



COMSATS Newsletter

Commission on Science and Technology for Sustainable Development in the South (COMSATS)

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ED COMSATS, Amb. Dr. Nafees Zakaria and the Founder of Eurasian International University (EIU), Kyrgyzstan, H.E. Zhumaliev Kubanychbek Myrzabeckovich, at MoU signing ceremony (page 03)

Inside this Issue

From the Executive Director's Desk

1

Highlights from COMSATS Secretariat

2

Some Activities of COMSATS' Centres of Excellence

9

COMSATS' Brief and Announcements

16

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From the Executive Director's Desk

Human intellect is the crown jewel of the world's evolutionary processes. Over centuries, the wonders of this faculty have helped improve the organization of societies and cultures through discoveries, inventions and mutual learning. The doom and gloom of the modern day catastrophes and adversities, perhaps, blindsides us to the leaps and bounds of development and universal organization humanity has undergone over last few hundred years. The pace and ease of scientific and technological development of current times that has especially increased in the third millennium can be rightly considered the prime of human intellect. Sadly, though, one cannot disregard the dark side of resulting developments that continues to lead to violence and destruction.

Ethical considerations become paramount amid this mixed picture to ensure that progress aligns with the well-being of humanity and the planet. As the world's landscape and horizons expand scientifically and technologically, intersection of science and ethics is crucial for a pivotal role in shaping our collective future. Developments such as gene-editing, artificial intelligence (AI), and other information technology interventions present both remarkable opportunities and ethical quandaries. AI applications, from autonomous vehicles to healthcare diagnostics, hold the potential to revolutionize industries and improve lives. A number of questions surrounding privacy, bias in algorithms, and ethical use of AI in decision-making processes, however, demand

careful consideration and contemplation over future implications. Balancing the pursuit of technological excellence with ethical safeguards ensures that these innovations benefit society without compromising fundamental values.

These values are also being seen tested at global scale with respect to climate change. The intensifying climate crisis is ethically compromising our planet in a number of ways, from waste management practices at society levels to industrial giants' stance over ethical production practices, and warfare, etc. A myriad of environmental challenges arising as a direct consequence of these and other anthropogenic leaves no doubt about Climate Change being a collective responsibility. Varied manifestations observed globally, from floods and droughts to forest fires and erratic weather patterns, especially affect the Global South that have least to contribute to factors exacerbating Climate Change. Further, the ethical dimension of Climate Change becomes apparent as melting glaciers raise security concerns, potentially instigating conflicts over depleting resources. I have been fortunate to have had the opportunity to make a clarion call in this regard at the recently concluded COP28 UAE, details of which shall be shared with the readers in the upcoming issue.

Amid the aforementioned realizations and

continues on page 03

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HIGHLIGHTS FROM COMSATS SECRETARIAT

Collaborations in Science and Innovation

COMSATS and Eurasian International University (EIU) formalize Cooperation in Science & Technology

COMSATS and the Eurasian International University (EIU), Kyrgyzstan, signed a Letter of Intent (LoI) aimed at a long-term partnership in diverse scientific and technological fields, starting with Telemedicine. The signing ceremony was held at COMSATS Secretariat in Islamabad on September 1, 2023.

The LoI was signed by the Founder of Eurasian International University (EIU), His Excellency Zhumaliev Kubanychbek Myrzabeckovich, who had been elected the 4th Prime Minister of Kyrgyzstan in 1998, and the Executive Director COMSATS, Amb. Dr. Mohammad Nafees Zakaria. H.E. Zhumaliev appreciated Amb. Zakaria for his deep understanding, support and encouragement that led to formalizing the cooperation agreement and immediately getting on with an innovative project in Telehealth. Moreover, the Ex PM assured COMSATS of his support for strengthening COMSATS' relationship with Kyrgyzstan.

COMSATS is focused at promoting S&T development of its Member States. Whereas EIU is an innovative educational and scientific research institution of higher education with international status. Located in Bishkek, Kyrgyzstan, EIU aims to improve quality and delivery of healthcare, predict illnesses and promote the health of entire community through education and research.

As the first initiative under the LoI, Telehealth clinics will be established in Kyrgyzstan to be linked to the Telehealth Resource Centre in Pakistan.



This service will provide tech-enabled access to quality healthcare for the people in Kyrgyzstan.

The agreement will also pave way to signing of specific agreements for cooperation and collaboration in other identified areas of cooperation.

COMSATS and SeQuenX to Establish Technology Corridor

COMSATS and SeQuenX, an IT solutions provider, reached an agreement to establish a Technology Corridor between Netherlands and Pakistan's Host Country, Pakistan. Executive Director COMSATS, Amb. Dr. M. Nafees Zakaria, and Director

SeQuenX, Mr. Sharjeel Tousif, signed the Memorandum of Understanding (MoU) at COMSATS Secretariat, Islamabad on September 20, 2023.

COMSATS offers software solutions to small and medium-sized businesses and institutions, and also advises the relevant government offices through COMSATS Software Solutions (CSS). SeQuenX provides software development and consulting services with a strong focus on software quality and engineering excellence. Its service portfolio includes Software Licensing Governance & Cyber Security Compliance; Scientific Software Research & Development; and IT Consulting. SeQuenX has a





global presence with offices in Europe (Netherlands), the USA (San Jose), and Asia (Pakistan).

Collaboration in technology applications and solutions between CSS and SeQuenX will be in the areas of cutting-edge technology research; Artificial Intelligence and Machine Learning; Data Science and Analytics; Cybersecurity and Network Solutions; Software Development Methodologies; Cloud Computing and Infrastructure; Internet of Things (IoT) innovations; User Experience (UX) and Interface Design; Quantum Computing; Advanced Software Engineering Practices; and Training and Theoretical familiarization.

COMSATS and Spectre Solutions to Collaborate on Drone Technology

COMSATS and Spectre Solutions, a Polish tech company specializing in drones/unmanned aerial vehicles (UAV), have entered into an agreement for collaboration in drone technology and its applications.

During the online ceremony held on September 27, 2023, the MoU was signed by the Executive Director COMSATS, Ambassador Dr. M. Nafees Zakaria, and the Chief Information Officer of Spectre Solutions, Mr.

Sebastian Konkol, for their respective organization. The visiting representative of Spectre Solutions and Founding Partner of Oxon Global Consultants, Mr Ali Ehsan, attended the ceremony in person.

Spectre Solutions excels and specializes in development of customized drones/UAVs. The tech company aims to solve important logistics and control problems with the help of latest drone technologies, providing a sense of security for people in need, particularly in emergency situations.

The MoU will pave the way inter-alia for research and development, knowledge-sharing with eventual joint production of drones; collaboration for projects involving use of Spectre UAVs; exchange of experiences and contacts; collaboration on pilot and other relevant trainings; conducting studies, and holding conferences, meetings and trainings.

UGR-Spain Becomes 25th Member of COMSATS Network

The University of Granada (UGR), Spain, became the 25th Member of COMSATS Network of International S&T Centres of Excellence on 23rd September 2023. The Coordinating Council, a

statutory body of COMSATS, approved the membership upon receiving favourable inputs from the members of COMSATS Technical Advisory Committee.



UGR is the first West European institution that has become a part of COMSATS Network, which is expected to boost scientific collaboration amongst the Network members. Founded in 1531, UGR is one of the largest universities in Spain, having five campuses in Granada while two campuses are in North African cities of Ceuta and Melilla.

...continued from page 1

learning, one hopes for a greater dialectical process leading to a more balanced world with a clearer path towards a future where scientific advancements, predominantly and even solely, serve the greater good and harmonious coexistence of science and ethics. Most certainly, it would not be possible without building on best of knowledge and scientific practices, as well as recognition of science and scientific cooperation as key proponent of development.

We, at COMSATS, continue to do hold this realization cardinal as we hold interventions under our mandate of S&T-led development reported regularly in issues of this Newsletter. In the current issue we proudly present induction of University of Granada of Spain as 25th Centre of Excellence to COMSATS' Network, agreement with Kyrgyz Republic on tech-enabled healthcare, and other Global North countries and other important undertakings of COMSATS. The contents of the newsletter are hoped to gain interest and attentions of potential partners hoping to work for collective good, as well as that of general readers.

We hope to keep receiving support for our noble mandate and look forward to effective collaborations for global equity in science.

The University is ranked 4th best in Spain and features among the top 300 universities in the world as per Shanghai Academic Ranking of World Universities (ARWU 2019). The University offers 89 bachelor degrees, over 100 Master degrees and 28 Doctoral programs through its 129 departments in 27 centers. The R&D focus of the university is on health sciences, geosciences, engineering, psychology, and mathematics.

With induction of UGR, the University's Rector, Prof. Pedro Mercado Pacheco, has become ex-officio member of COMSATS Coordinating Council.

ED COMSATS Highlights Symbiosis between Education and Industry at ICCI Event

Speaking as Chief Guest at the Inter-University Business Plan Competition, jointly organized by the Islamabad Chamber of Commerce and Industry (ICCI), and local universities on October 3, 2023, in Islamabad, Executive Director COMSATS, Ambassador Dr. Mohammad Nafees Zakaria, underscored the importance of academia-industry collaboration.

In his keynote address, Ambassador Zakaria highlighted the need for stronger alignment between the education sector and the industrial landscape. He opined that the business community should stand shoulder to shoulder with the government for supporting aspiring entrepreneurs. He also appreciated the young talents participating in the competition and lauded ICCI for spearheading this platform that enables university students to showcase their innovative business concepts and attract potential investors for commercialization of their ideas.

The President of ICCI, Mr. Ahsan Zafar



Bakhtawari, noted that the primary objective of the competition was to provide a robust platform to young aspiring entrepreneurs to present their innovative business proposals and garner attention of potential investors.

Senior Vice President of ICCI, Mr. Faad Waheed, noted that the industry has dearth of skilled work force that hinders overall industrial productivity. He advocated closer ties between academia and industry and supporting young graduates for meeting the demands of the job market.

COMSATS Collaborates with UCAS, China, for 7th Term of ANSO-BIDI School

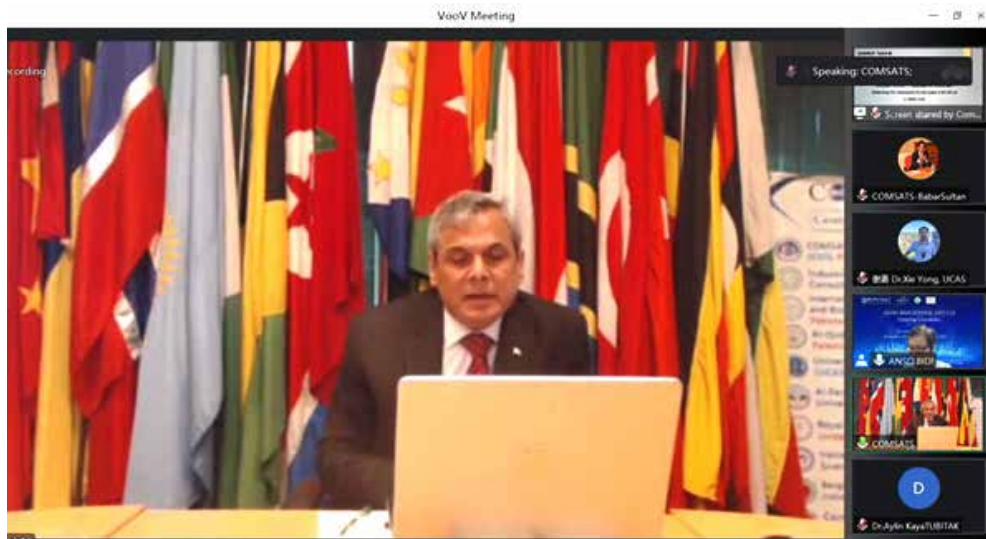
From the platform of the Belt & Road International Innovation Development Institute Network (ANSO-BIDI Institute Network), COMSATS joined hands with the Centre for Environmental Economics of the University of Chinese Academy of Sciences (CEE-UCAS), the Alliance of International Science Organizations (ANSO), and other members of the ANSO-BIDI Institute Network, to organize the seventh term of ANSO-BIDI School (online training) on 'Innovation, Sustainable Development

and Leadership Enhancement'. This prestigious program has successfully completed six terms during last three years, benefiting over 750 participants. Among these 400 were nominated by COMSATS Secretariat from its member countries.

The online training has 10 weekly modules spanning over 2.5 months during which distinguished professors/experts belonging to well-known universities in USA, Sweden, Belgium, Brazil, Poland, Canada, Switzerland and Germany are giving lectures.

Key topics include supply chain risk management, basic science for facing global challenges, green finance, using real-options reasoning to value supply chain responsiveness and resilience; communicating (spatial) 'data' (carto) graphically; sustainability of business operation from three dimensions of environmental, social and corporate governance (ESG); disruptive technologies: the case of autonomous vehicles; brand value upgrading and sustainable development growth; manufacturing for the 21st century; etc.

The opening ceremony of the event was held virtually on 20th September 2023 which was attended by over 100



participants from various countries. Among others, 55 trainees belonging to various Centres of Excellence and Member Countries of COMSATS, including Egypt, Iran, Nigeria, Pakistan, Syria and Uganda, are participating in the training program, and were present during the opening ceremony.

The inauguration ceremony of the training was attended by Prof. Desheng Wu, Dean of Sino-Danish College, UCAS, Director of the Research Centre for Environmental Economics of UCAS, China, Elected member of Academia Europaea, Elected member of European Academy of Sciences and Arts, and Elected member of International Eurasian Academy of Sciences. Moreover, various leaders from collaborating organizations of ANSO-BIDI Institute Network, including Prof. Xiaowei Nie, Assistant Executive Director, the Secretariat of the Alliance of International Science Organizations (ANSO), China; Prof. Luiz Davidovich, President of the Brazilian Academy, Brazil; Ambassador Dr. Mohammad Nafees Zakaria, Executive Director COMSATS, Prof. Dr. Hasan MANDAL, President, The Scientific and Technological Research Council of Turkey (TUBITAK), Turkey; Dr. Yong Xie, Director of International Cooperation

Office of the University of Chinese Academy of Sciences, China; Mr. Zoran Djikanovic, President, University of Donja Gorica, Montenegro; and Prof. Luis Seco, Professor, Department of Mathematical and Computational Sciences, Rotman School of Business, Department of Statistics, University of Toronto, Canada, participated in the opening ceremony and delivered speeches.

In his address, Ambassador Dr. Mohammad Nafees Zakaria, Executive Director COMSATS, highlighted the complexities of the modern world, marked by rapid changes in technology, demographics, environment, and geopolitics. He stressed the importance of giving top priority to high-quality education, research, development, and innovation in the fields of science and technology. He underlined the significance of nurturing visionary leaders in scientific research and development (R&D) organizations. He emphasized that contemporary challenges extend beyond boundaries and demand cooperative efforts on national, regional, and global scales, making international science and technology collaboration essential in addressing these issues.

Ambassador Zakaria reaffirmed COMSATS' commitment to ongoing collaboration with the ANSO-BIDI Institute Network, focusing on advancing scientific excellence, capacity building, and leadership development in developing countries. He conveyed his sincere appreciation to the organizing committee, trainees, and subject experts for their contributions towards this significant event, and also expressed gratitude to the leaders of the partner organizations for their unwavering commitment.

The opening ceremony was followed by first module of training course entitled 'Dynamic Product Development and Pricing with Network Externalities' which was conducted by Prof. John R. Birge, Professor of Operations Management at the University of Chicago, Booth School of Business, Chicago, Illinois, USA.

COMSATS Participates in 2nd High-Level Forum on Food Security, Qatar

Ambassador Dr. Mohammad Nafees Zakaria, Executive Director COMSATS, attended a panel discussion on "Enhancing Agricultural Food Production through Emerging Technologies" as a Panelist on October 2, 2023, which was held as part of the 2nd High Level Forum on Food Security, organized by the Islamic Organization for Food Security (IOFS) from October 1-3, in Doha, Qatar.

The forum that was organized by the Ministry of Municipality, Qatar, in partnership with IOFS, had more than 100 attendees, and 60 speakers from food, agriculture, science and technology institutions, academia, inter-governmental agencies particularly from the Member Countries of the Organization of Islamic Cooperation (OIC).



The event also featured remarks and the statements given by H.E. Mr. Hissein Brahim Taha, Secretary-General of OIC; H.E. Mr. Aydarbek Saparov, Minister of Agriculture of the Republic of Kazakhstan; H.E. Mr. Abdelmonem Belati, Minister of Agriculture of the Republic of Kazakhstan and H.E. Mr. Abdullah bin Abdulaziz bin Turki Al Subaie, Minister for Municipality of the State of Qatar.

Speaking on the occasion, Dr. Zakaria lauded the effort of IOFS for holding through the event in-depth discussions and possible sustainable ways to address the increasing challenges of food insecurity around the world amid the existing socio-economic, and environmental crises.

Quoting the Global Report on Food Crises (GRFC) published in 2023, Dr. Zakaria informed that over a quarter of a billion people had need for urgent food assistance in 2022 in 58 countries. Dr. Zakaria further emphasized the close connection between new technology, creative ideas, cutting-edge machinery,

and government policy actions to successfully address the problem of global food security. In addition, he stressed upon the necessity of making and then mobilizing investments in farmers' capacity-development to help boost the nation's economy.

Dr. Zakaria highlighted the significance of cross-sectorial partnerships and stressed upon the role of the potential of Intergovernmental Organizations through South-South and Triangular Cooperation to tackle food security issues. In this connection, he considered COMSATS-IFOS cooperation, ensuing from the MoU signed in 2022, reflection of their commitment towards capacity building, knowledge exchange, and the implementation of projects, aimed at addressing food security in their common member states.

Dr. Zakaris also gave an overview of the work being done in this area by COMSATS through its special initiative, the COMSATS Centre for Climate and Sustainability (CCCS), subthemes of

whose overarching mandate, inter alia, include sustainable solutions to hunger and poverty related challenges.

For the same session, COMSATS also facilitated participation of its two representatives, Dr. Majid Javanmard, Vice President, Industrial Relations & Commercialization, Iranian Research Organization for Science and Technology (IROST), Iran, and Mr. Minhaj Khokhar, CEO of PK2100, Agri-Technology and Business Advisor.

Meeting between COMSATS and FACE Paves Way for Potential Agreement

COMSATS and the Food Security & Agriculture Center of Excellence (FACE), Fauji Fertilizer Company Limited, held a meeting on 2nd October 2023, at COMSATS Secretariat, Islamabad, to discuss a potential Memorandum of Understanding (MoU) aimed at addressing critical food security challenges in member countries, particularly in Pakistan. The meeting



was attended by Ambassador Dr. M. Nafees Zakaria, Executive Director of COMSATS, Mr. Hasan Akram, Chief Operating Officer of FACE, Mr. Hamid Majid, Manager Outreach and Partnership of FACE, and Dr. Mehwish Durani, Additional Director (Head CCCS) of COMSATS.

The meeting emphasized the need for a coordinated approach to address the critical challenge of food security affecting communities locally and globally. The proposed MoU would pave way for joint efforts by the two organizations to combat the growing

issue of food insecurity exacerbated by multifaceted challenges, such as pandemics, global warming, extreme weather patterns, conflicts, and socioeconomic disparities. The collaboration aims to leverage the expertise and resources of both COMSATS and FACE to develop technology-driven solutions and promote climate-smart agricultural practices.

The MoU will help streamline collective efforts, enhance resource mobilization, and foster innovation to achieve sustainable food security goals for

Enhancing Food Security, Capacity Development, Knowledge Sharing, Collaborative Research, and Policy Research & Advocacy. Participants of the meeting agreed to engage in continued dialogue, recognizing the immense potential that lies in collaborative efforts to address the intricate challenges related to food security. Their discussions also underscored the need for alignment of academia, innovation, and the industrial sector for creating sustainable solutions to food security.

ED COMSATS Emphasizes the Need for R&D in Ion Beam Applications at NCP Event

On September 11, 2023, Ambassador Dr. Mohammad Nafees Zakaria, Executive Director COMSATS, graced the inaugural ceremony of the "5th International Workshop on Ion Beam Applications" as Chief Guest. The Workshop was organized in Islamabad by the National Centre for Physics (NCP) in collaboration with The Abdus Salam International Centre for Theoretical Physics (AS-ICTP), Trieste, Italy, from September 11th to 13th, 2023.



Speaking at the ceremony, Dr. Zakaria emphasized the importance of research and development to bridge the knowledge and technology gap and appreciated NCP's contribution to the field of physics in Pakistan.

Remarking on the dismal state of R&D in the Global South, Dr. Zakaria urged the decision makers in the developing countries to help put together their countries' resources, share knowledge and mutually promote each other's scientific products. He appreciated the role being played by NCP in promoting R&D of physics and its technical facilities and capacity for research.

Dr. Mohsin Siddique, Director NCP, delivered the welcome remarks during the ceremony, expressing gratitude to the Chief Guest, Executive Director COMSATS, Ambassador Zakaria and acknowledging the presence of foreign guests. Dr. Ishaq Ahmed, Director-General, NCP, expressed

his gratitude to all participants and reaffirmed COE Physics' commitment to advancing the field of physics through numerous scientific workshops and international collaborations. The event also marked the inauguration of an R&D center in collaboration with UKM (Universiti Kebangsaan Malaysia), further enhancing scientific cooperation between relevant institutions.

The workshop provided a platform for both national and international experts in Ion Beam Applications to deliver a series of informative lectures, conduct hands-on training sessions, and present the latest advancements in this field. With a team of renowned faculty specializing in Ion Beams, the agenda encompassed a wide range of topics, featuring 19 engaging talks, including, ion beam techniques for material analysis, ion beam modification of bulk materials/nanomaterials, irradiation related to biology, industrial applications, and applications of

radioactive ion beams, X-rays and Gamma ray production cross-section studies using heavy ions.

COMSATS Elected as Member of ANSO Governing Board

COMSATS has been elected as a Member of the Governing Board of the Alliance of National and International Science Organizations for the Belt and Road Regions (ANSO).



The decision was made during the 3rd ANSO General Assembly, held in Chongqing, China, on 4-5 November 2023. The six elected members of ANSO Governing Board also include two Centres of Excellence of COMSATS, the Scientific and Technological Research Council of Türkiye (TUBITAK), Türkiye, and the National Research Centre (NRC), Egypt.

SOME ACTIVITIES OF COMSATS' CENTRES OF EXCELLENCE

Delegation of ICCES-China Explores Collaboration with Thai Institutions

On September 4, 2023, on the invitation of Dean of the Faculty of Social Sciences of Srinakharinwirot University (SWU), Prof. Zhaohui LIN, Director of ICCES, led a delegation to Sinakaninvalo University. Dr. Tannikarn Soonsinpai, Associate Dean for Academic Affairs and International Relations, Dr. Sathaporn Monprapussorn, Associate Dean for Administration and Human Resources, Dr. Chomchanok Arunplod, Head of Department of Geography, and 15 scientific researchers attended the meeting.

Two sides discussed cooperative research in areas of urbanization and its environmental impact, land use, geographic information technology to address global issues, such as environmental degradation, urban pollution, and climate change, as well as future cooperation exchanges, such as short-term visits of scholars, joint training courses or conferences.

On September 5, 2023, Prof. LIN and other delegation members visited Hydro-Informatics Institute (HII), Thailand, and its Automated Telemetry Station and High-performance Computing Center. Officials of the two institutions discussed cooperation research in the fields of S2S forecasting,

high-performance computing, talent training, etc. Cooperation plans such as short-term visits of scholars, joint training courses or conferences were also discussed.

Discussions and preparation work in progress led to successful organization of international training workshop on "Increasing Capability on Drought and its prediction at S2S time scale" (INCAP2023) that was held successfully in Thailand, on September 6-8, 2023. The training workshop was jointly held by ICCES, CAS-TWAS network for sustainable development and Hydro-Informatics Innovation Division, Thailand. The three-day training consisted of eight presentations and



on-site training activities. The workshop invited experts from China and Thailand to give lectures on the spatio-temporal evolution characteristics, occurrence and development mechanism of drought, drought monitoring and S2S prediction, as well as drought management and response. The training workshop attracted more than 90 participants from 28 universities, scientific research and governmental departments in Thailand.

ICCES Co-organized 2023 International Training Workshop on Open Science and SDGs

From August 28 to September 8, 2023, International Training Workshop on Open Science and SDGs was successfully held in Beijing, inter alia, co-organized by GOSC International Programme Office, ICCES. The Chinese Academy of Sciences, the International Data Committee, the World Federation of Engineering Organizations Disaster Risk Management Committee, and other institutions also supported this workshop. The two-week training course covered open science macro policy, open science infrastructure platform, computer and data science technology applications, open science

data resources and interoperability, SDGs data resources and application technologies, and global typical application demonstrations.

Prof. LIN, Director ICCES, also presented a lecture entitled "The Earth System Science Numerical Simulator Facility and its Application in Climate Research".

Delegation of Elsevier and Elsevier Foundation visited ICCES

On August 23, 2023, Yann Schemm, Vice President of Corporate Responsibility, Director of the Elsevier Foundation, Xiaoling KANG, Director of Global Strategic Networks China visited ICCES. The delegation met with Yan ZHUANG, Director of Division of International Organization Programs, Dongyao WANG, Deputy Director of Division of International Organization Programs, Prof. Junji CAO, Director of IAP, Li YAO, Director of Division of Scientific Planning of IAP, Prof. Zhaohui LIN, Director of ICCES, and Prof. Xiaodong ZENG, Deputy Director of ICCES, attended the meeting.

The participants agreed to promote close cooperation between ICCES

and Elsevier to help developing countries to cope with climate change, encourage young scientists, support outstanding women scientists, for the implementation of the UNSDG.

RSS-Jordan Hosts First Meeting of World Science Forum 2024

HRH Prince El Hassan bin Talal, Chairman of the Royal Scientific Society (RSS), met with delegates of the Steering Committee of the World Science Forum 2024 (WSF 2024), which will take place in November 2024.

During the meeting, Prince El Hassan, an early supporter of the World Science Forum, gave a speech in which he addressed the challenges facing the world today and called for action based on intelligence and a shared humanity. In a related context, the RSS also hosted the first meeting of the World Science Forum steering committee at its headquarters.

In her welcoming remarks to delegates, HRH Princess Sumaya, President of the RSS, reiterated the commitment of the RSS and of Jordan to working with international organisations to help improve science policy and science responses to challenges, including climate change, water, energy and poverty.

RSS-Jordan Develops New Tests

The Automated Chemistry Laboratories of the RSS developed the following new tests:

- Detection of the traces of the high risk components of ethylene glycol (EG), diethylene glycol(DEG) in both raw materials and finished pharmaceutical products;
- Detection of Nitrosamines (NDMA, NDEA) in medicines for humans.



These contaminants are considered toxic to humans if their quantities exceed the allowed limits in international and national standards. In addition to that, the lab introduced validation studies for medicines used to treat diabetes and hypertension.

CUI Strengthens Collaborations with Institutions from Germany, UK, China

Queen's University Belfast: A delegation from UK's Northern Ireland's Queen's University Belfast (QUB) visited COMSATS University Islamabad (CUI) on October 25,

2023, to explore opportunities for collaboration. The QUB delegation included Professor David Rooney, Dean of Internationalization and Reputation/ Professor of Chemical Engineering in the School of Chemistry and Chemical Engineering, and Dr. Wasif Naeem, Director of Internationalization at QUB's School of Electronics, Electrical Engineering, and Computer Science. The delegation was given campus tour and introduction to the academic structure, research initiatives, and international ranking of the University. Discussions pertained to scholarships for PhD students to work on collaborative research projects, and procedural requirements for

establishing MoU between CUI and QUB.

University of Berlin: Dr. Oliver Görke, Chair of Advanced Ceramic Materials at Technical University of Berlin (TU Berlin), Germany, visited CUI on October 10, 2023, to advance discussions on the ongoing collaboration between the two institutions. Discussions with Dr. Görke covered collaboration aspects of interest to the German Embassy in Islamabad, i.e., promotion of the German language at CUI and exploring collaboration in research topics on AI, CS, engineering science, and commercialization of products and patents. He was assured of CUI's dedicated support in formalizing the MoU.

University of Manchester: Mr. Christopher Gibson, International Officer, University of Manchester (UoM), United Kingdom visited COMSATS University Islamabad (CUI) on September 19, 2023. He and colleagues met with Mr. Ali Tawab Baloch, Senior Manager International Office and his team. The two universities explored avenues for collaboration in particular about the arrangement of awareness sessions, preferential pricing initiatives by UoM, international internship



opportunities within Pakistan and at UK facilitated by UoM's partners, collaborative joint PhD programs, high-level faculty interactions, access to Erasmus funding, and faculty exchange programs.

Southeast University: A delegation from Southeast University (SEU) Nanjing, China, visited CUI-Pakistan on September 6, 2023. The delegates included Professor Chen Zhongfan, Professor Huang Xing-Huai, Dr. Yeshou Xu from School of Civil Engineering Southeast University, China.

In a significant development aimed at strengthening scientific cooperation between Pakistan and China, the delegation was visiting universities of Pakistan and National Disaster Management Authority from September 3 to 14, 2023. The key focus of discussions was establishment of a China-Pakistan Belt and Road Joint Laboratory on Smart Disaster Prevention of Major Infrastructures and Capacity Building of existing labs of Civil Engineering Department of designated universities of Pakistan, including CUI.

New Interim Head of ICCBS-Pakistan

Prof. Dr. Farzana Shaheen, the institution's senior most tenured professor, has been assigned the additional charge of the Director of the International Center for Chemical and Biological Sciences (ICCBS), Karachi, Pakistan, for an interim period. Prof. Shaheen received her M. Sc. and M. Phil. degrees from the Quaid-e-Azam University, Islamabad, in 1993 and 1995, respectively, and received the Chancellor's Gold Medal in M. Phil. She completed her Ph.D. from H.E.J. Research Institute of Chemistry, ICCBS. Dr. Shaheen was awarded the prestigious L'OREAL-UNESCO Fellowship for Young Women in Life



Sciences in 2004. She also received the OWSD Young Women Scientist Award 2011 in Malaysia and the Pakistan Academy of Sciences Gold

Medal (2012) in Chemistry from PAS Pakistan. Her research resulted in more than 90 publications in international journals and 9 patents.

PCMD-ICCBS Lab Gets Prestigious Certification

Federal Ministry of Science and Technology, Government of Pakistan, awarded to the Sindh Forensic DNA and Serology Laboratory (SFDL) of the Dr. Panjwani Center for Molecular Medicine and Drug Research (PCMD) a 'Certification of Accreditation' (ISO/IEC 17025:2017). The Center is one of the specialized institutions of ICCBS.

After the accreditation, PCMD has become the first forensic laboratory in the province Sindh to attain this prestigious recognition. Moreover, the SFDL is the only ISO-accredited forensic lab in the country whose scope of accreditation covers the entire process of forensic DNA analysis. This accreditation was granted after a thorough review of standard operating procedures (SOPs), staff competency, comparison of the laboratory results with labs of international stature, and the laboratory's equipment and facilities.

ICCBS Produces Cotton First Time in Karachi, Pakistan

ICCBS has successfully cultivated multiple generations of cotton in Karachi with low energy costs in a



year. This is the first time Organic Cotton has been grown in Karachi, and this experimental production can be expanded with the support of the federal and provincial governments in Sindh and Balochistan. The optimization of the weather conditions has provided the ICCBS research team, working under the supervision of Dr. Shahid Mansoor, at the Biotechnology Wing of the HEJ Research Institute of Chemistry an opportunity to grow multiple generations of cotton in a year.

The Center was able to grow multiple generations of cotton in Karachi with low energy costs. The first generation was grown in December and, initially, plants were maintained in a glass house without any heating or extra lights. The second generation was grown in normal season and seeds were harvested in July and the third generation already reached flowering and boll formation. ICCBS is also working to purify non-GMO varieties and genome editing tools for the improvement of cotton yield, and resistance to environmental stresses and to improve cotton fiber as per the requirement of the textile industry.

ICCBS to Create an Urban Forest

ICCBS has planted more than 300 saplings on the premises of the

international center with an aim to create an Urban Forest. A variety of saplings of different trees were planted including medicinal as well as fruit trees. In the one-day plantation drive, Prof. Dr. Atta-ur-Rahman, ICCBS Patron-in-Chief and former Federal Minister for Science and Technology, and Prof. Dr. M. Iqbal Choudhary, the then Director ICCBS, and COMSTECH Coordinator General, also planted saplings.

The plantation drive was also attended by a large number of students, research officers, and faculty members.

ICCBS Faculty Elected as Royal College of Physicians Honorary Fellow

The Royal College of Physicians of Edinburgh has elected Prof. Dr. M. Raza Shah, the senior Professor at the ICCBS as an honorary fellow. Prof. Shah received the FRCP diploma from the President of the Royal College of Physicians in recognition of his contribution to medical science, especially in the clinical trials he conducted in a short time. The Royal College of Physicians is one of three organizations that sets the specialty training standards for physicians in the United Kingdom.

Working in the area of Nanomedicine and Supramolecular Chemistry, Dr. Shah has authored six books (Elsevier) and also edited four books (Elsevier), along with 12 chapters in books and more than 460 research articles in international journals with impact factor more than 1700.

Dr. Shah was declared the top scientist for the year 2019 by the government of Khyber Pakhtunkhwa province of Pakistan. Among a number of awards and recognitions he received include the Civil Award of Pakistan, *Tamgha-i-Imtiaz*, in 2015.



Al Farabi KazNU, Kazakhstan Strengthens Partnerships with China, Turkey and Italy

The Rector of Al-Farabi Kazakh National University, Prof. Dr. Zhanset Tuimebayev, held talks with a delegation led by Secretary of the Education and Industry Commission of Shaanxi Province of the Communist Party of China Liu Jianlin. The delegation included rectors and vice-rectors of the Chinese Universities. The parties exchanged views on strengthening partnership between KazNU and universities of the People's Republic of China, development of joint scientific projects and conferences. Prof. Tuimebayev familiarized the honored guests with the educational and research activities of the university, as well as the strategy for further development of the university. He further expressed that KazNU will continue to work on the development of cooperation with higher education institutions of China.

In September 2023, Rector Al-Farabi KazNU, Prof. Zhanset Tuimebayev, took part in a meeting with the heads of universities in China, following which a number of agreements on mutually beneficial cooperation were concluded.

In particular, the University signed an MoU with Northwestern Polytechnic University to jointly establish the "Belt and Road" e-commerce Talent Training Center.

During a meeting between Prof. Tuimebayev and the Rector of Istanbul University, Dr. Osman Bulent Zulfikar, views were exchanged on further development of partnership and holding joint conferences and symposiums. It was observed that cooperation between KazNU and Turkish universities is expanding especially after the official visit of the Head of State, Mr. Kasym-Zhomart Tokayev, to Turkey that resulted in opening of a branch of KazNU in Istanbul.

Various international conferences, meetings and roundtable sessions are being held in the higher education institution. Also, the 11th President of Turkey Mr. Abdullah Gul delivered a leadership lecture in KazNU. In addition, KazNU now has cooperative arrangements with almost 50 leading universities of Turkey.

In another meeting, Prof. Zhanset Tuimebayev and Rector of Ankara University of Social Sciences, Dr. Musa Kazim Arican, signed an agreement on



partnership and mutual understanding between the two universities. The agreement envisages activities on training qualified personnel, exchange of students and teachers, joint scientific research and partnership development.

During a working trip to Japan, Rector of Al-Farabi KazNU held a meeting with the President of the University of Grenoble - Alpes in France, Dr. Yassin Laknesh, during which the parties signed a cooperation agreement. The two officials noted the dynamic development of bilateral relations and identified the main areas of cooperation and agreed to intensify interaction in the field of education and science.

Branch of North-West Polytechnic University Opens at Al-Farabi KazNU

During the state visit of the President of Kazakhstan Mr. Kassym-Zhomart Tokayev in May 2023 to China, an agreement was signed to open a branch of the Northwest Polytechnic University (NWPU) of the PRC in Al-Farabi KazNU. At the meeting that had the participation of the presidents of the two countries, Prof. Zhanseit Tuimebayev and Ambassador Extraordinary and Plenipotentiary of the PRC in the Republic of Kazakhstan, Mr.

Zhang Xiao, signed an agreement on cooperation and the establishment of a branch. Based on the agreement, a branch of the Northwestern Polytechnic University of China opened at Al-Farabi KazNU.

The solemn event was attended by: Advisor to the President of the Republic of Kazakhstan Malik Otarbayev, Vice-Minister of Science and Higher Education Talgat Yeshenkulov, members of the delegation headed by the Chairman of the Council of Northwestern Polytechnic University Li Yanrong, Consul General of the People's Republic of China in Kazakhstan, Jiang Wei, Chairman of the Board - Rector of Al-Farabi KazNU Zhanseit Tuimebaev, rectors of universities, scientists, faculty and students.

Other International Collaborations of KazNU

Following the results of the Central Asia-China Forum of Cooperation in Higher Education "The Fourth Industrial Revolution: Integration of Industry and Education", held at Al-Farabi KazNU, heads of participating universities signed the consensus "Almaty" and adopted a number of initiatives. The main purpose of signing the document is to develop partnership between

universities of China and Central Asia, integration of joint research works, expansion of the sphere of academic mobility of students, systematization of educational programs. President of Xi'an Jiaotong University, Dr. Wang Shuguo, Prof. Zhanseit Tuimebaev, heads of foreign diplomatic missions and consular offices, rectors of universities of PRC and Central Asia exchanged views on topical issues in the field of education and science at the panel session. The participants of the meeting also discussed strategic matters and directions of development of higher education in Central Asia and China.

Astrophysical Project of KazNU

Scientists at Al-Farabi KazNU are working on a scientific project to study the physical phenomena occurring in the magnetospheres of astrophysical compact objects. The project is led by Dr. Saken Toktarbay, PhD.

The goal of the project is the analytical description and numerical modeling of charged particle dynamics inside the magnetospheres of compact objects such as black holes and neutron stars. The results are planned to be applied to observe astrophysical phenomena, such as quasi-periodic oscillations from X-ray microquasars and acceleration of ultra-high energy cosmic rays from supermassive black holes in active galactic nuclei.

For theoretical research young scientists of KazNU use methods of general theory of relativity, electrodynamics and elementary particle physics. The researchers also plan to use the analytical and numerical results to search for their correlations in multi-wavelength and multi-channel observational data from astrophysical compact sources, such as black hole candidates, neutron stars and double systems. The research will help test a new approach to modeling the



electromagnetic environment of compact objects and formulate new models of various unexplained high-energy phenomena. The project will last until the end of 2024.

TUBITAK Seeks Collaborations with China and Azerbaijan

The Vice President of the National Natural Science Foundation of China (NSFC), Prof. Dr. Song Jiang, and the accompanying delegation, visited TÜBİTAK as well as some of the prominent research centers and universities in Türkiye. The NSFC delegation met with Prof. Dr. Hasan Mandal, the President of TÜBİTAK, on September 5, 2023, in his office to discuss current collaborations and new partnership opportunities.

Emil Ahmedov, President of the Consumer Goods Evaluation Center (MMC) at the Azerbaijan under Antimonopoly and Consumer Market Control State Service and Vice President Huseyn Abdinov visited TÜBİTAK UME between September 6-8, 2023. During the 3-day meeting, ideas were exchanged and technical reviews were concluded about the support provided by TÜBİTAK UME for the establishment and development of the laboratory infrastructure at the Azerbaijan Metrology Institute, showing examples of similar project partnerships.

TUBITAK Institutes participate in TEKNOFEST

TEKNOFEST Izmir Aerospace, Space, and Technology Festival took place from September 27 to October 01, 2023, at Izmir Çiğli Airport. The event was attended by 1.1 million people.

TÜBİTAK institutions BİLGEM, BİTO Bilim Gence, MAM, RUTE, SAGE, TUG, ULAKBİM, UME exhibited their R&D and innovations. Aside from science knowledge and popularization activities, simulations, chemical reactions, mobile apps, model making workshops were a part of this participation. TÜBİTAK UZAY; İMECE and TÜRKSAT 6A Satellite models were exhibited. In addition, TÜBİTAK Science High School opened a stand in Izmir for the first time.

TUBITAK Co-Organizes BilimFest and Askaray Sci Fest

TÜBİTAK was one of the leading organizers of the Antalya Science Festival (BilimFest) that was held from October 19 to 22, 2023. Within the framework of the Antalya Science Festival, various TÜBİTAK units participated, including BİLGEM, MAM, SAGE, UZAY, UME, RUTE, ULAKBİM, BİTO, and Human Resource. The TÜBİTAK Science and

Society Presidency organized activities during the event. The Deneyap Technology Workshops and Science Centers Directorate conducted interactive activities, such as Wooden Model Airplane, Paper Model Airplane, Rocket Circuit, Sky Puzzle, and Anatomy Detectives. The Digital Publications Directorate hosted a Popular Science Quiz on tablets and conducted four different types of Knowledge Quizzes on two interactive screens.

The 2nd Aksaray Science Festival, organized in collaboration between Aksaray Science Center and TÜBİTAK, took place from September 15 to 17, 2023. More than 100 national and international technology and science companies participated in the Science Festival. Exhibits at the event included: Metaverse VR Game, Fingerprint Detection at the Crime Scene; CO₂ Sources and Sinks, Hydrogen Value Chain Demonstration, Application of Different Materials in the Microscope events are waiting for young people, wooden train model workshop for E5000, Türkiye's first domestic and national Main Line Locomotive, Rocket Model Workshop and VR Virtual Reality Experience, "Pardus 23" Operating System Distribution and Pardus ETAP Operating System Distribution", interesting metrology equipment.

TUBITAK Celebrates 60th Anniversary with Türkiye's Centennial Anniversary

The 60th anniversary of TÜBİTAK, the flagship of science and technology in Turkey, was celebrated with a magnificent ceremony. The event, hosted by TÜBİTAK President Prof. Dr. Hasan Mandal, took place at the Feza Gürsey Conference Hall in the TÜBİTAK Headquarters building. The ceremony was attended by the Minister of Industry and Technology, Mehmet Fatih Kacır, the Minister of National Education, Yusuf Tekin, the President of the Presidency Strategy and Budget, İbrahim Şenel, Deputy Ministers, heads of institutions, and members of the Board of Science, Technology, and Innovation Policies. Among the distinguished guests, TÜBİTAK's former presidents Prof. Dr. Sümer Şahin, Prof. Dr. Sadık Kakaç, and Assoc. Prof. Dr. Cezmi Güner Omay, were also present at the ceremony.

In his speech at the ceremony organized at the institution on the occasion of TÜBİTAK's 60th anniversary, Minister of Industry and Technology Mehmet Fatih Kacır, stated that TÜBİTAK has been a pioneer in the science and technology ecosystem with its innovative and entrepreneurial approach. He emphasized that TÜBİTAK has taken initial steps in strengthening Türkiye's research capabilities and building the infrastructure of the science, technology, and R&D ecosystem. Kacır declared that the institution is the standard-bearer of the "National Technology Initiative."

Kacır, emphasizing the special significance they attribute to TÜBİTAK, made the following evaluation: "In the future of Turkey, TÜBİTAK will continue to maintain its pioneering role as it does today. Together with TÜBİTAK, which works for a fully independent and prosperous Türkiye, we will deepen Türkiye's expertise in critical research areas in line with the vision of the National Technology Initiative in the upcoming period. We will continue to support the commercialization of research results and the transformation of entrepreneurs' ideas into products on the path to global leadership. We will place more emphasis on high-tech platforms and industrial innovation networks created with the active participation of all actors in our country's R&D and innovation ecosystems.

We will continue to bring science and technology to all segments of society through science centers, Deneyap workshops, our organized TEKNOFEST events, and publications. We are determined to make the 'Century of Turkey' a century of science, digitalization, production, and development. In the 'Century of Turkey,' we will achieve all our goals and elevate our country beyond the level of contemporary civilizations."

TÜBİTAK President Prof. Dr. Hasan Mandal began his speech with the following words: "Today, on the 60th anniversary of TÜBİTAK, an institution I take pride in being a part of and leading as the president, we are celebrating it on the 100th anniversary of the establishment of our Republic. I would like to express my heartfelt thanks to all of you, especially our esteemed ministers, for not only honoring us with your presence but also for being with us on this important, honorable, and exciting day, on behalf of both myself and our institution."

Mandal emphasized the significance of the 60-year milestone, stating that throughout these 60 years, TÜBİTAK has been one of the most important institutions in shaping the science and technology system of the Republic of Turkey in its centennial history. He expressed the awareness of the responsibilities that TÜBİTAK has undertaken, both when looking back at the past 60 years and when discussing Turkey's vision for the future, especially the vision of a Fully Independent Turkey.

On the occasion of the 60th anniversary of its establishment, a photo exhibition titled "From Past to Present: TÜBİTAK" was also opened. Open for two weeks, the exhibition shed light on TÜBİTAK's history as a pioneer in science and technology for the past 60 years.

Courtesy: <https://bilgem.tubitak.gov.tr/en/tubitak-celebrates-60th-anniversary/>



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The relevant details, including terms and conditions, eligibility criteria, admission procedure and schedule, application form, etc., are available on CUI website: http://ww2.comsats.edu.pk/internationalstudents/COMSATS_HQ.aspx.

For further details on the scholarships and fellowships, please visit www.comsats.org or write to farhan@comsats.org.

The Iranian Research Organization for Science and Technology (IROST), Announces 37th Khwarizmi International Award (KIA)

The Iranian Research Organization for Science and Technology (IROST) is organizing the 37th Khwarizmi International Award (KIA) on 27th February 2024, in Tehran, I.R. Iran. The event will be preceded by the Khwarizmi International Conference on Science and Technology, which will be held on 25th and 26th of February 2024. Further details regarding the conference are available at: <https://khwarizmi2024.conf.irost.ir/en/>.

Relevant researchers and scientists from COMSATS Member States are invited to attend the conference and submit extended abstracts, latest by 21st January 2024.

Date: 27th February 2024

Event Website:
<http://khwarizmi.ir/kia/>

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