

Newsletter

PAKISTAN ACADEMY OF SCIENCES

Promoting Science, Technology and Innovation for Socio-economic Development

Brainstorming Workshop on Upgradation of National Water Policies at the PAS Scientific Advice to Govt. Unit/PAS Policy Unit, Islamabad (May 27, 2025)

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The Scientific Advice to Government (SAG) Unit of the Pakistan Academy of Sciences (PAS) organized a Brainstorming Workshop on the Upgradation of National Water Policies on 27th May at the PAS Secretariat, Islamabad. The primary objective of the workshop was to review the feedback received from various stakeholders and subject experts and to build consensus on the proposed revisions to NWP-2018. The session was convened by Dr. Sara Qaisar, Director of the SAG Unit, and brought together a distinguished group of experts and policymakers from leading public and private sector organizations. Representing the Ministry of Water Resources, Dr. Athar Hameed, Chief Engineering Advisor at the Federal Flood Commission, shared valuable insights on national priorities. Other prominent participants included Dr. Arif Goheer (Executive Director, Global Climate Change Impact Centre), Prof. Dr. Abida Farooqi (Professor, Quad-i-Azam University Islamabad), Dr. Hifsa Rasheed (Director General, PCRWR), and Dr. Shazia Akhtar (Deputy Manager, NDMA).

The workshop also benefited from the expertise of Dr. Ateeq ur Rahman Tariq (Director, CEWRE) besides contributions from civil society and development organizations. Notable among them were Mr. Muhammad Junaid (Country Manager, WaterAid), Dr. Shakeel Hayat Khan (Climate and WASH Specialist, WaterAid), and Ms. Durre Mehmood (Senior Consultant, Oxford Policy Management). Evidence-based perspectives were further provided by Dr. Muhammad Zeshan (Senior Researcher, PIDE) and Mr. Hassam Abbasi (Manager, WWF).

Distinguished Fellows and Members of PAS actively enriched the discussions, including Prof. Dr. Kauser Abdulla Malik (President, PAS), Prof. Dr. M. Aslam Baig (Secretary General, PAS), Prof. Dr. Iqar Ahmad Khan (Fellow PAS), Maj. Gen. Amir Ikram (Fellow PAS), Prof. Dr. Waheed Akhtar (Fellow PAS), and Dr. Riffat Mahmood Qureshi (Director Administration, PAS).

The diverse participation and rich exchange of ideas highlighted the importance of collaborative efforts in addressing Pakistan's pressing water challenges. Discussions highlighted the urgent need to strengthen Pakistan's water governance by fostering robust federal-provincial coordination, enhancing monitoring and evaluation frameworks, and promoting sustainable water pricing alongside greater community participation. Participants emphasized the role of private sector engagement, integration of reliable data systems, adoption of innovative technologies, and climate-smart solutions to build resilience against growing water challenges.

The workshop concluded with a strong commitment from all stakeholders to work collectively towards transforming Pakistan's water governance into a resilient, knowledge-based, and people-centered system, with the shared vision of ensuring a sustainable water future for the country.

Participation of the President and Secretary General of Pakistan Academy of Sciences (PAS) in the International Symposium Organized by the Academic Divisions of the Chinese Academy of Sciences (CASAD) on their 70th Anniversary of Establishment (May 31, 2025)

In celebration of the 70th anniversary of establishment of the Academic Divisions of Chinese Academy of Sciences (CASAD), the Chinese Academy of Sciences (CAS) hosted an international symposium themed "Sustainable Development and Inclusive Collaboration: The Responsibilities of the Scientific Community" on May 31, 2025, in Beijing, China. Prof. Dr. Kauser Abdulla Malik, President PAS, and Prof. Dr. M. Aslam Baig, Secretary General PAS, participated as Keynote Speakers in this

event. The event provided a platform to bring together distinguished leaders from major national academies, international scientific organizations, and representatives of CAS Foreign Members, and presented a great opportunity for leading scientific entities and prominent scientists to share insightful perspectives on the crucial roles that the international scientific community plays in addressing challenges and promoting sustainable development.



Prof. Dr. M. Aslam Baig (Secretary General, PAS) Presented a Keynote Lecture at The Asian Symposium on Laser-Induced Breakdown Spectroscopy (ASLIBS), held in Wuhan, China (May 23-26, 2025)

Prof. Dr. M. Aslam Baig (H.I., S.I., T.I.) (Secretary General, PAS) presented a keynote lecture entitled, "Signal Enhancement Techniques in Laser-Induced Breakdown Spectroscopy (LIBS)", at The Asian Symposium on Laser-Induced Breakdown Spectroscopy (ASLIBS), held in Wuhan, China, from May 23-26, 2025. This scientific program for ASLIBS 2025 featured a range of keynote presentations by distinguished international experts in LIBS. The oral and poster sessions presented the latest advances in LIBS research, including fundamental physics, technological innovations, data analysis, interdisciplinary applications, and multi-technique integration. The symposium provided invaluable insights and fostered engaging discussions on the future directions of LIBS.



Prof. Dr. M. Aslam Baig (Secretary General, PAS) Delivered a Talk as an Invited Speaker at the 15th International Symposium on Modern Optics and its Application, held in Bali, Indonesia (July 28-31, 2025)

Prof. Dr. M. Aslam Baig, Secretary General of Pakistan Academy of Sciences (PAS), delivered a talk as an Invited Speaker at the “15th International Symposium on Modern Optics and its Application” from July 28-31, 2025, in Bali, Indonesia. Prof. Baig presented a keynote lecture on: “LIBS – An Alternate Technique for Quantitative and Qualitative Analysis of any Sample”. The main theme of the event was “Bridging Light and Quantum Frontiers” to align with the International Year of Quantum Science and Technology. The symposium focused on the transformative potential of optics and photonics in advancing quantum innovations, including quantum communication, computing, precision sensing, and secure information networks. The event brought together distinguished scientists from various international scientific organizations to serve as a dynamic forum for scientific communication and

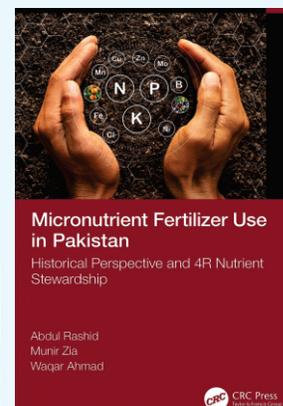
interaction among researchers—particularly those from the region and beyond—working in the rapidly advancing domains of modern optics and photonics, including theoretical, computational, and experimental studies of optical phenomena, devices, and materials.



Dr. Abdul Rashid (Fellow PAS) has been Awarded HEC Best Publication Award (May 22, 2025)

Dr. Abdul Rashid, Fellow of Pakistan Academy of Sciences (PAS), has been awarded Higher Education Commission (HEC) Best Publication Award, on May 22, 2025, in the category of Life Sciences (i.e., Biological Sciences, Health Sciences, Pharmacy, Agricultural Sciences and Animal Sciences) for being lead author of the book "Micronutrient Fertilizer Use in Pakistan: Historical Perspective and 4R Nutrient Stewardship", published by CRC Press (Taylor & Francis Group), Boca Raton, Florida in 2023, (340 pages). This prestigious Award carries a handsome amount of cash prize. Dr. Rashid is an eminent Soil Scientist of the country -- specializing in Soil Fertility

and Crop Nutrition with focus on Micronutrients. His farmer-friendly micronutrient fertilizer use technologies are adopted widely. Dr Rashid's innovative problem-solving research has earned him enormous global and national recognitions, like International Fertilizer Association's NORMAN BORLAUG AWARD, International Plant Nutrition SCIENCE AWARD, International Soil Testing & Plant Analysis Award, and Fellowship of Indian Society of Soil Science and Soil Science Society of Pakistan. His recent R&D is on agronomic biofortification of food grains with Micronutrients to combat 'hidden hunger' in human populations.



Prof. Dr. Zabta Khan Shinwari (Fellow PAS) Led the Completion of the Pioneer Project to Recycle Ablution Water

Prof. Dr. Zabta Khan Shinwari, Fellow PAS, and Vice Chancellor, Federal Urdu University of Arts, Sciences & Technology (FUUAST), led the completion of a groundbreaking project to recycle ablution water. This initiative is believed to be the first of its kind at a university level, setting a new standard for institutional responsibility in the face of pressing global challenges. This project not only highlights the ingenuity present within Pakistan's academic institutions but also positions the country as a leader in practical and impactful environmental innovation. The system, which is now fully operational on campus, captures water used for ablution and subjects it to a multi-stage filtration and purification process. The treated water is then repurposed for use in gardening, landscaping, and non-potable sanitation, significantly reducing the university's reliance on fresh water sources. Building on this success, FUUAST has ambitious plans to replicate this model throughout the country.



Prof. Dr. Zabta Khan Shinwari (Fellow PAS) Participated in Kazan Expo, held in Kazan, Russia (May 14-16, 2025)

Prof. Dr. Zabta Khan Shinwari, Fellow PAS, participated in Kazan Expo, held in Kazan, Russia, from May 14-16, 2025. The event, titled "Educating a New Generation of Academic Leaders of the Future in Russia and OIC." The dialogue emphasized the critical importance of cultivating leaders who possess global perspectives, foster innovation, and uphold ethical governance. A Memorandum of Understanding (MoU) between FUUAST and Kazan Federal University; Developing a joint leadership academy or institute specifically designed to mentor young faculty and administrators; Organizing annual "Future Academic Leaders Forums," alternating between Pakistan and Russia. The conclusion of the discussion underscored a shared belief that investing in young academic leaders today is essential for ensuring a more peaceful, innovative, and prosperous world tomorrow. Through this strategic collaboration, FUUAST and Kazan Federal University are poised to serve as torchbearers for nurturing a new generation of leaders for the entire global academic community.



Congratulations to Prof. Dr. Iqrar Ahmad Khan (H.I., S.I.), Fellow PAS, on his appointment as Chairperson of the Punjab Higher Education Commission (PHEC)

The Pakistan Academy of Sciences (PAS) extends its heartfelt congratulations to Prof. Dr. Iqrar Ahmad Khan (HI, SI), Fellow PAS, on his appointment as Chairperson of the Punjab Higher Education Commission (PHEC) for a period of four years. The appointment was notified by the Government of The Punjab Higher Education Department vide its Notification No. SO (Univ.) PHEC-1/2018-V-II, dated: 13 May, 2025. The Academy wishes him continued success for impactful contributions in the domain of science and education in the country.



Congratulations to Prof. Dr. Mushtaq Ahmad (T.I.) Fellow PAS, Awarded the Prestigious SCO Award of Asia 2025: SCO Decade of Dedication

Pakistan Academy of Sciences extends its heartfelt congratulations to PAS Fellow and Academician Prof. Dr. Mushtaq Ahmad (T.I.) for receiving the Prestigious SCO Award of Asia 2025: SCO Decade of Dedication. It is indeed a Pride moment for Pakistan. Under the Platform of Shanghai Conference Organisation (SCO) countries, Silkroad Agricultural Education and Research Innovation Alliance (SAERIA) has evolved from a China-initiated declaration in 2016 into a broad, international alliance aimed at sharing talent, research, technology, cultural, and policy resources in agricultural education, Agro-Biodiversity and Agro- biological resources across Silk Road countries. With a big forum of 19 countries, 156 institutions, new member institutions, and a growing membership base, SAERIA continues to shape agricultural innovation and collaborative education

across the region. In 10th years anniversary event was hosted by Almaty, Kazakhstan, dated 7-8 July, where the SCO announced the award: SCO Decade of Dedication for 10 scientists across the Member States, including Pakistan, Prof. Dr. Mushtaq Ahmad (T.I.), Fellow PAS, TWAS, PIFI-CAS, for his scientific contribution amongst SCO countries.



Congratulations to Prof. Dr. Irshad Hussain, Fellow PAS, on his appointment as Tang Au-Chin Chair Professor at Jilin University, China

The Pakistan Academy of Sciences (PAS) extends its heartfelt congratulations to Prof. Dr. Irshad Hussain, Fellow PAS, on his appointment as Tang Au-Chin Chair Professor (3 months/year) at Jilin University, China. Tang Au-Chin was a Chinese theoretical chemist and educator, known as the "Father of Quantum Chemistry" in China. He established the Department of Chemistry of Jilin University and served as President of the university from 1978 to 1986. He was a founding member of the Chinese Academy of Sciences and a member of the International Academy of Quantum Molecular Science (IAQMS). He established the National Natural Science Foundation of China (NSFC) in 1986 and served as its founding/first president.



Congratulations to Prof. Dr. Zulfiqar A. Bhutta (FRS, S.I., T.I.) Fellow PAS, on his Prestigious International Award as the Co-recipient of the 2025 Virchow Prize for Global Health

It is with immense pride and joy that we share the outstanding news that Dr. Zulfiqar Bhutta, a distinguished Fellow of the Pakistan Academy of Sciences, has been announced as the Co-recipient of the 2025 Virchow Prize for Global Health. This prestigious international honor recognizes his exceptional leadership and lifelong contributions to advancing maternal, newborn, and child health, especially among underserved and vulnerable populations.

Dr. Bhutta's work has not only influenced global health discourse but has also brought tangible improvements to the lives of millions across low and middle-income countries, including Pakistan. His commitment to evidence-based research, policy advocacy, and community-focused solutions reflects the very ideals that the Virchow Prize stands for: equity, justice, and universal health.

We are especially proud that a scientist from Pakistan continues to represent our nation on the global stage with such distinction and impact. This award is a

testament to Dr. Bhutta's enduring dedication, as well as the value of collaborative, science-driven action in addressing complex health challenges.

Please join us in congratulating Prof. Dr. Zulfiqar A. Bhutta on this well-deserved and historic recognition. It is truly a moment of national pride and a remarkable achievement for the scientific and health communities of Pakistan.

Use the link:

<https://youtu.be/FRQ-koP3gWE?si=ITP9aYAFbZBt9PI2> to view "Virchow Prize 2025 Laureate Announcement".



Prof. Syed M. Qaim (Foreign Fellow, PAS) Co-organized an International Conference on Nuclear Data for Science and Technology (June 2025)

The 16th International Conference on Nuclear Data for Science and Technology, held in June 2025 in Madrid, Spain, was attended by about 500 delegates from 32 countries. It was the newest edition of the prestigious conference series sponsored by the OECD-Nuclear Energy Agency (Paris) and the International Atomic Energy Agency (Vienna) every three years.

Professor Dr. Dr. h.c. mult. Syed M. Qaim from the Forschungszentrum Juelich and the University of Cologne, Germany, who is a Foreign Fellow of the Pakistan Academy of Sciences, co-organized the scientific programme of the above Conference and chaired two technical sessions. Furthermore, he was one of the few renowned scientists who were invited to give Plenary Lectures on the 5 most modern nuclear topics, namely, Nuclear Modelling; Fission Reactors; Fusion Reactor

Technology; Nuclear Astrophysics and Accelerator-based Medical Radionuclide Technology. Prof. Qaim covered the last topic, an area in which he has won several international prizes, awards and honours. Some work was also presented at the Conference from the University of Education Lahore and the Government College University Lahore, where Syed M. Qaim holds an Honorary Professorship.



Professor Mohamed Hag Ali Hassan (Foreign Fellow, PAS) Elected as a Fellow of the Royal Society (FRS)

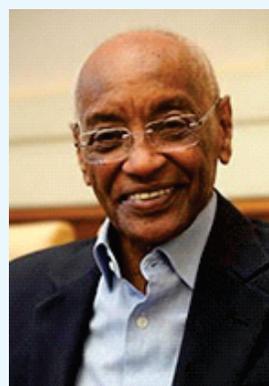
Pakistan Academy of Sciences (PAS) honored to extend deepest congratulations and immense pride for the election of Professor Mohamed Hag Ali Hassan, Foreign Fellow, PAS; and the President of Sudanese National Academy of Sciences (SNAS), as a Fellow of the Royal Society (FRS).

This prestigious recognition by the Royal Society—one of the world's most respected scientific institutions—is a testament to Professor Hassan's lifelong commitment to scientific excellence and global leadership. The Royal Society regards the election of Fellows as its most important activity, ensuring the Society's enduring reputation for scientific distinction over the past 360 years.

Professor Mohamed Hag Ali Hassan is currently President of the Sudanese National Academy of Sciences (SNAS) and a Member of the Board of Trustees of Grand Challengers Canada (GCC). He was Chairman of the Governing Council of the United Nations Technology Bank, Turkey; Chairman of the International Advisory Board of the Centre for International Development (ZEF), Germany; President of the InterAcademy Partnership (IAP); founding Executive Director and President of The

World Academy of Sciences (TWAS); President of the African Academy of Sciences (AAS); founding President of the Network of African Science Academies (NASAC); Chairman of the Council of the United Nations University (UNU); and Chairman of the Honorary Presidential Advisory Council for Science and Technology, Nigeria. He served as vice-chair of the scientific group for the UN Food Systems Summit.

After obtaining his DPhil in Mathematics from the University of Oxford, he returned to Sudan as Lecturer at the University of Khartoum, and later became Professor and Dean of the School of Mathematical Sciences.



Hackett Professor Kadambot Siddique (Foreign Fellow, PAS) Lifelong dedication to Agriculture recognised with Honorary Doctorate in India

Forty-eight years after graduating in agricultural science from Kerala Agricultural University in India in 1977, Hackett Professor Kadambot Siddique has been recently awarded a Doctor of Science (Honoris Causa) by his alma mater, acknowledging his outstanding contribution to global agricultural science, capacity building and

academic leadership. The conferral took place at Kerala Agricultural University's Annual Convocation on 26 June 2025 in the presence of the Chancellor and the Governor of Kerala, Minister for Agriculture and Minister for Revenue Government of Kerala.



Book Published by Prof. Dr. Munir Ozturk (Foreign Fellow, PAS)

Prof. Dr. Munir Ozturk (PAS Foreign Fellow) co-edited the Book titled: "Lantana Camara - Ecological and Bioprospecting Perspectives".

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