

Newsletter

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Pakistan Academy of Sciences, Islamabad Holds Reference for (Late) Dr. Abdul Quadeer Khan (N.I. & BAR, H.I.) October 21, 2021



Pakistan Academy of Science (PAS) held a hybrid Reference Meeting for (Late) Dr. Abdul Quadeer Khan (N.I. & Bar, H.I.), Founding Chairman, Dr. A.Q. Khan Research Laboratories, Kahuta & Fellow Pakistan Academy of Sciences (PAS) who breathed his last on October 10, 2021, and was buried in H-8 Graveyard, Islamabad. The Reference Session was well attended by the Fellows and Members of the Academy both physically in the PAS Auditorium as well as virtually (online). The main objective of the meeting was to pay homage and tributes to this great Nuclear Scientist and Metallurgist of Pakistan who made valuable scientific contributions and achievements in the process of making Pakistan an Atomic Power, the 7th in the entire World and the 1st among the Muslim nations.

Prof. Dr. Tasawar Hayat, Secretary General, PAS presented Introductory Welcome to the audience. He informed the audience that Dr. A.Q. Khan was elected as Fellow of the Academy in the year 1988. Throughout his association with the Academy and especially during his six years' tenure as President of the Pakistan Academy of Sciences from 1997-2002, Dr. Khan made all-out efforts and support for the upgradation and sustainability of scientific and academic activities of the Academy.

Nine Fellows and one Member of the Academy who happened to be close associates of Dr. A.Q. Khan spoke at the occasion and shared their memories and views on the scientific and social life of this highly celebrated nuclear scientist of Pakistan. It was reflected that throughout his scientific career, Dr. A.Q. Khan remained a strong source of encouragement and support for his fellow colleagues, associated scientific community including scientists, engineers, and researchers at the Academy and within the strategic scientific institutions, as well as students within universities, colleges, and schools, and above all the common masses.

In his closing address, Dr. Khalid Mahmood Khan (S.I.), President Pakistan Academy of Sciences lauded Dr. A.Q. Khan for his high-grade technical and management skills that enabled Pakistan to achieve wonders in the field of defense and cutting-end technology. His intellectual contributions to Pakistan were enumerable and his determination remained unmatched throughout his scientific & professional career. He praised Dr. Khan for his significant contributions to the uplift of the Academy and recommended that the Academy may initiate a yearly Award of A.Q. Khan Gold Medal to an acclaimed

researcher in the field of science & technology in Pakistan.

The meeting concluded that as one of the most highly decorated scientists of Pakistan, (Late) Dr. A.Q. Khan has left behind a rich harvest of sweet memories and marvelous achievements as inspiration for all those who know him and for the generations to come. The nation will always remember him as Mohsin-e-Pakistan.

Prof. Dr. Zulfiqar Bhutta has been Honored with the Prestigious International Roux Prize 2021

It is a matter of immense pride and honor for the Pakistan Academy of Sciences that Prof. Dr. Zulfiqar Bhutta *FRS* Fellow PAS has been awarded the 2021 Roux Prize for turning evidence into health impact. The Roux Prize is administered by the Institute for Health Metrics and Evaluation (IHME) at the University of Washington and is funded by founding board member David Roux and his wife, Barbara. Launched in 2013, it is the world's largest award for evidence-based public health achievement and has drawn nominations from across the world.

More details may be viewed at the link:
<https://www.dawn.com/news/1645261/akus-prof-bhutta-awarded-2021-roux-prize>



Pakistan Academy of Sciences congratulates Prof. Dr. Zulfiqar Bhutta on receiving this world's largest award.

Prof. Dr. Iqbal Choudhary Received the Prestigious Mustafa (PBUH) Prize October 21, 2021

Prof. Dr. M. Iqbal Choudhary Fellow PAS and Coordinator General COMSTECH has been named the 2021 winner of the Mustafa (PBUH) Prize for his services in the field of bio-organic chemistry. The Mustafa (P.B.U.H) Prize, a top science and technology award, is granted biennially to the top researchers and scientists of the Islamic world in four categories: "Life and Medical Science and Technology", "Nanoscience and Nanotechnology", "Information and Communication Science and Technology", and "All areas of science and technology". The Mustafa (P.B.U.H) Prize was established in 2012 as a symbol of scientific excellence at the international level, and it is regarded as Nobel prize of the Muslim world.

Mustafa (PBUH) Prize distribution ceremony was held at Tehran's Vahdat Hall on October 21, 2021 in which Prof. Dr. Iqbal Choudhary was awarded the prize.



Pakistan Academy of Sciences congratulates Prof. Dr. M. Iqbal Choudhary on receiving this world's largest award.

Prof. Dr. Zabta Shinwari Elected as President of Monbukagakusho: MEXT Alumni Association of Pakistan (MAAP) (2021-2024)

Prof. Zabta Shinwari got elected for fourth time (2021-2024) as President Monbukagakusho: MEXT Alumni Association of Pakistan (MAAP) (2021-2024). The Monbukagakusho-MEXT Alumni Association of Pakistan (MAAP) is an organization of the scholars study in Japanese institutions in the field of natural sciences, engineering & technology, social and medical sciences, public policy & management, etc.



Prof. Dr. Azra Khanum (Fellow, PAS) Elected as Vice Chair of the OWSD Pakistan Chapter

Prof. Dr. Azra Khanum (Fellow, PAS) has been elected as Vice Chair of the OWSD Pakistan Chapter. The OWSD Pakistan National Chapter was established in March 2019. It is hosted at the Karachi Institute of Biotechnology and Genetic Engineering (KIBGE) at the University of Karachi. The National Chapter's activities include organizing conferences, seminars and workshops for knowledge dissemination, developing cooperative projects with universities and instructors, and developing the culture of scientific awareness at undergraduate, graduate and postgraduate levels.



Representation of Pakistan Academy of Sciences in AASSA Working Group Meeting on Climate Change and Health

Prof. Dr. M. Perwaiz Iqbal (nominated member from the PAS) was assigned with the task to write a country report on the Effect of climate change on health in Pakistan. The final report of IAP is published in the year 2021.

The report highlights the emerging global issue of climate change, that has been in the lime light for more than 4 decades and response of the world bodies including the World Health Organization (WHO, Inter-Academy Partnership (IAP) to aware the member countries in order to save the future generations from the devastating effects of climate change.



Representation of Pakistan Academy of Sciences in Special Committee for Women in Science and Engineering (AASSA-WISE Committee) - STEM Women Database

To promote women participation in STEM education and career, AASSA is playing a lead role by constituting Special Committee for Women in Science and Engineering (AASSA-WISE Committee).

Prof. Dr. Azra Khanum (nominated member from the PAS) represented Pakistan Academy of Sciences in Special Committee for Women in Science and Engineering (AASSA-WISE Committee).

AASSA Executive Board and General Assembly Meeting October 15, 2021

The 5th AASSA General Assembly and AASSA Executive Board Meeting was held on October 15, 2021. Prof. Dr. Tasawar Hayat (Sec. Gen, PAS) and Prof. Dr. Zabta Shinwari (Former Treasurer, AASSA & Fellow PAS) participated in the meeting. Prof. Dr. Zabta Shinwari as representative from the Academy presented report on activities of Pakistan Academy of Sciences carried out during 2020-2021 on Climate Change and Health (CC&H), STEM women database, Open Science, and Pandemic, respectively at the EB meeting and the GA.

In the new AASSA Executive Board Member election held at the General Assembly for 2021 – 2024, Prof. Dr. Tasawar Hayat (Sec. Gen. PAS) has been elected as Member-at-Large.

AASSA Executive Board Member (2021-2024)

President: Prof. Dr. Khairul Anuar bin Abdullah - Malaysia

President-Elect: Prof. Ahmet Nuri Yurdusev – Turkey

Vice President:

Prof. Satryo Soemantri Brodjonegoro - Indonesia

Prof. AK Azad Chowdhury - Bangladesh

Prof. Mooha Lee – South Korea

Members-at-Large

Prof. Tasawar Hayat – Pakistan

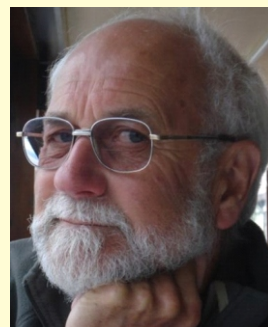
Prof. Viktor BOGATOV, Russia

Prof. Supawan Tantayanon – Thailand

Prof. Brian F. Windley has been Awarded 2021 International Prize by the Geological Society of Japan

Prof. Brian F. Windley, Foreign Fellow PAS has been awarded the “2021 International Prize” by the Geological Society of Japan, which was presented online at the Annual Meeting of the Society held in October 2021.

Pakistan Academy of Sciences congratulates Prof. Windley on receiving this International prize.



1st International Webinar on Materials Organized by Department of Physics, Air University, Islamabad

1st International Webinar on Materials had organized at the Department of Physics, Air University on August 12, 2021, in collaboration with Jiangnan & Shenzhen Universities, P.R. China, and Linnaeus University, Sweden. Prof. Dr. Asghari Maqsood, fellow PAS, was the chair of this webinar. The webinar organizers were Dr. Mozaffar Hussain (Head), Dr. Rizwan Akram, and Dr. Umer Rehman of the Physics Department, Air University, Islamabad. The central theme of the webinar was the fabrication methods and understanding of the 2D materials for applications in the industry.

The honorable Vice-Chancellor, Air Marshall (R) Javaid Ahmad, HI (M) chaired this webinar as a chief guest. Dr. Rashid Mahmood, Dean, Faculty of Basic & Applied Sciences, faculty, and post-graduate students attended this webinar.

The Speakers were Dr. Yun Zheng from Jiangnan University, P.R. China, Dr. Zahir Muhammad from Shenzhen University, P.R. China and Dr. Shahid Sattar from Linnaeus University, Sweden.

2020-2021 Year Book of PAS: Updation of Fellows Profiles

The Pakistan Academy of Sciences publishes its Year Book every two years. The Year Book 2020-2021 is currently being compiled for publication. The Fellows and Foreign Fellows of the PAS are requested to please send us their updated profiles by February 14, 2022 to enable us to include in the Year Book.

Obituary

Dr. Abdul Quadeer Khan (N.I. & Bar, H.I.) 1988 - 2021

It is with profound grief to inform all colleagues, friends, associates and well wishers that Dr. Abdul Quadeer Khan (N.I. & Bar, H.I.), Fellow of the Pakistan Academy of Sciences (PAS), a versatile metallurgist and nuclear scientist of Pakistan and Founding Chairman, Dr. A.Q. Khan Research Laboratories, Kahuta, breathed his last on October 10, 2021 at the KRL Hospital, Islamabad. His funeral was held in the Faisal Mosque, Islamabad and he was buried in H-8 Graveyard, Islamabad. As one of the most highly decorated scientist of Pakistan, Dr. Abdul Quadeer Khan has left behind a rich harvest of sweet memories and marvelous achievements as inspiration for all those who know him and for the generations to come. The nation will always remember him as Mohsin-e-Pakistan.



Dr. Abdul Quadeer Khan had a long and distinguished career in the field of metallurgy and allied disciplines. He was highly renowned for his pioneering research contributions in the field of uranium enrichment using the versatile high speed gas centrifuge technique in Pakistan. He played a pivotal role in Pakistan's nuclear Programme. The establishment of Kahuta Research Laboratories in fact speaks of his rank in the nuclear science arena and which lead to the 28 May, 1998 Nuclear Explosions by Pakistan in response to Indian nuclear tests. His sole efforts indeed paved the way for Pakistan to become the 6th nuclear state in the entire World and the first nuclear state in the Muslim World.

Dr. Abdul Quadeer Khan was elected as Fellow of the Pakistan Academy of Sciences in 1988. Throughout his association with the Academy, Dr. Abdul Quadeer Khan highly supported for the build-up and upgradation of the Pakistan Academy of Sciences. During his six years' tenure as President - Pakistan Academy of Sciences from 1997-2002, he significantly facilitated for renovation of the Academy Secretariat Building as well as creation of a versatile Auditorium, Fellows Lodge, and Garages/Transport Parking within the Academy premises. He also facilitated provision of significant amount of Rupees 20 Million as Endowment Fund to the Academy for sustainability of its scientific and academic work.

In recognition of his outstanding contributions in the field of science and technology, Dr. Abdul Quadeer Khan received several prestigious civil awards like Nishan -i-Imtiaz and Bar, Govt. of Pakistan, 1996, 1998; Hilal-i-Imtiaz, Govt. of Pakistan, 1989.

Throughout his scientific career, Dr. Abdul Quadeer Khan remained a strong source of encouragement and support for his fellow colleagues, the associated scientific community including scientists, engineers and researchers in strategic scientific institutions as well as students in universities, colleges and schools and above all the common masses. His effective and efficient management enabled Pakistan to achieve wonders in the field of defense and cutting-end technology for scientific and academic purposes. His intellectual contributions to Pakistan were enumerable and his determination unmatched. He will always be remembered for his deeply professional attitude, problem solving capabilities, organizational and management skills, excellent judgment and calm good cheer.

As a towering national hero, Dr. Khan has left us and the nation with deep sorrow and grief. There are no words to describe how much he will be missed by the nation. Our thoughts and heartfelt condolences go out to the family, friends and colleagues around the world. May ALLAH (SWT) give strength to his family, dears and nears to bear this great and irreparable loss and reward Dr. Khan for his services to the nation and bless him the highest place in Jinnah (Aameen) .

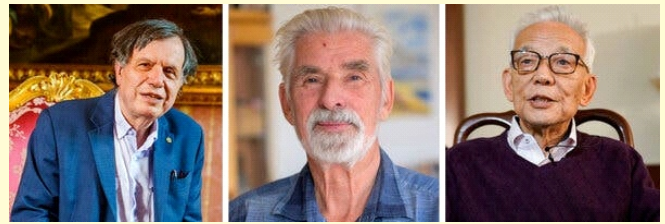
**On behalf of Pakistan Academy of Sciences,
Islamabad**

The 2021 Nobel Laureates

Nobel Prize in Physics

This year's Nobel Prize in Physics is awarded one half jointly to Syukuro Manabe, Klaus Hasselmann, and the other half to Giorgio Parisi. They have laid the foundation of our knowledge of the Earth's climate and how humanity influences it, as well as revolutionized the theory of disordered materials and random processes. Syukuro Manabe and Klaus Hasselmann “for the physical modelling of Earth's climate, quantifying variability and reliably predicting global warming”

Giorgio Parisi “for the discovery of the interplay of disorder and fluctuations in physical systems from atomic to planetary scales”



Giorgio Parisi

Klaus Hasselmann

Syukuro Manabe

Nobel Prize in Chemistry

Building molecules is a difficult art. Benjamin List and David MacMillan are awarded the Nobel Prize in Chemistry 2021 for their development of a precise new tool for molecular construction: organocatalysis. This has had a great impact on pharmaceutical research and has made chemistry greener.

Benjamin List and David MacMillan “for the development of asymmetric organocatalysis”



Benjamin List

David W.C. MacMillan

Nobel Prize in Physiology/Medicine

This year's medicine prize is awarded to David Julius and Ardem Patapoutian. Their discoveries have unlocked one of the secrets of nature by explaining the molecular basis for sensing heat, cold and mechanical force, which is fundamental for our ability to feel, interpret and interact with our internal and external environment.

David Julius and Ardem Patapoutian “for their discoveries of receptors for temperature and touch”



Ardem Patapoutian

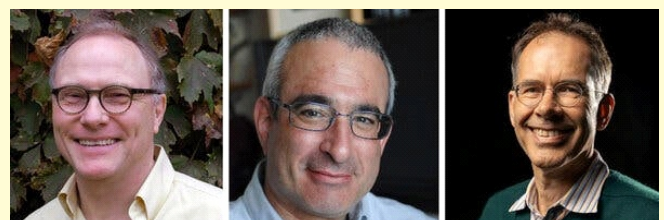
David Julius

Nobel Prize in Economics

This year's Laureates – David Card, Joshua Angrist, and Guido Imbens – have provided us with new insights about the labor market and shown what conclusions about cause and effect can be drawn from natural experiments. Their approach has spread to other fields and revolutionized empirical research.

David Card “for his empirical contributions to labor economics”.

Joshua D. Angrist and Guido W. Imbens “for their methodological contributions to the analysis of causal relationships”.



David Card

Joshua D. Angrist

Guido W. Imbens