghazi, KP, British India, on 4th April, 1928

Vice Chancellor, Gandhara University, Canal Road, Academy Town,  
Danishabad, University Town, Peshawar

**Tel:** 091-584 4492

**Fax:** 091-584 4428-29

**Mob:** 0300-584 9270

**Email:** gandhara@brain.net.pk

**Education:** Muslim University, Aligarh, India: B.Sc., 1945; University of St. Andrews, Scotland: M.Sc., 1960; Ph.D., 1964.

**Positions Held:** Vice Chancellor, Gandhara University, Pakistan, 1999 to date; University of Peshawar, Peshawar: Vice Chancellor, 1982-1987; Professor and Director, Center of Excellence in Geology, 1978-1988; Chairman, Department of Geology, 1964-1978; Reader & Chairman, Department of Geology, 1964-1969; Geological Survey of Pakistan: Senior Geologist/Deputy Director, 1962-1964; Geologist, 1959-1962; Assistant Geologist, 1951-1958.

**Awards:** *Sitara-i-Imtiaz*, Govt. of Pakistan, 1982; Medal for Academic Excellence, University of Edinboro, USA, 1986.

**Fellowships:** Honorary Fellow, Geological Society of America, 1988; Member: Geological and Mineral Development Coordination, Board,

**Memberships:** Govt. of Pakistan; National Committee for the International Geological Correlation Program (UNESCO), Govt. of Pakistan; Committee for Earth Science, Pakistan Science Foundation, Govt. of Pakistan; Committee for Formulation of Tectonic Map of Pakistan, Survey of Pakistan, 1980-1981; Mineral Technical Committee, Ministry of Petroleum, Govt. of Pakistan, 1980.

**Research/Areas:** Geology with Special Contributions to Geology of Himalayas, Karakoram and Hindukush.



## Yasinzai, Masoom

**FELLOW: Elected 2011**

Born in Quetta, Pakistan on 1<sup>st</sup> Oct, 1958

Rector, International Islamic University, Islamabad

**Tel:** 051-925 8067

**Mob:** 0300-386 4565

**Email:** rector@iiu.edu.pk

**Education:** University of Balochistan: B.Sc., 1978; University of Hull, UK; Ph.D. (Anal. Biochemistry), 1985.

**Positions Held:** Lecturer (Chemistry), University of Balochistan 1980-1985; Research Scholar, 1982-1985, University of Hull, UK; Demonstrator, 1983-1985 University of Hull, UK; Asstt. Professor, 1986-1993, Institute of Biochemistry, University of Balochistan; Post Doc Fellow 1987-1988, Perugia Med School, Italy; Visiting Scientist 1992-1993, Liverpool School of Tropical Medicine, UK; Associate Professor, 1993-1996, Institute of Biochemistry, University of Balochistan; Fulbright Fellow, 1993-1994, Chicago Medical College School, USA; Professor, 1996 to date, Institute of Biochemistry, University of Balochistan; FAO Consultant for Establishment of Feed labs in Balochistan, 1998; Director, Institute of Biochemistry, 2003-2008; Co-coordinator Research (Science)/ Dean Research, University of Balochistan, 2004-2008; Vice Chancellor, University of Balochistan, 2008-2010; Vice Chancellor, Quaid-i-Azam University, 2010 -2014; Rector, International Islamic University, Islamabad, 2012 to date.

**Awards:** First Position in Masters degree in all faculties of the University of Balochistan, 1980; Quaid-i-Azam scholarship for Ph.D. studies abroad, 1982; ORS Award, Britain, 1983-1985; IUB Award, on occasion of the 14<sup>th</sup> International Congress of Biochemistry, Prague, 1988; ISESCO Award, 1990; Gold Medal by PWA, for contribution in Sciences & Technology, 1991; Fulbright Award, 1992; Ibn- Al-Hythum Award in Biological Sciences, 1995; Scientists of the year 1998; Gold Medal, Raziuddin Prize in Chemistry, Year 1998; *Izaz-i-Fzeelat*, Gold Medal by the President of Pakistan, 1999; President, Environmental Club, University of Balochistan, 1995 to date; HEC Best Teacher Award & Prize, 2002; *Sitara-i-Imtiaz*, 2009.

**Fellowships/ Memberships:** Fellow, of Pakistan Academy of Medical Sciences, 2012; Fellow, Pakistan Chemical Society, 2004; Member, Board of Trustees, Pakistan Science Foundation; Chairman, Institutional Ethical Committee; Member, University Linkages Committee; President Environmental Club, University of Balochistan; Member Senate, Karakoram International University, Gilgit; Member, Pakistan Atomic Energy Council; Member, Chemical & Biological Societies, Pakistan; Member, Pakistan Council for Sciences & Technology; Member, Islamabad Policy Research Institute Board.

**Research/Areas:** Biotechnology; Clinical Biochemistry; Biochemical Parasitology; Chemotherapy & Leishmaniasis.



## Zubairy, M. Suhail

**FELLOW: Elected 1995**

Born in Lahore, Pakistan on 19th October, 1952

Department of Physics, Texas A&M University,  
College Station, Texas-77843, USA

**Tel:** (Off) +1-979-862-4047

**Email:** zubairy@tamu.edu

**Education:** Edwards College, Peshawar, Pakistan: B.Sc., 1967-1971; Quaid-i-Azam University, Pakistan: M.Sc. (Physics), 1971-1974; University of Rochester, New York, USA: Ph.D. (Physics), 1974-78.

**Positions Held:** Munnerlyn-Heep Chair in Quantum Optics and University Distinguished Professor of Physics, Texas A&M University, USA, 2004 to date; Quaid-i-Azam University, Islamabad: Chairman, Department of Electronics, 1988 to 1998, Professor, 1992-2004; Associate Professor, 1985-1992; Assistant Professor, 1984-1985.

**Awards:** Willis E. Lamb Award for Laser Science and Quantum Optics, 2014; George H. W. Bush Excellence Award in International Research, 2011; Humboldt Research Prize, 2007; Khwarizmi Award, President of Iran, 2001; *Hilal-i-Imtiaz*, Govt. of Pakistan, 2000; COMSTECH Award for Physics, Organization of Islamic Countries (OIC), 1999; *Sitara-i-Imtiaz*, Govt. of Pakistan, 1993; Gold Medal, Pakistan Academy of Sciences, 1989; Salam Prize for Physics 1986.

**Fellowships/ Memberships:** Fellow, American Physical Society, 2006; Fellow, Optical Society of America, 1988; Rush Rhees Fellowship, University of Rochester, USA, 1974-1977.

**Research/Areas:** Quantum Electronics and Laser Physics.

## 10. DECEASED FELLOWS OF THE ACADEMY

Prof. M. Afzal Hussain	Elected 1953
Dr. Nazir Ahmad	Elected 1953
Prof. Dr. Bashir Ahmad	Elected 1953
Prof. Dr. Salimuzzaman Siddiqui	Elected 1953
Prof. Dr. M. Raziuddin Siddiqi	Elected 1953
Dr. M. Sharif	Elected 1953
Dr. Hamid Khan Bhatti	Elected 1953
Dr. M. Ishaque	Elected 1953
Prof. Dr. Abdus Salam (Nobel Laureate)	Elected 1954
Ch. Muhammad Afzal	Elected 1954
Dr. Taskhir Ahmad	Elected 1954
Prof. Dr. M. Abdus Salam	Elected 1954
Prof. Dr. Afzal Hussain Qadri	Elected 1956
Prof. Dr. Karimullah	Elected 1956
Col. M. K. Afridi	Elected 1956
Dr. S. Hedayatullah	Elected 1956
Prof. Qazi M. Aslam	Elected 1957
Prof. Dr. Rafat Hussain Siddiqi	Elected 1957
Dr. Nazir Ahmad (Fisheries)	Elected 1958
Prof. Dr. Mukarram Hussain Khundkar	Elected 1959
Prof. Dr. M. Ziauddin	Elected 1959
Dr. Atiqur Rahman Ansari	Elected 1959
Prof. Dr. Qazi Saeeduddin Ahmad	Elected 1961
Prof. Dr. A. G. Asghar	Elected 1964
Prof. Dr. M.M. Qurashi	Elected 1964
Dr. Amir-ul-Islam	Elected 1967
Dr. Ghulamullah Chaudhry	Elected 1967
Prof. Dr. M. A. Azim	Elected 1967
Dr. M. A. Ghani	Elected 1967
Prof. Dr. M.I.D. Chughtai	Elected 1967
Prof. Dr. Majeed Ahmad	Elected 1968
Dr. Nazir Ahmad (Irrigation)	Elected 1968
Prof. Dr. Rafi Mohammad Choudhri	Elected 1968
Prof. Dr. Badruddin	Elected 1968
Dr. S. A. Warsi	Elected 1970
Prof. Dr. Muzaffer Ahmad	Elected 1970
Prof. Dr. Shafqat Hussain Siddiqui	Elected 1971
Dr. Ahmad Kamal	Elected 1971
Prof. Dr. Z. A. Hashmi	Elected 1972
Prof. Dr. Kh. Salahuddin	Elected 1972
Dr. M. K. Bhatti	Elected 1972



Prof. Dr. M. Aslam Khan	Elected 1972
Prof. Dr. M. A. Kazi	Elected 1972
Prof. Dr. Sultan Ahmad	Elected 1974
Prof. Dr. Ahmad Mohiuddin	Elected 1974
Prof. Dr. Qamar-ud-Din Khan Ghor	Elected 1974
Prof. Dr. Marghoob Ali	Elected 1976
Mr. A. Hamid Chotani	Elected 1976
Dr. Yusuf Ahmad	Elected 1976
Prof. Dr. Riazuddin	Elected 1976
Prof. Dr. A. G. Kausar	Elected 1977
Dr. Saleh M. Quraishy	Elected 1977
Prof. Dr. G. M. Khattak	Elected 1977
Dr. Heshamul Haque	Elected 1978
Dr. Fazal Ahmed Faruqi	Elected 1978
Dr. S. Mahdi Hassan	Elected 1980
Prof. Dr. Mrs. Nasima Trimizi	Elected 1980
Prof. Dr. Muhammad Ataur Rahman	Elected 1980
Dr. M.I. Burney	Elected 1983
Dr. F. H. Shah	Elected 1984
Prof. Dr. Naeem Ahmed Khan	Elected 1986
Dr. Mahbub Ali	Elected 1988
Prof. Dr. Shafiq Ahmed Khan	Elected 1989
Dr. Abdul Hafiz	Elected 1990
Prof. Dr. Iftikhar A. Malik	Elected 1990
Prof. Dr. Muhammad Zafar Iqbal	Elected 1990
Dr. Mushtaq Ahmad	Elected 1991
Dr. Agha Ikram Mohyuddin	Elected 1991
Prof. Dr. N. M. Awan	Elected 1992
Hafiz Hakim Muhammed Said	Elected 1992
Prof. Dr. Abdul Ghaffar	Elected 1992
Dr. Khushnood A. Siddiqui	Elected 1994
Prof. Dr. Iqbal Hussain Qureshi	Elected 1994
Prof. Dr. Zafar H. Zaidi	Elected 1995
Prof. Dr. Nasir Ud Din	Elected 1996
Prof. Dr. M.A. Hafeez	Elected 1999
Prof. Dr. Qasim Mehdi	Elected 1999
Dr. A. Sattar	Elected 2000
Dr. S. Moosa Hasany	Elected 2000
Prof. Dr. Kamaluddin Ahmad	Elected 2002
Prof. Dr. Mustafa Shameel	Elected 2003
Prof. Dr. Shahzad Ahmad Mufti	Elected 2003
Prof. Dr. S. Arshad Saeed	Elected 2007
Prof. Dr. Muhammad Arshad	Elected 2015



## **11. PROFILES OF FOREIGN FELLOWS**

**Pakistan Academy of Sciences**





## Akhtar, Muhammad

### FOREIGN FELLOW: Elected 2000

Born in Batala, Punjab, British India, on 23rd February, 1933

Emeritus Professor of Biochemistry, University of Southampton, UK;  
Distinguished National Professor (Previously) (Director General), School of  
Biological Sciences,  
University of the Punjab, Lahore, Pakistan

**Tel:** (92-42) 9923 0960

**Email:** M.Akhtar@soton.ac.uk; ma3@soton.ac.uk

- Education:** Government College, University of the Punjab: B.Sc., 1952; M.Sc., 1954; Imperial College, University of London, UK: Ph.D., DIC, 1959.
- Positions Held:** Emeritus Professor of Biochemistry, University of Southampton, UK, to date; Currently, Distinguished National Professor & Director General, School of Biological Sciences, University of the Punjab, Lahore; Director, SERC Molecular Recognition Center, 1990-1994; Chairman, Institute of Biomolecular Sciences, 1989-1990; Chairman, School of Biochemical & Physical Sciences, 1983-1987; Head, Department of Biochemistry, 1978-1983; Professor of Biochemistry, 1973-1998; Reader, Department of Biochemistry, 1968-1973; Senior Lecturer, Department of Biochemistry, 1966-1968; Lecturer, Department of Biochemistry, 1963-1966; Research Scientist, Research Institute, Cambridge, MA, USA, 1959-63.
- Awards:** Gold Medal, University of the Punjab, 1954; Fellow of Royal Society (FRS), UK, 1980; *Sitara-i-Imtiaz*, Government of Pakistan, 1981; Flintoff Medal, Royal Society of Chemistry, 1993; Hon. DSc, University of Karachi, 2002
- Fellowships/ Memberships:** Fellow, Royal Society, UK, 1980; Member, Council of the Royal Society, 1983-1985; Founding Fellow, The Academy of Sciences for the Developing World (TWAS), 1984; Treasurer & Member, TWAS, 1992-1997; TWAS Medal Lecturer, 1996; Honorary D.Sc. degree, University of Karachi, 2000; Fellow, University College London (2010).
- Research/Areas:** Biochemistry with special contributions to understanding of mechanisms of action of a large number of enzymes involved in biosynthesis of sterols, sex hormones, haem formation, elaboration of chlorophylls; Use of recombinant DNA technology for study of neomyosin synthesis; Binding of vitamin A aldehyde to rhodopsin.



## Bai, Chunli

### FOREIGN FELLOW : Elected 2011

Born in Dandong, Liaoning Province, China in 1953

President Chinese Academy of Sciences (CAS),  
52 Sanlihe Road, Beijing 100864, China

**Tel:** +86-10-68597606

**Fax:** +86-10-68526316

**E-mail:** president-office@cas.cn

**Education:** Department of Chemistry, Peking University, Beijing, China: undergraduate student, 1978; Institute of Chemistry, CAS, Beijing, China: M.S., 1981, Ph.D., 1985.

**Positions Held:** President, Chinese Academy of Sciences (CAS), (2011 to date); President, Academy of Sciences for the Developing World (TWAS) (2013 to date); President, Graduate University, CAS, (2001 to date); Executive Vice President, CAS, 1996-2004, 2004-2011; Director, National Center for Nanosciences and Technology, China, 2003-2008; Professor and Deputy Director, Institute of Chemistry, CAS, Beijing, 1992-1996; Director of Youth Laboratory of the Nanometer-Scale Science and Technology, 1992-1996; Visiting Professor, Institute for Materials Research, Tohoku University, Japan, 1991-1992; Professor, 1989; Associate Professor, 1987-1989; Research Associate, California Institute of Technology, Pasadena, USA, 1982-1985.

**Awards:** 2nd Place CAS Science and Technology Advancements Award, 1989; Young Scientist Award, CAS 1989; 2nd Place CAS National Science and Technology Advancements Award (State Council), 1990; National Level Expert with Outstanding Contributions (State Council), 1990; China Young Science and Technology Prize, China Association for Science and Technology, 1990; Ph.D. Recipient with Outstanding Contributions (State Council and State Education Commission), 1991; 1st Place CAS Science and Technology Advancement Award, 1991; 3rd Place CAS Science and Technology Advancement Award, 1992; 2nd Place CAS Natural Science Award, 1994; China Young Scientist Award, 1994; 2nd Place PLA Science and Technology Advancements Awards, 1995; "Outstanding Young Scholars", Hong Kong Qiu Shi Sci & Tech. Foundation, 1995; 2nd Place CAS Natural Science Award, 1997; 2nd Place Beijing Science and Technology Advancement Award, 1998; 2nd place Science and Technology Advancement Award (State Education Commission), 1998; 2nd Place PLA Science and Technology Advancement Award, 1999; International Medal, Society of Chemical Industry, London, UK, 2001; 1st Place Yunnan Science and Technology Advancement Award, 2001; China's 1st Top Ten Pioneers of Science and Technology 2002; 1st Place Beijing Science and Technology Advancement Award, 2006; UNESCO First Medal "Contributions to Development of Nanosciences and Nanotechnology, 2010; 3rd "Chemistry Contribution Prize" of Chinese Chemical Society-China Petroleum & Chemical Cooperation, 2012.

**Fellowships/ Memberships:** Member, CAS, 1997; Fellow, The World Academy of Sciences, (TWAS), 1997; Bureau Member, International Union of Pure and Applied Chemistry (IUPAC), 2001-2009; Member, Executive Committee of IUPAC, 2003-2009; Foreign Member, Mongolian National Academy of Sciences, 2005; Honorary Member, World Innovation Foundation, 2006; Honorary Fellow, The Royal Society of Chemistry (FRSC), UK, 2007; Foreign Member, Russian Academy of Sciences, 2008; Honorary Fellow, The Indian Academy of Sciences, 2008; Honorary Academic Fellow, Roskilde University, Denmark 2008; Honorary Fellow, The Chemical Research Society of India, 2009; Member, The German National Academy of Science and Engineering, 2011; Foreign Member, Royal Danish Academy of Sciences and Letters, 2012; Corresponding Fellow, Australian Academy of Science, 2013; Honorary CSJ Member, 2013.

**Research/Areas:** Structure and properties of polymer catalysts; X-ray crystallography of organic compounds; Molecular mechanics and EXAFS research on electro-conducting polymers; Scanning tunneling microscopy; Molecular nanostructures; Self assembly, Novel nanomaterials; Molecular nanodevices; Single molecule detection.



## Bangash, M. Y. H.

**FOREIGN FELLOW: Elected 2003**

Born in British India on 1st April, 1932

39 Wontner Road London SW17 7QT, UK

**Tel:** 020 8 672 0469

**Email:** FNiban1@aol.com

- Education:** University of Peshawar: B.Sc., 1953; B.Sc. Engg., 1957; California Institute of Technology, USA: M.Sc. Engg., 1963; University of London: Ph.D., 1981; D.Sc. 1989.
- Positions Held:** Defense Consultant, Aerospace-Naval Structures, UK Defense Department, London, 1991-1993; Professor of Aerospace Structures, Middlesex University, London, 1980-91; Group Consulting Engineer, Atomic Power Construction Ltd., Surrey, 1973-80; Consultant UKAEA, 1966; Consultant, Nuclear Aerospace Structures, British Aerospace, Surrey, 1966-1969; Reader, Aerospace Structures, Imperial College, London, 1966-73; Senior Lecturer, Aerospace Structures, University of Greenwich, London, 1963-65; Senior Manager, Nuclear Construction, General Atomic Inc., San Diego, California, 1962-64; Senior Group Engineer, Lockheed International Inc., California, 1960-1962; Senior Lecturer in Structural Engineering, College of Engineering, University of Peshawar, 1957-59; Structural Design Engineer, US Core of Engineers, Kharian, 1954-56.
- Awards:** Eleven Gold Medals including the 1999 Dr. F. L. Rahmam Medal from Chicago Consultants Inc.
- Fellowships/Memberships:** FeACE, Struct. E. of UK; Member: Nuclear Inst., British Standards (BSI) and International Standards (ISO); Cited in American WHO's WHO, New York and in Federal Emergency Agency (FEMA) Report, Washington, D.C.; Structural Board of American Institute of Aeronautics and Astronautics, 2004; Governor of the Union of Muslim Organizations (UMD), UK.
- Research/Areas:** Aerospace Engineering, Software Development in Engineering Sciences, Explosion Dynamics.



## Basha, Fatima Z.

**FOREIGN FELLOW: Elected 2013**

Born in Hassan, India, on 6th November 1950

**Current Position:** Foreign Faculty Professor, H.E.J. Research Institute of Chemistry, International Center for Chemical and Biological Sciences, University of Karachi, 2006 – present.

**Tel :** +9926 1767; Cell : 0341 227 9107

**Email :** bashafz@gmail.com

- Education:** Post-Doctoral Research, Massachusetts Institute of Technology, Cambridge, Massachusetts, 1978-81; Ph.D.: Synthetic Organic Chemistry, Fordham University, USA, 1977; M.Sc.: University of Karachi, B.Sc.: St. Joseph's College, Karachi; Research Fellowship, University of Karachi, Pakistan, 1970-72; Presidential Scholarship from Fordham University, NY, 1972-1973; Research and Teaching Fellowship from Fordham University, NY, 1973-77; Post-Doctoral Research, Massachusetts Institute of Technology, Cambridge, Massachusetts, 1978-81.
- Positions Held:** Senior Group Leader, Associate Research Fellow, Wilier Society, Drug Discovery Research, ABBOTT LABORATORIES, USA, November, 1998 to June, 2006; Senior Group Leader, Associate Research Fellow, Volwiler Society, Infectious Diseases Research, ABBOTT LABORATORIES, USA, December, 1998 to November, 2001; Senior Group Leader, Associate Research Fellow, Volwiler Society, Immunoscience Research, ABBOTT LABORATORIES, USA, May, 1998 to November, 1998; Senior Group Leader, Associate Research Fellow, Volwiler Society, Infectious Diseases Research, ABBOTT LABORATORIES, USA, March, 1997 to April, 1998; Senior Group Leader, Associate Research Fellow, Volwiler Society, Neuroscience Research, ABBOTT LABORATORIES, USA, October, 1994 to March, 1997; Senior Group Leader, Associate Research Fellow, Volwiler Society, Immunoscience Research, ABBOTT LABORATORIES, USA, October, 1993 to October, 1994; Senior Group Leader, Associate Research Fellow, Volwiler Society, Cardiovascular Research, ABBOTT LABORATORIES, USA, October, 1992 to September, 1993; Associate Research Fellow, Volwiler Society, Cardiovascular Research, ABBOTT LABORATORIES, USA, December, 1991 to September 1992; Research Investigator, Cardiovascular Research, ABBOTT LABORATORIES, USA, January 1989 to January 1992; Senior Research Scientist, Cardiovascular Research, ABBOTT LABORATORIES, USA, September 1984 to January, 1988; Research Scientist, Cardiovascular Research, ABBOTT LABORATORIES, USA, June 1981 to September 1984.
- Awards:** *Tamgha-i-Imtiaz*, by Government of Pakistan.
- Fellowships/Memberships:** Member of Phi Lambda Epsilon Honorary Chemical Society; Member of American Chemical Society and Sigma Xi; Member of Volwiler Society, Abbott Laboratories.
- Research/Areas:** Synthetic Organic Chemistry



## Cao, Jinde

### FOREIGN FELLOW: Elected 2016

Born in Wuhu, Anhui Province, China, on 8th November, 1963

Dean, School of Mathematics, Southeast University  
No. 2, SEU Road, Jiangning District, Nanjing 211189, China

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**Mob:** +86-13809034558

**Email:** jdcao@seu.edu.cn; jdcaoseu@gmail.com

**Education:** Anhui Normal University, China: B.Sc., 1986; Yunnan University, China: M.Sc., 1989; Sichuan University, China: Ph.D., 1998; The Chinese University of Hong Kong, China: Postdoc., 2002.

**Positions Held:** Endowed Chair Professor, Southeast University, China, 2017 to date; Distinguished Professor, Southeast University, China, 2007 to date; Dean, School of Mathematics, Southeast University, China, 2014 to date; Director, The Jiangsu Provincial Key Laboratory of Networked Collective Intelligence, China, 2017 to date; Director, Research Center for Complex Systems and Network Sciences, Southeast University, China, 2011 to date; Distinguished Adjunct Professor, King Abdulaziz University, Saudi Arabia, 2013 to date; Professor, Yunnan University, China, 1996-2000; Professor, Southeast University, China, 2000 to date.

**Awards:** National Innovation Award of China, 2017; The State Council Special Allowance, China, 2016; Thomson Reuters China Citation Laureates Award, Thomson Reuters, 2014; Highly Cited Researcher, Thomson Reuters/ Clarivate Analytics, 2014-2017; Most Cited Chinese Researcher, Elsevier, 2015, 2016; First Class Science and Technology Award, Jiangsu Province of China, 2011; Thomson Reuters Research Fronts Award, 2008; Second Class Natural Science Award, Ministry of Education of China, 2007.

**Fellowships/ Memberships:** Fellow, IEEE, 2015; Member, Academia Europaea (Academy of Europe), 2016.

**Research/Areas:** Neural networks; Computational intelligence; Complex networks; Complex systems; Intelligent control; Multi-agent system; Differential equations; Applied mathematics.



## Cheetham, Anthony Kevin

### FOREIGN FELLOW: Elected 1997

Born in Stockport, UK, on Nov 16, 1946

Goldsmiths' Professor of Materials Science,  
Department of Materials Science and Metallurgy,  
University of Cambridge,  
Cambridge CB3 0FS, United Kingdom

**Email:** akc30@cam.ac.uk

**Education:** St. Catherine's College, Oxford, UK: Honorary Scholar, B.A. (Class 1) in Chemistry, 1969; Distinction of Supplementary Biochemistry, 1968; Wadham College, Oxford, UK: Senior Scholar, M.A., D.Phil., 1971.

**Positions Held:** Treasurer and Vice-President, The Royal Society, 2012 to date; University of Cambridge: Goldsmiths' Professor of Materials Science, 2007 to date; University of California, Santa Barbara, California, USA: Director, Materials Research Laboratory, 1992 to 2007; Professor of Chemistry, 1992 to 2007; Professor of Materials, 1991 to 2007; Science Advisor, Unilever plc, 2000 to 2008; Professor of Solid State Chemistry, Royal Institution, London, 1986 to 2002; Christ Church, Oxford: Tutor in Inorganic Chemistry, 1974-1991; Emeritus Student (Fellow), 1991 to date; Oxford University: Lecturer in Chemical Crystallography, 1974-1990; Reader in Inorganic Materials, 1990-1991; Visiting Professor (Fulbright Scholar), Arizona State University, USA, 1977; U.C. Berkeley, USA, 1979; E.P. Abraham Cephalosporin Junior Research Fellow, Lincoln College, Oxford, 1971-1974; Member, German National Academy of Engineering, Acatech, 2013.

**Awards:** Bonner Chemiepreis, Univ. Bonn, Germany, 2002; Humphry Davy Prize Lectureship of the Royal Society, 2003; Somiya Award of the IUMRS with Professor C.N.R. Rao, 2004; Docteur Honoris Causa, Université de Versailles, 2006; Hon D.Sc., University of St. Andrews, 2011; Hon. D.Sc., Tumkur Univ., India, 2011; Raman Chair, Indian Academy of Sciences, 2011; TWAS Medal Lecturer, 2011; Nyholm Prize for Inorganic Chemistry, Royal Society of Chemistry, 2012; Chemical Pioneer Award, American Institute of Chemists, 2014.

**Fellowships/ Memberships:** Fellow, The Royal Society, London, 1994; Fellow, Royal Society of Chemistry; Foreign Member, Indian National Academy of Sciences, 1998; Fellow, The World Academy of Sciences (TWAS), 1999; Honorary Fellow, Indian Academy of Sciences, 2001; Foreign Member, Mongolian Academy of Sciences, 2008; Member, Academia Europaea, 2009; Platinum Medal, Institute of Materials, Minerals and Mining, 2011; Member, German National Academy of Science, Leopoldina, 2011; Member, German National Academy of Engineering, Acatech, 2013.

**Research/Areas:** Inorganic and Hybrid Materials, Solid State Chemistry and Materials Science.



## de Meis, Leopoldo

**FOREIGN FELLOW: Elected 1996**

Born in Brazil, on 1st March, 1938

Instituto Ciencias Biomedicas Department Bioquimica Universidade Federal do Rio de Janeiro  
CEP 21.941-590. Rio de Janeiro, Brasil

**Tel:** int+ (21) 2270-1635, 260-9895

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**Email:** demeis@bioqmed.ufrj.br

**Education:** Federal University of Rio de Janeiro, Brazil: MD, 1961.

**Positions Held:** Federal University of Rio de Janeiro: Professor of Biochemistry, 1978 to date, Assistant and Associate Professor, 1967-1978; Biologist, Instituto Oswaldo Cruz, Rio de Janeiro, 1964-1967; Fogarty Fellow, National Institute of Health (NIH), Bethesda, Maryland, USA, 1962-1964.

**Awards:** National Award, Republic of Brazil "Ordem Nacional do Merito Educado--Classe Comendador", 2000, "Ordem Nacional do Merito Cientifico--Classe Gra Cruz, 1997; Doctor Honoris Causa, Universidade de Buenos Aires, Argentina, 1997 and Universite Catholique de Louvain, Belgium, 1995; N. van Uden Award Lecture, University of Coimbra, Portugal, 1993; Oswaldo Cruz Award, State Govt of Rio de Janeiro, 1988; Diploma of the World Cultural Council (Mexico), 1987; Chemistry Award, Third World Academy of Sciences (TWAS), 1986; LAFI Award, Pharmaceutical Industries, Brazil, 1978.

**Fellowships/ Memberships:** Fellow, John Simon Guggenheim Memorial Foundation, USA, 1986-87; Fogarty Fellow, NIH, USA, 1962-64; Member, International Science Advisory Committee of the Center for International Cellular and Molecular Biology, N.L. Mexico, UNESCO, 1990 to date; Advisor of the Brazilian Society for Advancement of Science, 1991; Conselho Director (CD-CNPq), Brazilian Council for Development of Science, 1992-94; Chairman, Educational Committee of the International Union of Biochemistry and Molecular Biology, 1991-2000; Founder Advisor and Member of the Latin American Academy of Sciences, 1977 to date, vice President and President, Brazilian Society of Biochemistry, 1982-83; Member of several National and International Committees; Member, Editorial Boards of Ciencia e Cultura (Brazil), Biochemical Education (UK), Molecular and Cellular Biochemistry (Canada) and Bioscience Reports (UK).

**Research/Areas:** Cellular and Molecular Biology; besides numerous original research articles, published 21 reviews and book chapters and a book on Sarcoplasmic Reticulum (1981, John Wiley, USA).



## Gell-Mann, Murray *(Nobel Laureate, 1969, Physics)*

**FOREIGN FELLOW: Elected 1983**

Born, New York, NY, USA, on September 15, 1929

Professor of Physics, California Institute of Technology, Pasadena California, USA.

**Education:** B.S. (Physics), 1948; Massachusetts Institute of Technology: Ph.D. (Physics) 1951.

**Positions Held:** California Institute of Technology: R.A. Millikan Professor Emeritus, 1993- present; R.A. Millikan Professor, 1967-1993; Professor, 1956-1967, Associate Professor, 1955-1956; Univ. of Chicago: Instructor, Asst. Prof., Assoc. Prof., 1952-54; Research Associate, Univ. of Illinois, Summers 1951 and 1953; Visiting Prof., CERN, Geneva, Switzerland, 1971-72, 1979-80; Laboratory Fellow, Los Alamos National Lab, 1982-2000; Distinguished Fellow, Santa Fe Institute, 1993- present; Visiting Professor, University of New Mexico, 1995 - present; Director, J.D. & C.T. MacArthur Foundation, 1979-2002; Citizen Regent, Smithsonian Institution, 1974-88.

**Awards:** Dannie Heineman Prize of American Physical Society, 1959; Ernest O. Lawrence Award, 1966; Franklin Medal, Franklin Institute of Philadelphia, 1967; John J. Carty Medal, National Academy of Sciences, 1968; Honorary Doctorate, University of Turin, Italy, 1969; Nobel Prize in Physics, 1969; Eric Science for Peace Prize, World Federation of Scientists, 1990; Sigma Xi Procter Prize for Scientific Achievement, 2004; Albert Einstein Medal, Albert Einstein Society, Bern, 2005.

**Fellowships/ Memberships:** Fellow, American Physical Society, 1960; Fellow, National Academy of Sciences, 1960; Fellow, American Academy of Arts and Sciences, 1964; Vice President and Chairman, American Academy of Arts and Sciences, Western Center, 1970-76; Foreign Member, The Royal Society of London, 1978; Member, Council on Foreign Relations, 1975; Foreign Member, Pakistan Academy of Sciences, 1985-Present; Foreign Member, Indian Academy of Sciences, 1985-Present; Foreign Member, Russian Academy of Sciences, 1993-Present; Member, American Association for the Advancement of Science, 1994-Present. Member, Institute for Advanced Study, Princeton, NJ, 1951; Member, Institute for Advanced Study, Princeton, NJ, 1967-68.

**Research/Areas:** Physics with research on dispersion relations, strangeness theory, eightfoldway theory and theory of weak interactions.



## Gilani, G. Sarwar

**FOREIGN FELLOW: Elected 2011**

Born In British India, on 1943

Nutrition & Health Consultant 1429 Forest Valley Drive,  
Ottawa, Ontario, Canada K1C 5M8

**Tel:** 1-613-830-2197

**Email:** gilanisarwar@rogers.com

**Education:** University of Peshawar (Pakistan): B.Sc. Hon., 1964; M.Sc. 1968; University of Saskatchewan (Canada), M.Sc., 1971; Ph.D. 1974.

**Positions Held:** Senior Research Scientist, Bureau of Nutritional Sciences, Health Products and Food Branch, Health Canada, Government of Canada, 1982 to 2011; Scientific Evaluator, Health Protection Branch, Government of Canada, 1977 to 1981; Professional Research Associate, Rapeseed Association of Canada, 1975 to 1976; Post-doctorate Research Fellow, University of Alberta; Adjunct Professor, McGill University (Canada), 1984 to 1992; Adjunct Professor, Laval University (Canada), 1985 to 1990; Lecturer, University of Peshawar, 1968 to 1969.

**Awards:** Fellow: Association of Official Analytical Communities International (AOACI).

**Fellowships/** Chair, Editorial Board, AOAC International (2013-2016); Member of WHO/FAO Expert Consultations on Protein and Amino

**Memberships:** Acid Requirements for Human Nutrition (2002) and of FAO/WHO Expert Consultations on Protein quality Evaluation in Human Nutrition (1990, 2001 and 2011); Member of Codex Committee on Vegetable Proteins for establishing international standards for international trade (1980-1989); Member, American Society for Nutritional Sciences and Canadian Society for Nutritional Sciences; Scientific Advisor to Pakistan under the UNDP (United Nations Development Programme); Scientific Consultant to FDA and LSRO (Life Sciences Research Office), USA; Member, Expert Review Panels, Centre of Excellence, Government of Canada dealing with Food, Nutrition and Health (2000-2005); Organized and/ or chaired international symposia including those sponsored by FABA (Federation of Asian Biotech Associations) with headquarters in India; Member, Editorial Board of an international journal " Plant Foods for Human Nutrition: Section Editor of Journal of AOAC International.

**Research/Areas:** Research regarding safety and nutritional quality of the food supply to prevent acute and chronic diseases and nutrient imbalances in general populations and in sub-groups at increased risk with reduction of corresponding health care costs.



## Hassan, M. H. Ali

**FOREIGN FELLOW: Elected 2002**

Born in Elgetina, Sudan, on 21st November, 1947

Co-Chair of IAP, the Global Network of Science Academies, and Chairman of the Council of the United Nations University (UNU).

**Email:** hassan@ictp.it

**Education:** University of Newcastle, UK, B.Sc. (Special Honours), Mathematics, 1968; University of Oxford, UK, M.Sc., Advanced Mathematics, 1969; University of Oxford, UK, D. Phil. (Ph.D.), Plasma Physics, 1974.

**Positions Held:** Founding Executive Director (formerly Exec. Secretary), TWAS, Trieste, Italy, 1983; Secretary General, Third World Network of Scientific Organizations (TWNISO), Trieste, Italy, 1988 to date; President, African Academy of Sciences (AAS), Nairobi, Kenya, 2000 to date; Chairman, Honorary Presidential Advisory Council for Science and Technology in Nigeria; Council Member, Islamic Academy of Sciences, Amman, Jordan, 1999 to date; University of Khartoum, Sudan: Lecturer, 1974, Senior Lecturer, 1977, Associate Professor, 1980, Full Professor, 1986, Dean, School of Mathematical Sciences, University of Khartoum, 1985; Senior Associate, International Centre for Theoretical Physics, Trieste, 1982-87; Fulbright Senior Research Fellow, Lawrence Livermore National Lab., 1984.

**Awards:** Comendator (1996) and Grand Cross (2005), National Order of Scientific Merit, Brazil; Officer, Order of Merit, Italian Republic, 2003.

**Fellowships/ Memberships:** Fellow: The Academy of Sciences for the Developing World (TWAS), 1985; Founding Fellow, African Academy of Sciences, 1985; Islamic World Academy of Sciences, 1992. Hon. Member, Academia Colombiana de Ciencias Exactas, Físicas y Naturales, 1996. Corresponding Member, Académie Royale des Sciences d'Outre-Mer, Belgium, 2001; Academy of Sciences of Lebanon; Cuban Academy of Sciences; Academy of Sciences of South Africa.

**Research/Areas:** Theoretical Plasma Physics; Physics of Wind Erosion, Sand and Dust transport, Diffusion of Dust Particles.



## Kharin, Stanislav Nikolaevich

### FOREIGN FELLOW: Elected 1998

Born in Kaskellen Village of Almaty Region, Kazakhstan, on December 4th, 1938

59 Tolebi, Almaty, 050000, Kazkhstan

Residence: 050043 Almaty Orbita-1-24-6, Kazkhstan

**Tel:** +7 7272 290240

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- Education:** Kazakh State University (named after S. M. Kirov), Kazakhstan: Student, Faculty of Mathematics and Mechanics, 1956-1961; Postgraduate Student at the Chair of Mathematical Physics Equations, 1961-1964; Masters in Physical and Mathematical Sciences, 1968; Doctor of Science (PhD), Thermodynamics Institute of the Siberian Branch of the USSR Academy of Sciences, Novosibirsk, Russia, 1990.
- Positions Held:** Professor, Kazakh-British Technical University, Almaty, Kazakhstan; Visiting Professor, Ghulam Ishaq Khan Institute of Engineering and Technology, Pakistan, 1996 -2001, 2003-2005; Visiting Professor, University of the West of England, Bristol, UK, 2001-2003; Head, Department of Physics and Mathematics, National Academy of Sciences, Kazakhstan, 1994-1996; Head, Laboratory of the Mathematical Physics Equations, Institute of Mathematics, Kazakhstan Academy of Sciences, 1980-1994; Institute of Mathematics and Mechanics, Kazakhstan Academy of Sciences: Deputy Director for Sciences, 1980-1994; Senior Research Worker, 1969-1980; Junior, Research Worker, 1964-1969.
- Awards:** Awarded title of Professor in Mathematical Physics, 1991; Medal "Inventor USSR" for Introduction of the Mathematical Base of Bimetallic Switches in Electrical Apparatus, 1982; Gold Medal of the Exhibition of the National Economy Achievements of the USSR for invention of Electrical Connector SP-063; Academic rank of Academician of the National Academy of Sciences of Kazakhstan, 2003.
- Fellowships/ Memberships:** Member, Specialized Council for Masters and Ph.D. Degrees, Kazakhstan Academy of Sciences, 1969-1980; President, Maly Academy of Sciences for Schoolboys, 1995 to date; Member, Editorial Board of Transactions of the Kazakhstan Academy of Sciences, Series of Physics and Mathematics, 1996 to date; Member, Scientific Council of the Institute of Mathematics of Kazakhstan Academy of Sciences, 1980 to date; Chairman, Committee for Coordination of Investigations of the Former USSR Countries in the Fields of Electrical Contacts and Electrodes, 1995 to date; Co-Chairman, Committee for Scientific and Technological Cooperation between Republic of Kazakhstan and the Islamic Republic of Pakistan, 1996-2005; Academic rank of Associate Member of the National Academy of Sciences of Kazakhstan, 1994.
- Research/Areas:** Mathematical Physics and Mechanics, Mathematical Models of Thermophysical Processes in Electrical Contacts.



## Langer, Peter

### FOREIGN FELLOW: Elected 2012

Born in Hannover, Germany, on 20 February, 1969

Full Professor and Head  
of Department of Organic Chemistry,  
University of Rostock, Germany

**Tel:** 0049 381 4986410

**Email:** peter.langer@uni-rostock.de

- Education:** Dipl.-Chem. (equiv. to M. Sc) University of Hannover, Germany (1989-1994); Diploma thesis Massachusetts Institute of Technology, USA (1993-1994); Dr. rer. nat. (equiv. to Ph.D.), University of Hannover, Germany (1994-1997); Postdoctoral Fellow, Cambridge Chemical Laboratory, UK (1997-1998); Habilitation and Venia Legendi (equiv. to D.Sc.), University of Gottingen, Germany (1998-2001); Privatdozent, Heisenberg Research Scholar, University of Gottingen, Germany (2001).
- Positions Held:** Full Professor and Head of the Department of Organic Chemistry, University of Rostock, Germany (2004 - today); Head of the Department Organic Synthesis of Leibniz Institute of Catalysis at the University of Rostock e.V. (LIKAT) (2005 - today); Full Professor and Head of Chair of Bioorganic Chemistry, University of Greifswald, Germany (2002-2004); Acting Professor, University of Greifswald, Germany (2001-2002).
- Awards:** Award of the Faculty of Chemistry of the University of Hannover (1997); Thieme-Journal-Award (2000); Gold Medal of Yerevan State University, Armenia (2010); Doctor Honoris Causa, Yerevan State University, Armenia (2011); Doctor Honoris Causa, Vietnam National University, Hanoi, Vietnam (2012); Professor Honoris Causa, University of Mosul, Iraq (2012); Doctor Honoris Causa, Tishreen University Latakia, Syria (2012).
- Fellowships/Memberships:** Scholar of the Studienstiftung des Deutschen Volkes (1992-1994); Ph.D. Scholarship Feodor-Lynen Scholar of the Alexander von-Humboldt Foundation (1997-1998); Liebig Scholar of the Verband der Chemischen Industrie (1998-2001); Heisenberg Scholar (2001); Member of the German Chemical Society (since 1996); Member of Deutscher Hochschulverband (since 2000); Member of the Academic Council of COMSATS Institute of Information Technology (CIIT), Pakistan (since 2012); Member of the Editorial Board of 'Journal of Carbohydrate Chemistry' (since 2008); Member of the Editorial Board of 'Materials' (since 2008); Associate Editor of 'Current Bioactive Compounds' (since 2008); Associate Editor of 'Current Organic Synthesis' (since 2009); Member of the Editorial Board of 'Biochemical Compounds'; Guest Editor, Tetrahedron-Symposium-in-Print (2009); Associate Editor of the Journal of the Chemical Society of Pakistan (since 2011); Foreign Fellow of the Pakistan Academy of Science (2013).
- Research/Areas:** Synthetic organic chemistry, domino reactions, cyclization reactions, catalysis, organosilicon chemistry, heterocycles, medicinal chemistry, natural products, carbohydrates, new organic materials.



## Maiani, Luciano

### FOREIGN FELLOW: Elected 2000

Born in Roma, Italy, on 16th July, 1941

CERN, DG Division - CH 1211  
Geneva 23, Switzerland

**Tel:** 0041-22-7672300

**Fax:** 0041-22-7678995

- Education:** Ph.D. (Physics), 1964; Harvard University, USA: Postdoctoral Fellow, 1969; Slovak Academy of Sciences: D.Sc., 2001.
- Positions Held:** Director General, CERN, 1999 to date; President, CERN Council, Geneva, 1997; Chairman, Comitato Tecnico Scientifico, Fonda Ricerca Applicata, 1995-1997; Scientific Delegate, CERN Council, Geneva, 1993-1996; President, Istituto Nazionale di Fisica Nucleare, 1993-1998; Visiting Scientist, CERN, Geneva, 1985-1986; Professor, Theoretical Physics, University of Roma "La Sapienza", 1984; Visiting Scientist, European Organization for Nuclear Research (CERN), Geneva, 1979-1980; Visiting Professor, Ecole Normale Supérieure, Paris, 1977; Professor, Institutions of Theoretical Physics, University of Roma "La Sapienza", 1976-1984; Research Staff, Istituto Superiore di Sanita, Roma, 1964.
- Awards:** Matteucci Medal, Accademia Nazionale dei XL, 1979; Prize "J.J. Sakurai" of the American Physical Society, 1987; Laurea honoris causa, Université de la Méditerranée, Aix-Marseille, 1996; Laurea honoris causa, University of St. Petersburg, 1998.
- Fellowships/Memberships:** Fellow, American Physical Society, 1991; Member, Accademia Nazionale dei Lincei, Roma, Italy, 1988; Member, Accademia Nazionale dei XL, 1997; Member, The Super-Proto-Synchrotron Committee, CERN, Geneva, 1979-1983; Member, Scientific Policy Committee, CERN, Geneva, 1984-1991; Member, Extended Research Council, German Electronic Synchrotron at DESY, Hamburg, 1990; Member, LHC Committee, CERN, Geneva, 1992-1993; Member, IUPAP, C11 Subcommittee, 1997 to date.
- Research/Areas:** Nuclear Physics.



## Nieschlag, Eberhard

### FOREIGN FELLOW: Elected 1996

Born in Germany, on 16th July, 1941

Former Director,  
Institute of Reproductive Medicine University of Münster,  
Domagkstr. 11, D-48149 ,  
Münster, Germany

**Email:** eberhard.nieschlag@ukmuenster.de

- Education:** University of Bonn and Munich: Study of Medicine, 1961-1967 University of Bonn: Doctoral degree (Dr. med.) 1967; Studies at several other institutions in UK, USA and Sweden.
- Positions Held:** University of Munster, Germany: Full Professor of Reproductive Medicine, 1992 to date; Associate Professor of Internal Medicine, 1976; Director, Institute of Reproductive Medicine, 1986 to 2008; Director, Max Planck Clinical Research Unit for Reproductive Medicine, Munster, 1980 to 1989.
- Awards:** German Federal Cross of Merit, 2008; "Distinguished Andrologist" of the American Society of Andrology, 2007; Doctor honoris causa, Medical University of Łódź (Poland), 2006; Premio di Andrologia J. M. Pomerol, Fundació Puigvert (Barcelona), 2005; Clinical Endocrinology Trust Visiting Professor (UK), 2001; Ernst-Jung Prize for Medicine (DM 200,000), 1996; Clinical Endocrinology Trust Medal, London, 1994; Keith-Harrison Plaque and Lecture of the Endocrine Society, Australia, 1993; European Medal and Lecture of the British Endocrine Society, London, 1990.
- Fellowships/ Memberships:** Fellow, Royal College of Physicians, London, 1994 to date; Member, Executive Council, European Society for Human Reproduction (ESHRE), 1996-1999; Executive Council, European Federation of Endocrine Societies (EFES), 1994-2001; Chairman, WHO Steering Committee of the Task Force on the Regulation of Male Fertility, 1985-1990.
- Presidencies:** International Society of Andrology, 1981-1985; German Society of Endocrinology, 1990-1993; European Academy of Andrology, 1992-1998; German Society of Andrology, 2001-2007; German Society of Reproductive Medicine, 2001-2003; European Society of Endocrinology 2007-2011.
- Research/Areas:** Internal Medicine, Reproductive Medicine, Endocrinology and Andrology.



## Petersen, R. J.

### FOREIGN FELLOW: Elected 1996

Born in Everett, Washington State USA, on 10th October, 1939

Department of Physics, University of Colorado,  
Boulder, Colorado 80309-0390, USA

**Tel:** (303) 492-1686

**Email:** jerry.peterson@colorado.edu

- Education:** University of Washington, USA: BS, magna cum laude, 1961, Ph.D., 1966.
- Positions Held:** Professor of Physics and of International Affairs, former Interim Vice Chancellor for Research, University of Colorado Boulder, USA; Visiting Professor, University of Copenhagen, Niels Bohr Institute, Denmark, University of Tokyo, Japan and University of Rio de Janeiro, Brazil; Various ranks, University of Colorado, Boulder, 1970-present; Research Faculty Member, Yale University, USA, 1968-1970; Instructor, Princeton University, USA, 1966-1968.
- Awards:** Fellow, American Physical Society; Foreign Fellow, Pakistan Academy of Sciences; Fellow, Japan Society for the Promotion of Science; Jefferson Science Fellow, US Department of State.
- Fellowships/ Memberships:** Member, American Physical Society, American Nuclear Society; Member, Long Range Plan Panel, Nuclear Sciences Advisory Committee, 1992; Member, US National Science Foundation (NSF), Physics Division Committee of Visitors, 1994, 1997; Chairman, Nuclear Physics Laboratory, 1980-81, 1988-89, 1994-96; Chairman, LAMPF User Group, 1992-93; Program Director, Intermediate Energy Physics, Physics Division, NSF, 1978-79; Member, International Conference on Nuclear Science and Technology, Turkey, 2nd & 3rd International conferences on Nuclear and Radiation Science, Kazakhstan, and others.
- Research/Areas:** Experimental Nuclear Physics, Nuclear Astrophysics, Exotic Fission Mechanisms, High Energy Nuclear Reactions with Mesons and Light Ions.



## Qaim, Syed Muhammad

### FOREIGN FELLOW: Elected 1990

Born in Fatehpur, British India, on 5th January, 1941

Advisor, Institute of Nuclear Chemistry, Forschungszentrum, Jülich GmbH, and Professor of Nuclear Chemistry, Universität zu Köln D-52425, JÜLICH, Germany

**Tel:** +49 (0) 2461 613282

**Fax:** +49 (0) 2461 612535

**Email:** s.m.qaim@fz-juelich.de

**Education:** Govt. College and University of the Punjab, Lahore, Pakistan: B.Sc., 1958; M.Sc., 1961; Liverpool University, United Kingdom: Ph.D., 1964; Birmingham University, United Kingdom: D.Sc., 1977

**Positions Held:** Research Associate, Birmingham University, United Kingdom, 1964–1966; Senior Scientific Officer, Atomic Energy Centre, Lahore, Pakistan, 1966–1968; Alexander von Humboldt Fellow, Mainz University, Germany, 1968–1970; Institute of Nuclear Chemistry of the Research Centre Juelich, Germany: Scientist, 1970–1975; Group Leader, 1975–1985; Division Leader, 1985–1995; Acting Director, 1995–1996; Vice Director 1996–2006; Advisor/Guest, 2006 to date; also Professor of Nuclear Chemistry at University of Cologne, Germany, 1997 to date; Chairman International Nuclear Data Committee of IAEA, 2002–2008.

**Awards:** Roland Eötvös Medal of Hungarian Physical Society (for contributions to understanding of complex particle emission reactions), 1988; JARI Medal Award and Prize of Pergamon Press (for developing novel medical radionuclides), 1990; Honorary Citizen, Kossuth University Debrecen, Hungary, 1995; *Sitara-i-Imtiaz* by President of Pakistan, 1999; Doctor of Science honoris causa, Kossuth University, Debrecen, Hungary, 1999; Doctor of Science honoris causa, The Yorker International University, New York/ Milan/ Florence, 2007; Honorary Professor, Government College University, Lahore, Pakistan, 2003; Medal of Honour of Egyptian Atomic Energy Authority, 2005; Medal and Certificate of Merit, Egyptian Association of Nuclear Physicists, 2005; Hevesy Medal of Nuclear Chemistry (for outstanding contributions to nuclear and radiochemistry), 2008; Becquerel Medal of Radiochemistry Group of Royal Society of Chemistry, London (for outstanding career contributions to radiochemistry), 2008; Golden Jubilee Award of Radiochimica Acta (for lifetime contributions to the Journal), 2012; Medal of Honour of Rajshahi University, Bangladesh, 2013.

**Fellowships/ Memberships:** Fellow Royal Society of Chemistry, London, 1974; Fellow Institute of Physics, London, 1974; Honorary Fellow, Hungarian Physical Society, 1988; Foreign Fellow, Pakistan Nuclear Society, 1997; Foreign Fellow, Pakistan Institute of Chemists, 1998; Fellow, Islamic World Academy of Sciences, 1994; Fellow, The World Academy of Sciences.

**Research/Areas:** Nuclear chemistry, analytical radiochemistry, medical radionuclides.



## Smith, David L.

### Foreign Fellow: Elected 2017

Born in USA, on 7<sup>th</sup> June, 1944

Emeritus Professor of Chemistry, University of Nebraska, USA

**Tel:** 970 264 6647

**Email:** dsmith7@unl.edu

**Education:** B.S. 1966, Ph.D. 1969, University of Kansas, Lawrence, Kansas; Postgraduate research at the University of Utah, Salt Lake City, Utah

**Positions Held:** Postdoctoral Research Associate, Department of Chemistry, University of Utah, 1969–1973; NATO Fellow, University of Paris-Sud, Orsay, France, 1974; Research Assistant Professor, University of Utah, 1975–1980; Research Associate Professor, University of Utah, 1981–1984; Associate Professor, Department of Medicinal Chemistry and Pharmacognosy, Purdue University, 1984–1989; Professor, Department of Medicinal Chemistry and Pharmacognosy, Purdue University, 1990–1994; Professor, Department of Chemistry, Director of Nebraska Center for Mass Spectrometry, University of Nebraska, 1994–2004.

**Fellowships/ Memberships:** Thesis Honors; NATO Fellow, Petroleum Research Fund Fellowship; USAID Science Advisor for Pakistan; Editorial Board, Analytical Biochemistry; Editorial Board Molecular and Cellular Proteomics; National Institutes of Health Bioanalytical, Engineering and Chemistry Study Section; many ad-hoc Review Committees for the National Institutes of Health; Co-Chair Asilomar Conference on Mass Spectrometry; Fogarty Fellowship for Research at the Institut de Biologie Structurale, Grenoble, France; Protein Society; American Society for Mass Spectrometry; American Chemical Society; Association for Research in Vision and Ophthalmology.

**Research/Areas:** Physical Chemistry, Mass Spectrometry, Protein Structure and Dynamics.





## Stein, Gary

### FOREIGN FELLOW: Elected 1997

Born in 1943

Chair, Department of Biochemistry, Co-Director, Vermont Cancer Center  
Burlington, VT, USA.

**Tel:** (802) 656-4874

**Fax:** (802) 656-8220

**Email:** gary.stein@med.uvm.edu

- Education:** B.A., Biology, Hofstra University, Hempstead, New York, 1965; M.S., Biology, Hofstra University Hempstead, New York, 1966; Ph.D., Biology, University of Vermont, Burlington, Vermont, 1969.
- Positions Held:** Temple University, Department of Pathology Philadelphia, Pennsylvania, 1969 – 1972; Postdoctoral Fellow (with Dr. Renato Baserga), University of Florida College of Medicine Department of Biochemistry and Molecular Biology, Gainesville, Florida; Assistant Professor, 1972 – 1975; Associate Professor, 1975 – 1979; Professor, 1979 – 1987; Associate Chairman, 1981 – 1986; University of Massachusetts Medical School Department of Cell Biology, Worcester, Massachusetts: Professor and Chairman, 1987 – present; Haidak Distinguished Professor & Chair of Cell Biology; Professor of Medicine; University of Massachusetts Cancer Center: Associate Director, 1993 – 1994; Deputy Director for Research, 1994 – 2005; Deputy Director, 2005 – 2009; Interim Director, 2009 – 2010; Co-Director, 2010-present; Center for Stem Cell Biology & Regenerative Medicine: Interim Director, 2007 – 2010; Director, The Human Embryonic Stem Cell Core, 2007-present.
- Awards:** Basil O'Connor Faculty Fellow, 1970-1972; Elizabeth Winston Lanier-Kappa Delta Award from the American Academy of Orthopaedic Surgeons and the Orthopaedic Research Society (for defining interrelationships between control of cell growth and tissue specific gene expression), 1993; Brown University Steroid Hormone Research Award, 1997; Elected Member: Pakistan Academy of Sciences, 1997; Appointed: The Gerald L. Haidak, M.D. and Zeldia S. Haidak Distinguished Professor and Chair of Cell Biology, 1999; William F. Neuman Award from the American Society for Bone and Mineral Research (with Jane Lian, for defining nuclear organization of gene regulatory machinery for biological control and cancer), 2007.
- Fellowships/ Memberships:** Elected Fellow, American Association for the Advancement of Science; American Association for Cancer Research; American Chemical Society; American Society for Cell Biology; Fellow: American Association for Advancement of Science; American Society for Microbiology; International Cell Cycle Society Southeastern Cancer Research Association; American Society of Biological Chemists; New York Academy of Sciences; American Society of Bone and Mineral Research; Orthopedic Research Society; American Society of Hematology; International Society for Experimental Hematology; International Bone and Mineral Society; International Society for Stem Cell Research.\
- Research/Areas:** The pluripotent cell cycle in human embryonic and reprogrammed (iPS) stem cells. Regulation of cell cycle, cell growth and phenotypic (skeletal and hematopoietic) gene expression in normal and cancer cells. Interrelationships between proliferation and differentiation. Combinatorial organization, assembly and integration of gene regulatory machinery in nuclear microenvironments.



## Ting, Samuel C.C. *(Nobel Laureate in Physics)*

### FOREIGN FELLOW: Elected 1983

Born in Ann Arbor, Michigan, USA, on 27th January, 1936

Department of Physics,  
Brookhaven National Laboratories Upton, New York, USA

- Education:** Early education in China, 1936-1956; University of Michigan, Ann Arbor, Michigan, USA: BSE (Physics & Mathematics), 1959; Ph.D. (Physics), 1962.
- Positions Held:** Presently Professor of Physics, Brookhaven National Laboratories, Upton, New York; Thomas Dudley Cabot Institute Professor of Physics, Massachusetts Institute of Technology (MIT), 1977; Professor of Physics, MIT, 1969; Leader, Experimental Group, Deutsches Elektronen Synchrotron, Hamburg, Germany, 1966; Instructor, Columbia University, New York, 1964.
- Awards:** Ford Foundation Fellowship, 1963 (working at European Organization for Nuclear Research, Geneva, Switzerland); Nobel Prize in Physics, 1976; Ernest Orlando Lawrence Award, US Government, 1976; The Enringen Medal, Society of Engineering Science, 1977; DeGasperi Award in Science, Government of Italy, 1988; Golden Leopard Award for Excellence by the Town of Taormina, Italy, 1988; Gold Medal for Science by the City of Brescia, Italy, 1988; Doctor Honoris Causa by University of Michigan, Ann Arbor, 1978; Chinese university, Hong Kong; University of Jiatong, Shanghai, China, 1987; University of Bologna, Italy, 1988; Columbia University, New York, 1990; University of Science & Technology, China, 1990; Moscow State University, Moscow, 1991; University of Bucharest, Romania, 1993; Doctor Honoris Causa by the University of Michigan, Columbia University, Moscow State University, Rheinische Westfälisch Technische Hochschule (Germany), University of Bologna (Italy), University of Bucharest (Romania), Hong Kong University of Science and Technology, etc.
- Fellowships/ Memberships:** Ford Foundation Fellow, 1963; Member, American Academy of Arts and Sciences, 1975; Member, Academia Sinica, Republic of China, 1975; Member, US National Academy of Sciences, 1977; Member, Soviet Academy of Sciences, 1989; Member, Hungarian Academy of Sciences, 1993; Member, Chinese Academy of Sciences, 1994; Member, Russian Academy of Sciences, 1995; Member, Deutsche Akademie Der Naturforscher Leopoldina (Germany), 1996; Royal Spanish Academy of Science; Honorary Fellow of the Tata Institute of Fundamental Research (India).
- Research/Areas:** Physics.



## Voelter, Wolfgang

### FOREIGN FELLOW: Elected 1983

Born in Ludwigsburg, Germany, on 20th October, 1936

Head of the Board of the Institute for Scientific Cooperation, Germany

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- Education:** Tübingen University, Tübingen, Germany: Diplom in Chemistry, 1963, Vorphysikum in Medicine, 1964, Dr.rer.nat., 1966; Erlangen University, Erlangen, Germany: Physikum in Medicine, 1966.
- Positions Held:** Head, Board of the Institute for Scientific Cooperation, Tübingen, Germany, 1985-2005; Tübingen University, Tübingen, Germany: Head, Department of Physical Biochemistry, 1976-2005; Vice Dean, Faculty of Chemistry and Pharmacy, 1976-1980; Vice Director, Chemisches Zentralinstitut, 1976-1980; University Professor 1973 to date; Research Fellow, Kaiser Foundation Research Institute, San Francisco, California, USA, 1967; Research Associate, Stanford University, Stanford, California, USA, 1966-67.
- Awards:** Kneipp Award (for structure elucidation of natural products), 1983; Erich Krieg Award (for studies on drug metabolism), 1984; Japan Society for the Promotion of Science Award, 1986; Special Award and Gold Medal of the President of Pakistan, 1986; Sitara-i-Imtiaz, Govt. of Pakistan, 1995; Doctor of Science Honoris Causa, University of Karachi, Pakistan, 1990; Doctor of Science Honoris Causa, Hamdard University, Pakistan, 2003; *Hila-i-Pakistan* by President of Pakistan, 2005; Felicitation Volume Award, Hamdard Foundation, 2006; Honorary Badge, Bulgarian Academy of Sciences, Sofia, 2006; Foundation-Stone Laying of Völter Foundation (support of young children's education), 2012; Elected Vice President of Völter Foundation, 2013.
- Fellowships/ Memberships:** Member, International Advisory Board of Dr. Panjwani Center for Molecular Medicine and Drug Research, 2004; Member Board of Prof. Dr. Harald Grubler Foundation, 2003; Elected Member, Art Foundation Baden-Württemberg, 1978-2000; Elected Member, Third World Academy of Sciences, Trieste, Italy, 1996; Elected Member, Bergmann-Kreis since 1980; Numerous grants and fellowships donated; Co-organizer of numerous symposia.
- Research/Areas:** Isolation, synthesis and bioactivity of natural products.





## Windley, Brian Frederick

### FOREIGN FELLOW: Elected 2008

Born in London, UK, on Jan 19, 1936

Emeritus Professor of Tectonics, University of Leicester, UK

**Tel:** 0116-2414035

**Fax:** 0116-2523918

**Email:** brian.windley@btinternet.com

**Education:** University of Leicester, UK: B.Sc., 1960; University Exeter, UK: Ph.D., 1963.

**Positions Held:** University of Leicester, UK: Emeritus Professor of Tectonics, 2001 to date; Professor of Geology, 1982-2001; Head, Department of Geology, 1983-1986; Reader, Department of Geology, 1975-1982; Lecturer, Department of Geology, 1968-1975. Geologist, Geological Survey of Greenland, Copenhagen, Denmark, 1963-1968. Visiting Professor: Tokyo Institute of Technology, Japan, 2001-2002; Institute of Geology and Geophysics, Chinese Academy of Sciences, Beijing, 2002 to date.

**Awards:** Bigsby Medal, Geological Society of London, 1977; Murchison Medal, Geological Society of London, 1985; Bronze Medal, University of Helsinki, Finland, 1991.

**Fellowships/ Memberships:** Fellow of the Geological Society of London, 1960; Fellow, the Geological Society of America, 1977; Fellow, Geological Association of Canada, 1979; Fellow, Geological Society of India, 1979; Honorary D.Sc. degree, University of Leicester, 1978; Member, Geological Society of Edinburgh, 1965; Mineralogical Society of London, 1974; Royal Geographical Society, 1990; Royal Society of Asian Affairs, 1996; American Geophysical Union, 1997.

**Research/Areas:** Evolution of the continents with special contributions to understanding Archaean to Cenozoic mountain belts worldwide.



## 12. Additional Foreign Fellows (PROFILES NOT PROVIDED)

Sagadiev, K.A.	Elected 1998
Kazi, Abdul Mujeeb	Elected 2001
Panjwani, Noorjahan	Elected 2001
Alam, M. Sajjad	Elected 2004
Agre, Peter (Noble Laureate, Chemistry 2003)	Elected 2008
Plant, Tony M.	Elected 2008
Rode, Bernd Michael	Elected 2016
Hasnain, S. Samar	Elected 2017

## 13. Deceased Foreign Fellows

Prof. Dr. Norman E. Borlaug, Noble Laureate	Elected 1982
Prof. Dr. H. Hartmann, Noble Laureate	Elected 1982
Prof P.A.M. Dirac, F.R.S., Noble Laureate	Elected 1982
Prof. Dr. John Bardeen, Noble Laureate	Elected 1982
Dr. Ralph Randles Stewart E.	Elected 1983
Dr. George Beadle, Noble Laureate	Elected 1983
Dr. M. I. Ibrahim	Elected 1986
Prof. R. H. Haynes	Elected 1995
Prof. Dr. Pulat Khabibullaev	Elected 1997
Prof. Dr. Mu Shik Jhon	Elected 2000
Dr. Nurul Islam	Elected 2004



## 14. Members of the Academy

Pakistan Academy of Sciences





## 14. Members of the Academy

1. **Dr. Farhan Saif** Elected 2008  
Professor, Department of Physics  
Quaid-i-Azam University, Islamabad
2. **Dr. Mona Lisa** Elected 2009  
Professor and Chairperson  
Department of Earth Sciences  
Quaid-i-Azam University, Islamabad
3. **Dr. Muhammad Sayab** Elected 2012  
Assistant Professor,  
National Centre of Excellence in Geology  
University of Peshawar, Peshawar
4. **Dr. Sohail Nadeem** Elected 2012  
Professor, Department of Mathematics  
Quaid-i-Azam University, Islamabad
5. **Dr. Syed Ghulam Musharraf** Elected 2013  
Associate Professor  
HEJ Research Institute of Chemistry  
Dr. Panjwani Center for Molecular Medicine and Drug Research  
International Center for Chemical and Biological Sciences  
University of Karachi, Karachi
6. **Dr. Asma Saeed** Elected 2013  
Senior Scientific Officer  
Food and Biotechnology Research Centre  
Pakistan Council of Scientific and Industrial Research Laboratories  
Complex, Lahore
7. **Dr. Muhammad Ansar** Elected 2013  
Associate Professor, Department of Biochemistry  
Faculty of Biological Sciences  
Quaid-i-Azam University, Islamabad
8. **Dr. Bilal Haider Abbasi** Elected 2014  
Associate Professor, Department of Biotechnology  
Faculty of Biological Sciences  
Quaid-i-Azam University, Islamabad
9. **Dr. Reaz Uddin** Elected 2014  
Assistant Professor  
Dr. Panjwani Center for Molecular Medicine and Drug Research Center  
for Chemical and Biological Sciences  
University of Karachi, Karachi



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|-----|---|--------------|
| 10. | <b>Dr. Gul Shahnaz</b><br>Assistant Professor<br>Department of Pharmacy<br>Faculty of Biological Sciences<br>Quaid-i-Azam University, Islamabad   | Elected 2014 |
| 11. | <b>Dr. Tariq Mahmood</b><br>Associate Professor and Chairperson<br>Department of Plant Sciences<br>Quaid-i-Azam University, Islamabad             | Elected 2015 |
| 12. | <b>Dr. Nudrat Aisha Akram</b><br>Assistant Professor<br>Department of Botany<br>GC University, Faisalabad   | Elected 2016 |
| 13. | <b>Dr. Mushtaq Ahmed</b><br>Associate Professor<br>Department of Plant Science<br>Quaid-i-Azam University, Islamabad                              | Elected 2016 |
| 14. | <b>Dr. Zia-ur-Rehman</b><br>Assistant Professor<br>Department of Chemistry<br>Quaid-i-Azam University, Islamabad                                  | Elected 2016 |
| 15. | <b>Dr. M. Farooq</b><br>Associate Professor<br>Department of Agronomy<br>University of Agriculture, Faisalabad                                    | Elected 2017 |
| 16. | <b>Dr. Sammer Yousaf</b><br>Assistant Professor<br>H.E.J. Research Institute of Chemistry<br>University of Karachi, Karachi                       | Elected 2017 |
| 17. | <b>Dr. Muhammad Zaffar Hashmi</b><br>Assistant Professor<br>Department of Meteorology<br>COMSATS Institute of Information Technology<br>Islamabad | Elected 2017 |





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