



News Letter

PAKISTAN ACADEMY OF SCIENCES

Promoting Science, Technology and Innovation for Socio-economic Development

Seminar and Election of Pakistan Nuclear Society at Pakistan Academy of Sciences

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The seminar was organized by Pakistan Nuclear Society (PNS) in collaboration with Pakistan Academy of Sciences and Pakistan Science Foundation on May 10, 2018 at Pakistan Academy of Sciences, Islamabad. Dr. Parvez Butt (*NI, HI, SI*) Former Chairman PAEC inaugurated the event as Chief Guest and Prof. Dr. Qasim Jan (*HI, SI, TI*) was the Guest of Honor. The Welcome Note address was given by Dr. Syed Javaid Khurshid, President Pakistan Nuclear Society. Prof. Dr. Aslam Baig and Dr. Parvez Butt were the speakers in the Seminar.

Prof. Dr. Aslam Baig (*HI, SI, TI*) presented a talk about the latest developments in the field of Laser Radiation interaction with matter. He also described the fabrication of a locally designed line of flight mass spectrum that was based on a very generous funding from the PAS. This equipment is being used for the elemental abundance of the naturally existing isotopes. Besides the performance of this equipment was also demonstrated by observing the existence of Uranium in Uranites sample. This was much appreciated by the R & D organization as this equipment can be used for exploring the precious elements. Dr. Parvez Butt (*NI, HI, SI*) presented a talk about 'How could Pakistan build the bomb when it still assemble motorbikes'.

Pakistan Nuclear Society also conducted their general election on the same day, which was attended by numerous PNS members who also participated in the two lectures. The PNS members appreciated the efforts of the outgoing office bearers to organize such an event in which some experts express their views about the scientific achievements and scientific developments in the country.

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Suggestions on ANSO's Future Development

Mr. Jinhua Cao, Director-General of Bureau of International Co-operation of Chinese Academy of Sciences (CAS), in his email asked for opinions and suggestions for the General Assembly of ANSO on November 3rd 2018 in Beijing, Prof. Dr. Qasim Jan on behalf of Pakistan Academy of Sciences sent a document in response to questions regarding ANSO's role and future activities.

Dr. Qasim Jan visualized the uniqueness and distinctiveness of ANSO as an extension of The Belt-and- Road Initiative and a hub for various scientists worldwide to meet and addressing environmental threats and SDGs, especially humanity. In addition, Dr. Jan projected the collaboration of members that would be possible with communication and active partnership. Mutual planning of programs with shared responsibilities was indicated by Dr. Jan. Lastly, he shared the idea of focusing on crucial and common issues related to member academies and countries, with unbiased commitment while handling issue like climate change, SDGs, responsible conduct of science, etc.

ANSO should focus on common issues related to member academies and countries. It will have color-blind commitment to tackle issues in human interest,

e.g. climate change, SDGs, Natural disasters, responsible conduct of science, human health, etc. It should identify future trends and characteristics of the global STI, including the following:

1. *Future trends of global economic and social development.*
2. *Major indicators and features of the world STI powerhouses (countries).*
3. *The strategies and approaches to be adopted by China if it wants to be at the forefront of the world science and innovation powerhouse*
4. *Identifying key scientific and social challenges faced by ANSO member countries.*
5. *Joint work on energy, water scarcity, agriculture productivity in era of climate change, Big data handling, storage & security, robotics, ethics in S&T; plasma-physics, artificial Intelligence, materials science*

The Pakistan Academy of Sciences has already sent its comments to the CAS.

Dr. N. M. Butt, Fellow PAS honored as Notable Alumnus- Physics of the University of Birmingham, U.K

Dr. N. M. Butt (SI) was a Ph.D. student in the Department of Physics of the University of Birmingham from 1961 to 1965. He passed his Ph.D. (Physics) in 1965 and later passed the degree of D.Sc (Physics) in 1993. His Ph.D. supervisor was the world famous Nuclear Physicist Professor P. B. Moon, F.R.S who had earlier worked in the Manhattan Project of Atom bomb of the USA during the world war-II. Dr. N. M. Butt had also the fortune of learning courses in nuclear physics and solid state physics of other two famous Physicists, Professor W.E. Burcham F.R.S and Professor R. E. Peierls, CBE, F.R.S who was the head of Implosion device in the Manhattan Project.

Dr. Noor Mohammad Butt has recently been listed as Notable Alumnus in Physics from the University of Birmingham. There is a total list of 24 Notable Alumni of Physics (almost all British Physicists) listed over a period of 118 years since the establishment of the university in 1900. The Birmingham university has been on the forefront of Nuclear Physics and is one of the leading British Universities of U.K and is particularly famous for experimental Nuclear Physics in the U.K. This list published in Wikipedia at the site:

“https://en.wikipedia.org/wiki/List_of_University_of_Birmingham_alumni” has been confirmed by the Alumni Office of the University of Birmingham. Dr. Butt is the only Physicist from Asia honoured as Notable Alumnus of this University.

At present Dr. Butt is working as a Professor and Chairman of the Preston Institute of Nano Science and Technology (PINSAT) of the Preston University, Kohat, Islamabad Campus, appointed in 2009 by the Chancellor of the University Dr. Abdul Basit.



Dr. Mohamed Hassan Foreign FPAS Appointment as Lifetime Member of Pontifical Academy of Sciences

Dr. Mohamed Hassan, Foreign Fellow Pakistan Academy of Sciences and TWAS founding Executive, has been elected a lifetime member of the Pontifical Academy of Sciences. He is also the chairman of the Governing Council of the United Nations Technology Bank for the Least Developed Countries. He will receive the insignia in an official induction ceremony, which will be celebrated during a solemn pontifical audience at a meeting of the Academy 12-14 November in Rome, Italy. Dr. Hassan, the President of the Sudanese National Academy of Sciences and former Executive Director of The World Academy of Sciences, has been appointed by Pope Francis to the Pontifical Academy of Sciences.

The Pontifical Academy (Pontificia Academia Scientiarum in Latin) is an international and independent body with roots that date back to the Accademia Nazionale dei Lincei (Academy of the Lynxes), an esteemed scientific body founded in Rome (1603). The Pontifical Academy is a member of the InterAcademy Partnership (IAP), which is hosted by TWAS in Trieste, Italy, and of the International

Science Council (ICSU). The Pontifical Academy is one of the world's oldest and most august scientific bodies, with roots dating to the early 17th century. Under Academy statutes, members receive lifetime appointments "on the basis of their eminent original scientific studies and of their acknowledged moral personality, without any ethnical or religious discrimination.



Prof. Dr. S. M. Qaim's 15 years of Honorary Professorship at GC University Lahore

It is a matter of great pride and pleasure to congratulate Prof. Dr. S. M. Qaim, Foreign Fellow Pakistan Academy of Sciences, on the completion of 15 years of Honorary Professorship at GC University Lahore. Under his kind guidance and supervision 4 PhD students have successfully completed their work and serving in GCU, COMSATS, University of Education and Pakistan Atomic Energy Commission respectively.

A big push from his side, made it possible that International Atomic Energy Agency (IAEA) included GCU in a City and Regional Planning (CRP). GC University can now be seen at the landscape of International Nuclear Science. The students worked at University of Debrecen (Hungary), ATOMKI (Hungary), Berkeley National Lab (USA), LASA lab (Italy), ARONAX (France) and presented work at many international forums.



Popularization of Science in Pakistan

Pakistan Academy of Sciences has initiated a new project in collaboration with Technology Times for the popularization of science in the country. In this collaborative venture the Technology Times will record interviews of the Eminent Scientists and Fellows of PAS, that will be telecast on different TV Channels. The idea behind this project is to highlight

the achievements and contributions of PAS Fellows to the masses to improve the image as well as scientific development of the scientists of the Country. These interviews are based on the personal life as well as the scientific contributions presented in a relax mood so that general public are made aware of the Scientists and Engineers contributions.

IAP/AASSA Workshop on the SDGs Kuala Lumpur, Malaysia

Representatives from 14 of the 30 AASSA member national academies and six Young Academies participated in the workshop, along with the International Science Council (formerly ICSU) Regional Office for Asia-Pacific (ROAP); GYA members from the region; and several representatives of the policymaking community. Prof. Dr. Aslam Baig, Secretary General, took part in the discussion about SDG's.

Many participating academies are already working on science-for-policy issues of relevance to the SDGs, but often not explicitly framed around them: there is quite a bit of "retrofitting". Participants undertook to account for the SDGs more fully in their future work and were very keen to learn from the IAP project and from each other.

Conversations tended to be framed around four broad themes:

- (1) strengthening outreach (leading, convening, advocating, socializing);
- (2) academy practices (capacity building, training, incentivising);
- (3) holistic approaches (understanding Interactions, minimizing trade-offs, maximising synergies);
- (4) regional cooperation (mapping, partnering, servicing/evaluating).

The President of AASSA committed to take the learning from the workshop to the AASSA General Assembly in October 2018 and to create a special committee on the SDGs and critical policy issues.



Construction of Pak-Austrian Engineering University Commences

The Pak-Austrian Engineering University is being established in Haripur, Hazara under the guidance of Prof. Atta-ur-Rahman, (*FRS*) who is Chairman of the steering committee. The construction of the engineering university has commenced after its foundation was laid by the Chief Minister of KP province. It will be the first foreign engineering university in Pakistan in which degrees will be awarded from Austria. Classes are expected to commence by the end of 2019.



Dr. Bilal Haider Abbasi Organized International Workshop at University of Tours, Tours, France

Dr. Bilal Haider Abbasi, Member Pakistan Academy of Sciences, organized international workshop at University of Tours, Tours, France on June 27, 2018. Scientists from United Kingdom, Germany, Poland and France presented their research in this workshop. This workshop focuses on Modern aspects on plant in vitro cultures. This workshop was financially supported by Le Studium, Institute of Advanced Studies, France. Dr. Abbasi is working as Research fellow in laboratories of Prof. Nathalie Giglioli-Guivarc'h (University of Tours) and Christophe Hano (University of Orleans).

Theme of workshop is as follows: "Modern aspects of Plant in Vitro Technology" Theme of Conference Medicinal plants are exploited since time immemorial due to health benefits they offer. Lack of cultivation practices and over-harvesting from wild

provoke plant scientists to establish alternate platforms for the reliable and consistent production of these elite medicinal plant species. "Plant in vitro technology" provides a most promising platform for the production of chemically consistent plantlets for further biotechnological implications. However, the emergence of omics technologies, molecular biology, metabolic engineering and synthetic biology has revolutionized the field of life sciences. These are modern aspects of life sciences which are considerably influencing plant in vitro technology and phytochemical production. An application of these technologies is expanding horizons for an understanding of metabolic pathways involved in the biosynthesis of precious biologically active ingredients and their cost-efficient production.



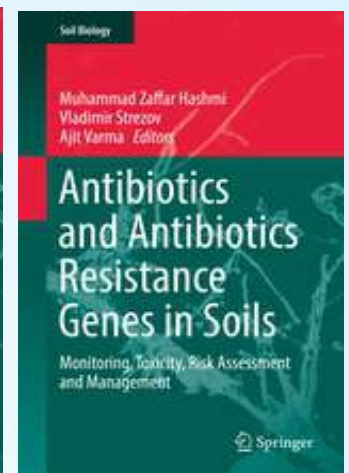
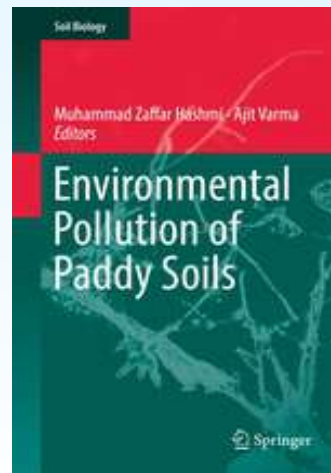
Dr. M. Zaffar Hashmi Published Two Books: “Antibiotics and Antibiotics Resistance Genes in Soils” and “Environmental Pollution of Paddy Soils”

Dr. M. Zaffar Hashmi, Member Pakistan Academy of Sciences, published two books Environmental Pollution of Paddy Soils and Antibiotics and Antibiotics Resistance Genes in Soils.

The book, Antibiotics and Antibiotics Resistance Genes in Soils: Monitoring, Toxicity, Risk Assessment and Management summarizes the current state of knowledge regarding antibiotics and antibiotics resistance genes (ARGs) in the soil environment. It covers a wide range of topics to help readers understand antibiotics and ARGs in soils, the risks they pose for the environment, and options for effective control. In addition, it presents a range of essential tools and methodologies that can be used to address antibiotics and ARGs in a consistent, efficient, and cost-effective manner.

The book, Environmental Pollution of Paddy Soils provides an overview of our current understanding of paddy soil pollution, addressing topics such as the major types of pollutants in contaminated paddy soil ecosystems; factors affecting the fate of pollutants in paddy soil; biomonitoring approaches to assess the

contaminated paddy soil; the impact of chemicals on soil microbial diversity; and climate change. It also covers arsenic and heavy metal pollution of paddy soils and their impact on rice quality. Further, new emerging contaminants such as antibiotics and antibiotics resistance genes (ARGs) in paddy soil and their impact on environmental health are also discussed. The last chapters focus on the bioremediation approaches for the management of paddy soils.



Obituary

Mr. Tajammul Hashmi

Mr. Tajammul H. Hashmi was born on 1st January 1924, in Gujrat, British India. Mr. Hashmi earned his MS degree from Michigan State University, USA in 1948. His main research areas were bridge design, Road Transport, Utilization of Sub-surface space, Control of water logging Salinity and Soil Mechanics.

Mr. Hashmi was Inter-Regional Advisor, United Nations Department of Technical Cooperation for Development, 1981-1991. Federal Secretary, Government of Pakistan, 1971-1973; Assistant Chief Engineer, Ministry of Railways and Communication, Government of Pakistan, 1949-1970.

Mr. Hashmi was honored with two Civil Awards in recognition to his services by Govt. of Pakistan. He was Past President and Fellow of Institute of Engineers Pakistan; Fellow, American Society of Civil Engineers, Executive Member of International

Road Federation. Mr. Hashmi was elected as Fellow Pakistan Academy of Sciences in 1977.

On 24th May 2018, Mr. Hashmi left us all to meet his creator. We will miss him; so will his family. May Allah (SWT) bless him with highest ranks in Jannah. Ameen

