



# COMSTECH News

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ORGANIZATION OF ISLAMIC COOPERATION STANDING COMMITTEE ON SCIENTIFIC AND TECHNOLOGICAL COOPERATION

## From Coordinator General's Desk



Prof. Dr. M. Iqbal Choudhary  
H.I., S.I., T.I.

Tragedies unfolding in Palestine and occupied territories are heart breaking. It is the high time for not only showing solidarity with the people of Palestine, but also to hold aggressors

responsible for their heinous war crimes. Equally important is to help in rebuilding infrastructure, healthcare, academic and research institutions of Palestine.

Whereas on political front the struggle to end the occupation and apartheid should continue with vigor, on socioeconomic front, we should strive to strengthen education in Palestine at all levels. We should also try to build a new Palestine on the pattern of Singapore with the capacity to develop, based on knowledge generation, and innovation.

COMSTECH, along with its excellent partners in Consortium of Excellence (CCoE) and beyond, has launched a new program for the Palestinian scholars to resume their research in various institutions of the OIC region.

COMSTECH is also in the process of working with Palestinian International Cooperation Agency (PICA) (IsDB) to

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## Biotechnology and Genomics have Application in Every Sphere of Life

Industrial biotechnology and advanced genomics are among the top disrupting technologies with application in every sphere of life from energy, consumer goods, to food and medicine, said Prof. M. Iqbal Choudhary. He was addressing the inauguration meeting of COMSATS joint center for industrial biotechnology with Tianjin Institute of Biotechnology (TIB), China, on April 14, 2021.

He expressed gratitude to Tianjin Institute of Biotechnology (TIB) for the establishment of COMSATS joint center for industrial biotechnology, on behalf of COMSTECH and International Center for Chemical and Biological Sciences (ICCBS).

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## COMSTECH Enters into MoU with NETKENT Mediterranean Research and Science University

The NETKENT Mediterranean Research and Science University, TRNC/Turkey and OIC Ministerial Standing Committee on Scientific & Technological Cooperation COMSTECH, entered into a Memorandum of Understanding (MoU). The MoU was signed by Coordinator General, COMSTECH, Prof. Dr. M. Iqbal Choudhary and Rector, NETKENT Mediterranean Research and Science University, Prof. Tayfun Turgay, in an online ceremony.

With this MoU, the NETKENT Mediterranean Research and Science University will be inducted as a member of COMSTECH Consortium of

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## Int'l Conference on Biodiversity to Prepare for CBD Meeting Organized

Under the patronage of His Royal Highness Prince El Hassan bin Talal, founding patron of the Islamic World Academy of Science (IAS), IAS and COMSTECH organized biodiversity conference on 1st April 2021. The purpose of the conference was to share information in preparation for the fifteenth meeting of the parties to the Convention on Biological Diversity (CBD) which will be held in 2021, in Kunming, China.

Prof. Dr. M. Iqbal Choudhary, Coordinator General COMSTECH delivered welcome address in which he said that this event is focused on bringing various stakeholders on board in the OIC region for a unified view at the int'l

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## COMSTECH Int'l Workshop on Viral Diseases

COMSTECH International Workshop on “Fundamental Techniques in Viral Diseases Diagnostics” inaugurated on January 25, 2021 at COMSTECH.

More than 300 virologists, scientists and students from around the OIC member states participated in this workshop.

Thirteen national and international experts from Germany, China, Sweden and Pakistan gave lectures on different aspects of viral diseases during the workshop.

Keynote address was delivered by Prof. Dr. Khalid Saeed Khan of University of Granada, Spain. He emphasized the need of medical research. Prof. Khalid emphasized the research-based decision making. He mentioned that existing knowledge, and text books available could not help out in coping with COVID-19. It was only research which helped scientists to generate new knowledge to cope with this pandemic. He urged the public to take interest in research process and get involved into it.

Prof. Dr. M. Iqbal Choudhary, Coordinator General COMSTECH said that good governance, science and society connection, science culture, and science itself helped the humanity to tackle with the current pandemic. He said that it was the practice of open science that helped conducting genome sequence of the virus and exploring its entire biological characteristics within a few months of the outbreak. Dr. Choudhary said it was exceptional to provide COVID vaccine to the world in such a shortest period of time. It happened first time in the arena of vaccine development only due to the practice of open science and cooperation by the scientists around the world. Dr. Choudhary advised the nations that we need to be prepared for future pandemics – which are not far - by developing our capacity and institutional infrastructure.

This three-day workshop consisted upon four technical sessions. ■

## COMSTECH International Seminar on Challenges for Healthcare in Pandemics

Prof. Dr. M. Iqbal Choudhary, Coordinator General, COMSTECH mentioned in his welcome address that our partnership with IEEE being the largest professional organization in the world has been extremely fruitful and we have organized a number of joint events in the past. COMSTECH is Pakistan's strongest intergovernmental organization with the aim to enhance science and technology cooperation in OIC member states. Int'l Seminar on "Challenges for the Healthcare in Pandemics" held on March 31, 2021, and organized by COMSTECH and IEEE Educational Activities Karachi Section.

The year 2020 is remarkable in every definition of the world. We have seen over 3 million deaths, over 300 million infections and over \$15 trillion loss to economies all over the world caused by this pandemic, said Dr. Choudhary. He said that any calamity of this magnitude can magnify the calamities that already exist, quoting Malinda Gates. The difference between haves and have nots, and systemic crisis increased, he said.

He appreciated by mentioning that what science has done in last one year is truly remarkable. Science and technology exceeded the global expectations. Dr. Choudhary mentioned that when everything had failed such that global economic cooperation, science and technology delivered. We have seen the biological understanding, development of diagnostics and vaccines have happened. Technology has fulfilled all the promises which it has made to humanity at large, he said. This is not last pandemic, we need to prepare and be resilient for the next health challenges, he informed.

The pandemic opens new dimensions of thinking in every walk of life, specially our health care industry which now requires new ways of working, new methods of communication finding new solutions to problems and try to innovate solutions. Digital health in the current era is more than just online virtual visits and distant patient monitoring. COVID19 pandemic primarily redesigned the health care system and highlighted the importance of gap that can be problematic in the future, Dr. Muhammad Sadiq Ali Khan said in his opening remarks.

The seminar was addressed by Prof. Jim Buckley of University of Limerick, Prof. Maurice Mulvenna, Ulster University, Prof. Andrew Ware, University of South Wales and Dr. Wasswa William, Mbarara University of Science and Technology. Complete video lectures are available on COMSTech YouTube channel "comstech-oic".

## SPEAKERS



**Clockwise:** Prof. Andrew Ware, Professor, University of South Wales; Prof. Maurice Mulvenna, Professor, Ulster University Artificial Intelligence Research Centre; Prof. Jim Buckley, Senior Lecturer, University of Limerick; Dr. Wasswa William, Senior Lecturer, Mbarara University of Science and Technology.

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## From Coordinator General's Desk

engage Palestinian scholars in various S&T capacity building programs. COMSTECH is willing to partner with any institution towards the common mission of

helping our brothers and sisters in Palestine for a politically sovereign, economically prosperous, and strategically strong country, Insha Allah.■





## COMSTECH International Workshop on Nanomedicine

COMSTECH international workshop on “nanomedicine – development and challenges”, a three-day long event was inaugurated on March 15, 2021 at COMSTECH Auditorium, Islamabad.

This workshop was delivered by 15 leading scientists from UK, USA, Germany, France, Switzerland, Saudi Arabia, Malaysia and Pakistan.

More than 100 academic and research institutions from Pakistan, OIC member states and from across the world participated both physically and virtually in this international event.

Apart from more than 100 young scholars who participated in-person, more than 200 international participants joined this event virtually from Egypt, UAE, Mauritius, Turkey, Azerbaijan, Cameroon, Niger, Iraq, Bangladesh, UK, China, Kyrgyzstan, Hong Kong and Saudi Arabia.

The workshop was consisted upon four technical thematic sessions. The themes of the sessions were functional materials for disease sensing and treatment, functional nanoparticles for biomedical applications, nanotechnology for diagnostics and clinical applications, and nano-antimicrobials. This three-day event was scheduled with lectures by experts, each lecture was of one-hour duration with question answer session.

It was concluded by the speakers that the nanotechnology offers new prospects of developing affordable, quick and scalable solutions in diagnoses and treatment of COVID-19 and other diseases and manufacturing of personal protective equipment. Complete video lectures are available on COMSTECH youtube channel “comstech-oic”. ■

## COMSTECH International Workshop on AI & ML in Life Sciences

COMSTECH in collaboration with International Center for Chemical and Biological Sciences, Karachi organized an International Workshop on “Artificial Intelligence & Machine Learning in Life Sciences” on March 25.

COMSTECH as host institution represents 57 member states, it is a second largest block of countries after United Nations. Countries situated in Africa, Asia and some part of Europe and South America are part of COMSTECH, said Prof. Dr. M. Iqbal Choudhary, Coordinator General, COMSTECH in his welcome address.

Dr. Choudhary said that Artificial Intelligence (AI) is extremely important, it has been used in COVID19 treatment, patient care, tracking and tracing of positive patients, and most importantly it was used in analysis of big data. He mentioned that science was able to perform because of enabling technologies and AI is certainly one of the most important technologies.

Dr. Choudhary informed that we are in process of establishing a research center particularly focused on the application of AI in health.

Dr. Saurabh Sinha, of University of Illinois at Urbana-Champaign addressed the workshop and talked about cyberinfrastructure foundations and challenges, big data and use of AI and Machine Learning (ML) and shared his own experiences. He concluded that ML and AI will play a key role in analysis, given the high dimensionality of data, large volumes of training data, and inter-relationships among different components of the data.

Dr. Ghazna Khalid, Advisor to Prime Minister on health, was the guest of honor of the event. She said that AI/ML can help doctors make better clinical decisions, replace human judgment in some areas of healthcare. It can help in diagnostic processes by analyzing data generated from patients.

Dr. Ghazna informed that we use big data set to individualize patient care, we can know the susceptibility to not only the cancer but also the other non-communicable diseases. We will be able to know and predict from our genetic structure the susceptibility of genes. This is why AI and ML is so important to patient care.

She mentioned that genome on chip will make possible the tailor-made patient care possible in future and then be the next revolution in life sciences. The future of doctors is in AI and ML. We need to intertwine it into patient care, to provide better quality and make informed decisions, and understand disease processes.

Dr. Shahid Mehmood, Chairman and CEO of Interactive Group, the chief guest of the workshop, informed that world population is moving to 8.8 to 10.4 billion by 2100, connectivity and geographical shift is taking place as well.

Dr. Shahid said that AI and ML are tools that are fast moving, because the processes, storages, connectivity is now doubling every 12 to 18 months. When we have technology moving at that pace and we have population shift, the analyses specially for future disease monitoring and future control mechanisms become complex.

Dr. Shahid said that population shift is happening, connectivity, and geographical footprint are changing. When geographical footprint changes it also have impact on various communal diseases and whole stuff that we are trying to study with AI and ML as a tool because manually it will become impossible, he pointed out.

He suggested that first thing we need to do in Pakistan is to plan, how and where to store all of these data? How to generate this data in a digital format? How to manage the big data? How to learn all the tools available around the world and how to apply them?

He emphasized to think about, how will we manage data. What will be the cyber sovereignty, authenticity, management and rules that apply to the data that would be generated by all the studies. This becomes the new challenge, he indicated. How do we streamline the data in a manner that can translate into something that can ethically be managed as the future course of action? This is the real challenge not only for Pakistan but also for all OIC states.

Dr. Waseem Haider of COMSATS gave opening remarks, and four lectures were delivered by distinguished speakers in the technical sessions of the workshop. ■



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## Secretary MoST Visits COMSTech Headquarters

Dr. Arshad Mahmood, Secretary, Ministry of Science and Technology, Pakistan, visited COMSTech Headquarters.

Prof. Dr. M. Iqbal. Choudhary, Coordinator General COMSTech welcomed the Secretary at COMSTech Headquarters and gave him a detailed presentation on COMSTech establishment, objectives its past programmes, current initiatives and future plans. Dr. Choudhary informed the Secretary about the achievements of COMSTech by mentioning many accomplished programmes and projects of COMSTech.

Prof. Choudhary mentioned that COMSTech is only OIC organization hosted by Pakistan which functions under the

chairmanship of the President of Pakistan while the Prime Minister is the co-chair of COMSTech. COMSTech works for socio-economic development of 57 OIC member states through the application of science and technology.

He mentioned the benefits of COMSTech programmes to Pakistani scientists and institutions and said that COMSTech provides a leadership opportunity to Pakistan in the Muslim World in the field of science and technology.

Prof. S. Khurshid Hasanain, Adviser, COMSTech, Dr. Mohammad Ali Mahesar, Consultant, COMSTech and Mr. Syed Aftab Hussain Zaidi, Senior Director, HR & Admin COMSTech were also present in the meeting. ■

## COMSTech International Webinar on Academic Collaboration, Science Diplomacy and OIC

International webinar on 'Academic Collaboration, Science Diplomacy and OIC: Challenges and Opportunities' organized jointly by COMSTech and the Dept. of International Relations, Islamia University Bahawalpur (IUB) on March 22, 2021.

The objective was to bring stakeholders from academic management and diplomatic circles together to address bottlenecks and create opportunities for international academic collaboration through science diplomacy.

COMSTech set up Consortium of Excellence (CCoE) comprising of leading science, technology, engineering, academic and research institutions, under the "Science Diplomacy Initiative" of the Ministry of Foreign Affairs (MoFA) last year. The IUB being the founding member of the CCoE, through its department of international relations offered joint organization of this webinar.

The chief guest, Dr. Arshad Mahmood, Federal Secretary, MoST, appreciated COMSTech for the establishment of CCoE and the IUB for being the founding member of it. He said that it is our collective responsibility to collaborate for addressing challenges effectively, particularly in COVID19 situation.

He said that academic institutions have a vital role to play in addressing various problems being faced by the Muslim Ummah. There is a dire need to create partnerships among the higher education institutions of the Islamic countries so that they may benefit from one another's experience, expertise and knowledge. He assured utmost cooperation of Ministry of Science and Technology for CCoE and other

collaborative initiatives of COMSTech.

The Vice Chancellor IUB, Engr. Prof. Dr. Athar Mahboob, highlighted the challenges faced by the Muslim world. He stressed the need of mutual cooperation and joint research projects.

Coordinator General COMSTech Prof. Dr. M. Iqbal Choudhary, stressed the need of developing linkages, academic collaboration and funding mechanism for joint science projects. He pointed out that there is a deep south and deep north in the OIC member states.

Chairman Pakistan Science Foundation Prof. Dr. Shahid Mahmood Baig offered full support for joint activities and said that everything can't be made available under one roof for science research. We need to identify research institutions and collaborate with them.

Dr. Muhammad Ijaz Latif, Chairman, Dept. of Int'l Relations concluded the session by vote of thanks. ■



## COMSTech Offers Free Online Courses



COMSTech, in collaboration with Latif Ebrahim Jamal National Science Information Center, provides access to thousands of courses delivered by world authorities in science, engineering, agriculture, social sciences, economics and other fields free of cost online for school, college and university level learners. Please visit [www.lej4learning.com.pk](http://www.lej4learning.com.pk) to learn anything of your choice free of cost.

## Government College University Lahore Joins COMSTech Consortium of Excellence

Government College University (GCU), Lahore joined COMSTech Consortium of Excellence (CCoE). GCU assured tireless support to, and collaboration with COMSTech for the promotion of cooperation among OIC countries in science and technology.

The OIC Ministerial Standing Committee on Scientific and Technological Cooperation (COMSTech) and Ministry of Foreign Affairs, Government of Pakistan launched "COMSTech Consortium of Excellence (CCoE)" comprising of leading academic and research institutions of Pakistan and OIC member states in the fields of science, technology, engineering and mathematics.

CCoE is launched under the "Science Diplomacy Initiative" of the Ministry of Foreign Affairs (MoFA), Government of Pakistan with the purpose of putting efforts to achieve excellence in partnership.

CCoE initiative was conceived to provide a platform to the leading universities of Pakistan and the universities of the OIC member states to cooperate, collaborate and showcase their achievements. Currently 19 universities have joined CCoE and the membership process is underway. ■







## 14 Jordanians among World's Top 2% Researchers

The ranking was published in the highly-rated journal, PLOS Biology, and used SCOPUS database for analyses of the citations and the composite indicators, including research performance, quality and quantity of publications, and a number of citations.

Stanford University's list of the world's top 2 percent scientists includes 150,000 researchers from 149 countries.■

# Tunisia Launches First Satellite Manufactured Locally

The satellite, called Challenge one, is intended for the Internet connectivity, was launched into space on March 22, 2021.

Tunisia is the first country in the Maghreb to manufacture its own satellite, and the sixth on the African continent.

The small satellite is launched by a Russian Soyuz spacecraft from Baikonur, Kazakhstan. Tunisia says it hopes to launch 20 more in the next 3 years.■

# UAE Receives Hope Probe's First Image of Mars

Dubai (UNA-OIC) – on 14 Feb 2021, the Emirates Mars Mission team announced that the Hope Probe, which successfully entered the orbit of Mars last Tuesday, has sent the first image of the Red Planet.

Having traveled more than 493 million kilometers over the past seven months, millions in the UAE, the Arab region and around the world have eagerly awaited to see the first image taken by the Hope Probe, which will be immortalized in history as the first image of an Arab probe to reach Mars.

The picture is the first of more than 1,000 GB of new Mars data that the Probe will send back to earth and that will be shared for free with more than 200

academic and scientific institutions around the world.

The mission will provide deeper insights into the climatic dynamics of the Red Planet through observing the weather phenomena in Mars such as the massive famous dust storms that have been known to engulf the Red Planet, as compared to the short and localized dust storms on earth.

The Hope Probe is the culmination of knowledge transfer and development effort started in 2006, which has seen Emirati engineers working with partners around the world to develop the UAE's spacecraft design, engineering, and manufacturing capabilities. ■

## Algeria, Russia Agree to Cooperate in Manufacturing Sputnik V Vaccine in Algeria

Algiers (UNA-OIC) – Algeria and Russia on agreed to establish bilateral cooperation in the manufacturing of Russia's Sputnik V COVID-19 vaccine in the North African nation.

Talks to manufacture the vaccine in Algeria took place on Sunday during a meeting between Algerian Prime Minister Abdelaziz Djerad and Russian Ambassador Igor Beliaev. ■

# Kazakhstan Plans to Produce 1,200 Electric Vehicles in 2021

Nur-Sultan, (UNA-OIC) - Kazakhstan plans to produce 1,200 electric vehicles of various models, including buses in 2021. In 2022 this figure will be brought to 2,000.

To date, more than 50 charging stations for electric vehicles operate in the Kazakh capital city, Nur-Sultan. The vehicles will be supplied to the domestic market and for export.■



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