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The Executive Director presenting COMSATS' Shield to Secretary of COMSATS' Focal Ministry in Sri Lanka (details on page 2)

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From the Executive Director's Desk

It is one of COMSATS' unique distinctions to have an affiliated Network of R&D organizations spread across four continents that are designated as its Centres of Excellence. All of these Centres are performing well in accordance with their national priorities and available resources. However, an enduring point of concern for these Centres, and probably most of the S&T organizations in the South, is the need to enhance quality of their research output and services. The founding Member States of COMSATS were highly conscious of this fundamental issue and considered it an important objective of COMSATS to persistently help achieve the upgradation of Centres of Excellence. As part of the Executive Director's assignment to visit the COMSATS' Centres of Excellence and get first-hand information about their programmes, it was invariably a pleasant experience to see the basic infrastructure in place and experienced manpower employed in these organizations to undertake a variety of projects according to the mandate of the respective institutions. Nevertheless, in most cases it was learnt that working conditions of researchers and the laboratory facilities were far below the level of the developed countries with some notable exceptions. Understandably, the financial resources required for improving this situation are perhaps unavailable under the current socio-economic disposition of these countries.

The vision of Professor Abdus Salam, on whose behest COMSATS had been established, was to create at least 20 Centres in the South, which could be regarded as world leaders in their respective fields of R&D activity. To achieve such a status is an ambitious undertaking for COMSATS' Centres. However, it is not unattainable considering the available human and natural resources at the disposal of most developing countries. Clearly, two prerequisites are necessary to be met before a major breakthrough occurs. Firstly, the realization by developing countries that scientific excellence is highly competitive, and achieving a higher level of capacity would not be possible through half-hearted measures. A total commitment and highest priority with maximum possible allocation of resources is the only viable option. Scientists have to be regarded as the most respectable section of the society with best privileges and public recognition. Scientific community in developing countries, on the other hand, should strive harder to live up to the expectations of their societies, which are craving to enjoy the benefits of modern technology. It is true that the end result of an R&D effort leading to economic dividends depends on the overall innovation system, and not simply on the creativity of individual scientists. This important point has also been the subject of much discussion and controversy in developing countries. Often the path of translating academic

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NEWS/ACTIVITIES/HIGHLIGHTS FROM COMSATS SECRETARIAT

COMSATS' COORDINATION WITH ITS SRI LANKAN FOCAL MINISTRY STRENGTHENED

The Ministry of Technology, Research and Atomic Energy (MoTR&AE), Democratic Socialist Republic of Sri Lanka, acts as COMSATS' Focal Point in Sri Lanka, and, by virtue of the same, is represented in COMSATS' International Consultative Committee. In view of COMSATS' policy to foster greater coordination between its Secretariat and the Focal Points, as well as between Focal Point and the Centre of Excellence within a Member State, the Executive Director COMSATS, Dr. I.E. Qureshi, visited MoTR&AE on 11th April 2013 and undertook detailed consultations with the honourable Secretary of the Ministry, Mrs. Dhara S. Wijayatilake. Also present in the meeting were Director, Technology & Science Development Division, Mrs. Himali W. K. Athaudage; Chairman Board of Management, Industrial Technology Institute (ITI), Sri Lanka, Prof. Vijaya Kumar; and Head of Chancery, High Commission of Pakistan in Sri Lanka, Mr. Bilal Akram Shah.

Dr. Qureshi informed the honourable Secretary about the 2nd meeting of COMSATS Consultative Committee being held in conjunction with the 16th Coordinating Council meeting in Accra, Ghana. The Secretary was also informed that the current visit of the Executive Director to Sri Lanka was principally meant to make assessment of ITI as a potential Centre of Excellence COMSATS to join the COMSATS Network. The Secretary appreciated the progress being made to grant the status of COMSATS' Centre of Excellence to ITI. She issued an official memo, authorizing Prof. Kumar to represent the Ministry in the 2nd Consultative Committee meeting, in addition to his participation as an invited delegate in the 16th Coordinating Council meeting.

The matters discussed at length during the meeting related to increased funding for ITI in order to enable it to fully participate in COMSATS' South-South Cooperation Programmes and the progress on the approval of Sri Lanka's Annual Membership Contribution towards COMSATS. The honourable Secretary expressed her desire to strengthen scientific relations with COMSATS on multilateral level, as well as bilaterally with the Ministry of Science and Technology, Government of Pakistan. Any financial, legal and administrative action required for the same would be actively pursued by the MoTR&AE, Sri Lanka.

Recounting the support extended by COMSATS to Sri Lankan scientists, the Executive Director informed that 16 scientists were provided travel grants over a period of last three years, who participated in COMSATS' capacity-building programmes and trainings in Bangladesh, China, Malaysia, and Pakistan. COMSATS' future programmes with Sri Lanka, he noted, would involve the following five sectors:

- Collaboration, through the participation of ITI in Coordinating Council;
- Educational Opportunities, at COMSATS Institute of Information Technology (CIIT), Pakistan, and Iranian Research Organization for Science and Technology (IROST), Iran;
- S&T Capacity-building, by participation of Sri Lankan scientists in COMSATS' sponsored symposia/workshops/training programmes;
- Joint Research, through ITI's and other Sri Lankan institutions' participation in International Thematic Research Groups administered by COMSATS; and
- Joint Conferences/Workshops, with the support of COMSATS and relevant Sri Lankan organizations.

TECHNICAL EVALUATION OF ITI, SRI LANKA, FOR INDUCTION IN COMSATS' NETWORK

As a follow-up of the application received from the Industrial Technology Institute (ITI), Sri Lanka, for joining COMSATS Network of International S&T Centres of Excellence, the Executive Director COMSATS visited this Institute in Colombo on April 11-12, 2013.

Welcoming the Executive Director, the Chairman Board of Management ITI, Prof. Vijaya Kumar, expressed the desire to expand ITI's international role through different bilateral and multilateral fora, including COMSATS. He thanked Dr. Qureshi for the invitation to participate in the 16th COMSATS' Coordinating Council meeting, where the former would present ITI's case for induction in the COMSATS Network of International S&T Centres of Excellence. Prof. Kumar explained that, following the acceptance of ITI in the Network, the Director (CEO) ITI would be nominated as a member of the Coordinating Council. Before inviting the Executive Director COMSATS to visit the laboratories at ITI, the Director ITI, Dr. G.A.S. Premakumara, gave a briefing about the scope of R&D activities and services being provided by the Institute.



The Executive Director COMSATS visiting a laboratory of ITI, Sri Lanka

It was noted that the R&D work at ITI is distributed in four sections, which are related to Food Technology, Environment Technology, Herbal Technology, and Materials Technology. A Biotechnology Unit established at ITI, in 2009, is dedicated to undertaking research and providing services in the fields of Molecular Biology and Biotechnology. A wide array of equipment is available in the Unit for providing services such as testing genetically modified (GM) organisms and products; development of plant tissue culture techniques; microbial identification through sequences of Ribosomal Ribonucleic Acid (rRNA) genomes, etc. Other laboratories of ITI that provide services to local industry include: Chemical and Microbiological laboratory, Materials laboratory, Industrial Metrology laboratory and Electrotechnology laboratory.

The ITI is centrally located in Colombo with all of its laboratories adjacent to each other. The Institute's strength of permanent staff is 329, seventy per cent of which are employed in technical divisions, while the rest work in support divisions. Out of the total of 79 research officers in both categories of divisions, 56% possess post-graduate qualifications. The visit to laboratories was conducted by the Director ITI, while the activities of relevant sections were described by Section Heads.

The Institute has a plan to partially move in a new and more spacious complex of laboratories and pilot plants, which is located in Malambe, at about 12 kms from the Institute's present location. The Chairman ITI accompanied the Executive Director COMSATS to the premises of the complex that is under-construction. A brief about the on-going construction activity was given by the former Director ITI, currently the In-charge of the construction project, Dr. A.M. Mubarak. He explained that the administration building, as well as the halls of the pilot plants have been completely constructed, while a five-storey building, housing most of the laboratories, has been built only up to three levels. It is expected that a 'model laboratory' will start

functioning in the main building by 2014, while the remaining construction work of the complex will continue.

In order to explain how COMSATS operates for the development of its Member States, Dr. Qureshi delivered a multimedia presentation to the senior members of the Institute. After a brief summary of COMSATS' history, organizational structure and S&T capacity-building programmes conducted in recent years, it was emphasized that ITI can benefit from COMSATS' Network membership by entering into collaborative projects with other members of the Network.

THE HIGH COMMISSIONER OF MAURITIUS TO PAKISTAN RECEIVES A BRIEFING ON COMSATS

The High Commissioner of Republic of Mauritius, H.E. Mr. Mohammed Rashad Daureeawo, made a courtesy call on the Executive Director COMSATS, on March 28, 2013. With a view of Mauritius' prospective membership of COMSATS' Commission, the High Commissioner was briefed by Dr. Qureshi on COMSATS' international role and on-going programmes and activities. The meeting was also attended by the Advisor (Programmes) and Deputy Director (Programmes) of COMSATS.

The Executive Director noted that Mauritius is an important African country with a vast scope for scientific collaboration and exchange. During his presentation, Dr. Qureshi shed light on the vision behind establishing a Commission at the level of Heads of the State/Government and its Network of International S&T Centres of Excellence. Dr. Qureshi informed the High Commissioner about COMSATS' current leadership, geographic presence, various organizational bodies, thrust areas and cooperative mechanisms that provide the organization with the necessary leverage to effectively pursue South-South cooperation among the Member States.

contd. from page 1 ... 'From the Executive Director's Desk'

achievements into economic success is difficult to traverse, leading to a negative impression about the role of scientific enterprise, in general. It is here that an effective Science, Technology and Innovation Policy, matched with political will and enlightened leadership plays a critical role.

COMSATS Coordinating Council, which comprises of the Heads of Centres of Excellence, is the most potent body of COMSATS' Member countries that has the necessary knowledge and understanding of the situation on the ground in different countries. It is, therefore, not surprising that the advocacy for resource allocation to achieve excellence in science; help and support for ST&I policy; focus on

technology parks and the undertaking of joint research work through international thematic research groups, have been the focus of COMSATS' endeavours over the past 17 years, under the directions of the Coordinating Council. It is well-understood that the S&T capacity-building is a long haul but the destination is clearly identified and the efforts are gaining pace. Hopefully, the developing countries will eventually transform themselves into S&T savvy knowledge-societies, capable of providing good quality of life to their populations in not too distant a future. COMSATS is committed to play its modest role in this epic effort of transforming the world into an equitable and peaceful comity of nations through the inculcation of scientific approach in all spheres of human activity.

The Executive Director concluded his presentation with a hope to see Mauritius joining COMSATS as a Member State and nominating one Mauritian R&D/S&T institution to join COMSATS' Network of Centres of Excellence for effectively benefitting from the cooperation being offered through the platform of COMSATS. In this connection, COMSATS' Draft Accession Agreement and other relevant documents were handed over by the Executive Director to the High Commissioner, who appreciated the role being played by COMSATS and enormous efforts of Dr. Qureshi and his colleagues at COMSATS Secretariat to achieve its mission. H.E. Mr. Daureeawo pledged to forward the Membership documents, along with his report supporting the case for Mauritius' membership to COMSATS, to the relevant Ministry in his home country. He also indicated the University of Technology, Mauritius (UTM) as the potential institution to join COMSATS' Network.

Dr. Qureshi noted that COMSATS Institute of Information Technology (CIIT), which is ranked as the No. 9 higher education institute in Pakistan, is one of the Centres of Excellence of COMSATS and possesses enormous potential to contribute in the field of Higher Education in Mauritius. Dr. Qureshi informed that, on Mauritius becoming a Member State, Mauritian students can also benefit from the scholarships offered by CIIT for COMSATS' Member States.

AMBASSADORS OF COMSATS' MEMBER STATES SENSITIZED ABOUT COMSATS' BODY MEETINGS IN GHANA

On March 28, 2013, a dinner-reception in honour of the Ambassadors of COMSATS' Member States in Islamabad was hosted by the Ministry of Science and Technology (MoST), Government of Pakistan, in connection with the upcoming 2nd meeting of COMSATS Consultative Committee (1st May 2013, Accra-Ghana).

The Ambassadors/Heads of Mission of five Member countries, Jordan, Korea (D.P.R.), Sudan, Syria, and Tunisia, graced the meeting with their presence. The representatives of diplomatic missions of Bangladesh, China, Egypt, Iran, Kazakhstan, the Philippines, and Sri Lanka also attended the dinner. Other guests included officials from MoST, CIIT, and COMSATS Internet Services.

Addressing the august gathering, the Executive Director COMSATS underscored the significance of the two international meetings of COMSATS' organizational bodies that would provide future directions and guidelines to the organization for achieving S&T-led development in its Member States. Speaking on the occasion, the Federal Secretary, MoST, Government of Pakistan, Mr. Akhlaq Ahmad Tarar, who is also the Chairman COMSATS Consultative Committee, welcomed the participants and



A glimpse of the Reception Dinner in honour of Ambassadors and their representatives of Member States in Islamabad

highlighted the importance of the Ghana meetings. He appreciated the proactive role being played by the diplomatic missions of COMSATS' Member States in Islamabad, and noted their efforts made last year for sensitizing respective governments about the 2nd Commission Meeting of COMSATS that was held on 16th and 17th April 2012. He also hoped for similar support and cooperation to ensure maximum participation from the Member States at the 2nd Consultative Committee meeting.

EXECUTIVE DIRECTOR COMSATS MEETS THE FOREIGN SECRETARY, GOVERNMENT OF PAKISTAN

The Executive Director and Advisor (Programmes) COMSATS met the Foreign Secretary, Government of Pakistan, at his office on March 22, 2013, to brief him about the upcoming COMSATS' two meetings in Accra, Ghana. It was informed that the Consultative Committee, represented by senior government officials from COMSATS' Member States holding the portfolio of S&T, is to meet after 2009 to discuss a nine-point agenda, while the Coordinating Council will meet to discuss items primarily concerning the Council's membership and international technical programmes.

During the meeting, support for maximum participation of Member States in Consultative Committee meeting was requested. Other issues discussed on this occasion were:

1. Stronger coordination between COMSATS and Ministry of Foreign Affairs in strengthening of COMSATS' role in Member States;
2. Greater engagement with African countries following the two meetings in Accra;
3. Support of the Ministry for induction of new COMSATS' Members.

It was decided that Foreign Secretary will visit COMSATS Secretariat in the near future and discuss all avenues of support from the Ministry.

BIOGRAPHIES OF EMINENT SCIENTISTS: DR. AHMED ZEWAIL

Ahmed Zewail is the Linus Pauling Chair professor of chemistry and professor of physics at the California Institute of Technology (Caltech). For ten years, he was the Director of the National Science Foundation's Laboratory for Molecular Sciences (LMS), and is currently the Director of the Moore Foundation's Center for Physical Biology at Caltech. He received his early education in Egypt and in the U.S. completed a Ph. D. from the University of Pennsylvania and a postdoctoral (IBM) fellowship at the University of California, Berkeley, before joining the faculty at Caltech. Dr. Zewail was awarded the 1999 Nobel Prize for his pioneering developments in Femtoscience, making possible observations of ephemeral molecular phenomena on the femtosecond (10^{-15} seconds) time scale of atomic motion. More recently, he and his group have



Recent Awards and Prizes

- World Harmony Award, University of California at Santa Barbara (2012)
- Mendel Medal, Villanova University, Villanova, Pennsylvania (2012)
- Medal of the University of Tunis, El Manar, Tunisia (2012)
- Honorary Award Medal, Baku State University, Baku, Azerbaijan (2011)
- Sven Berggren Prize, Royal Physiographic (Natural Science) Society, Lund, Sweden (2011)
- Sir Humphrey Davy Medal, Royal Society of London, U.K. (2011)

developed the field of 4D electron microscopy for the direct visualization of materials and biological behavior. In the four dimensions of space and time, both the structure and dynamics of nanomachines can be imaged, and the applications range from atoms to cells.

In California, Dr. Zewail resides with his wife Dema Faham, and he is a proud father of four children: Maha, Amani, Nabeel, and Hani; two of them have scholarly bonding to Caltech and Berkeley. Over the years he has mentored more than 300 members of his research school, and published more than 500 articles and treatises. His biography, "Voyage through Time" (and "Age of Science"), which has now been published in 17 languages and editions, offers an exposé of his life, science and world affairs until the receipt of the Nobel Prize.

For his contributions to science and for his public service, Dr. Zewail has received honors from around the globe. Forty

Recent Special Honours

- Ordre national de la Légion d'honneur, Chevalier, decreed by President of France (2012)
- Top American Leaders Award, Washington Post and Harvard University (2011)
- Priestley Gold Medal, highest award, American Chemical Society (2011)
- National Leadership Award, Merage Foundation (2010)
- Cowl Hood, honor of the Coptic Orthodox Church, Bucharest, Romania (2010)
- Albert Einstein World Award, World Cultural Council (2006)

Honorary Degrees in the sciences, arts, philosophy, law, medicine, and humane letters have been conferred on him, including those from Oxford University, Cambridge University, Peking University, École Normale Supérieure, University of Pennsylvania, and Alexandria University. He has been decorated with Orders of State and Merit, including the Order of the Grand Collar of the Nile, Egypt's highest state honor. Postage stamps have been issued in commemoration of his contributions to science and humanity. Among other honors, he has received the Albert Einstein World Award, Benjamin Franklin Medal, Leonardo da Vinci Award, Robert A. Welch Award, Wolf Prize, King Faisal Prize, Othmer Gold Medal, and the Priestley Gold Medal. In his name, international prizes have been established in Amsterdam, Cairo, Detroit, Trieste, and Washington (DC), and in Cairo the AZ Foundation is providing support for the dissemination of knowledge and for merit awards in arts and sciences.

Dr. Zewail serves on President Obama's Council of Advisors on Science and Technology, and also as the President's Science Envoy to the Middle East. He is an elected member of academies and learned societies, including the American Philosophical Society, National Academy of Sciences, Royal Society of London, French Academy, Russian Academy, Chinese Academy, and the Swedish Academy. Over the years, he has given public lectures on science and on the promotion of education and partnership for world peace, and continues to serve on national and international boards for academic, cultural, and world affairs.

"I am a frank man... I have no political ambition, as I have stressed repeatedly that I only want to serve Egypt in the field of science and die as a scientist."

Dr. Ahmed Zewail

ARTICLE: DEVELOPING NATIONS SHOULD AVOID 'SLOW SCIENCE'

Rafael Loyola*

Scientists in the developing world are under growing pressure to publish more every year. Some would argue that these quantitative metrics are promoting a scientific distortion, in which quantity prevails over quality, that is, publishing papers in journals with high impact factors. In certain developing countries, the ability of researchers or institutions to obtain funding is closely related to their productivity, measured as the number of scientific papers they publish. Since Brazil started applying this metric in the 2000s to evaluate researchers' performance, its science has improved, with a greater number of papers published in high-impact-factor journals and new research networks established.

The global Slow Science movement seeks to move away from an emphasis on productivity. It claims that pressure to publish leaves scientists with insufficient time to think about important issues that require in-depth discussion and reflection, such as poverty alleviation and the development of a cancer vaccine. But while such a movement may be attractive to some, it should be applied with caution in countries where research capabilities are still developing. I believe that slow science does not work for developing countries.

Slow spread: The Slow Science movement originated in Germany and its ideas are now spread by the Slow Science Academy. It has been popular in developed nations, such as the United States, that have a strong research capacity. The movement's manifesto argues that focusing on productivity limits researchers' creativity, preventing them from taking "time to think ... time to read, and time to fail".

The need to publish more papers, say researchers, ultimately leads to shorter papers with superficial discussions, an increasing number of quantitative rather than descriptive reviews and the replacement of field-based papers with modelling papers. However, the increase in Brazil's publishing output has brought enormous growth in science. For example, investment in science education has increased, fostered by the establishment of new graduate training programmes and the implementation of policies to incentivise national and international cooperation. Reducing publication output at this crucial stage of growth could be detrimental.

I have previously argued, together with colleagues from the Federal University of Goiás, Brazil, that focusing on productivity is a tough but necessary step on the way to establishing a more mature system in which the quality of science papers will eventually supersede quantity as a focus of research strategies. The situation is similar in other Latin American nations, such as Argentina, Colombia and Mexico. In these countries, pressure from funding agencies and institutions to publish more papers has increased their scientific ranking across Latin America. In China, economic growth and a pressure to publish has dramatically increased the quality of science and technology.

Practice is crucial: Highly productive researchers publish in both high-profile and medium-impact journals, while less productive ones mostly publish in low-impact journals. This is a clear argument against slowing scientific production, based on the impact factor as a well-established, if disputable, international metric of a journal's scientific quality. This pattern emerges for several reasons.

Firstly, getting papers published is about practice. Whatever we do, we get better at it the more we do it. Secondly, getting published in a high-profile journal boosts your reputation. For example, you might be asked to act as an associate editor of an important journal in your field. Such invitations largely come about through networking. Based on my experiences and those of my colleagues, highly productive scientists are usually skilled at networking. They are also good at initiating international, collaborative research, whose outcomes are usually solid and well discussed, and thus more likely to be published in high-profile journals.

Finally, high-quality international collaborative research helps scientists to raise funds, and this will ultimately attract more students, postdocs and young scientists to work with them, leading to more high-quality papers.

Time trade-off: This big picture is, of course, simplified, and there are exceptions. I also recognise that there is a trade-off in raising productivity: the more you need to publish, the less time is available for laboratory experiments or expeditions. However, I also believe that publishing more papers is a natural consequence of a healthy, collaborative research environment and can be achieved within a big research group, even in those with busy senior scientists. Therefore, developing countries should be cautious about the Slow Science movement. The emphasis by funders and research institutions on productivity may be global, but the history of scientific development varies considerably between developed and developing countries.

It takes time for nations to reach a state of steady scientific production from one in which production is still developing. For developed countries, focusing on productivity may limit creativity. But for developing ones, having such a focus for now can help to improve national science.

In Brazil, the implementation of metrics and indicators of science and technology development have helped the country to better define its targets and encouraged local scientific communities to take a risk and aim for publication in high-profile journals. If the history of scientific development were compared to a train going up and down a hill, it is sensible to slow its speed when it's descending to safeguard against derailment. But applying the brakes when it is climbing will cause it to roll back to its starting point, leading it to arrive late at its destination.

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Courtesy: *SciDev.Net* (1 May 2013), available online at: www.scidev.net/en/science-communication/science-publishing/opinions/developing-nations-should-avoid-slow-science-.html

ACTIVITIES/NEWS OF COMSATS' CENTRES OF EXCELLENCE

RSS-JORDAN AND UN-HABITAT HOLD WORKSHOP ON SUSTAINABLE CITIES

On April 3, 2013, the Construction and Urban Planning Cluster (CUP) at the Royal Scientific Society (RSS) of Jordan, in collaboration with the United Nations Human Settlements Programme (UN-HABITAT), organized a workshop on "Sustainable Development Goals". The collaborative event aimed at promoting cities that are environmentally sustainable, socially inclusive, economically productive and resilient.

The workshop sought public participation from multi-disciplinary participants/experts to discuss and review the suggested goals of UN-HABITAT in order to come up with suitable action plans and make progress. The suggested goals cover the areas of national urban policies, urban sprawl, public space, housing & slums, citizen participation, urban safety, urban job creation, urban mobility, urban energy, urban water and sanitation, and urban resilience.

The event encouraged dialogue with the national and local authorities, civil society organizations and the private sector.



A session of the workshop on 'Sustainable Development Goals' in progress

RSS AND THE ENVIRONMENT AGENCY - ABU DHABI (EAD) ORGANIZE WORKSHOP ON THE INTEGRATED HAZARDOUS MATERIALS MANAGEMENT SYSTEM

During February 2013, RSS, in collaboration with the Environment Agency - Abu Dhabi (EAD), organized a training workshop on the 'Integrated Hazardous Materials Management System' for the companies and warehouses that deal with hazardous materials in the UAE. The participants were trained on all the relevant functions of a system, which included companies and warehouses registered on the system and updating its profile, electronic import/export permits for hazardous materials, and tracing/tracking of the hazardous materials from the entry-

point up to the final destination. Additionally, participants were briefed on the use of the unified list of banned and restricted hazardous materials and the Material Safety Data Sheet (MSDS).

The EAD emphasized on the importance and need to activate the system by the companies and warehouses that deal with hazardous materials.

CIIT-PAKISTAN ORGANIZES 1ST MEETING OF GLOBAL FORUM ON ISLAMIC FINANCE (GFIF-2013) IN LAHORE

The three-day international event, marked as the first meeting of the Global Forum on Islamic Finance (GFIF), was organized by COMSATS Institute of Information Technology (CIIT), Lahore, Pakistan, in collaboration with the Lancaster University, UK, on March 11-13, 2013. The theme of the meeting was "Islamic Finance: New Realities, New Challenges". The meeting of GFIF aimed at providing an opportunity to researchers, scholars and practitioners for sharing knowledge regarding the dynamics of Islamic finance. The meeting also focused on contemporary developments in the field of Islamic finance and their impact on economic landscape of the world in the coming decades.

Mr. Akhlaq Ahmed Tarar, Federal Secretary, Ministry of Science and Technology, Government of Pakistan, inaugurated the event on March 11, 2013, and noted with pleasure that CIIT had successfully gathered from around the world many distinguished academics, researchers and leaders from the field of Islamic banking and finance. The opening ceremony also included COMSATS Perspective presented by the Executive Director COMSATS, and Lancaster Perspective presented by Dr. David Simm, Director of International Partnerships at the Lancaster University Management School. Dr. Qureshi stated that Islamic Financial instruments provide a practical way of achieving social equity, which is essential for sustainable development.

The seven technical sessions, spread over the first two days of the event, comprised a keynote address each and 30 papers/presentations overall. The following topics were deliberated upon during the event: Islamic finance and socio-economic development; Performance of Islamic financial institutions; Islamic finance and the new geopolitical realities; Islamic finance and the global financial crisis; Variety of Islamic financial products; Regulations of the Islamic finance sector; Non-banking Islamic financial institutions; Product development and implementation of Islamic financial products; Sukuk: development, issues and challenges; Ensuring Shariah compliance in Islamic financial instruments; Islamic gold account: a golden opportunity; Islamic mutual funds (unit trusts): factors to consider in making an investment; Takaful: innovation and solutions; and the Rise of Islamic wealth management in

Islamic finance industry. The subject-experts and speakers of the event represented various academic and financial institutions from Australia, Italy, KSA, Lebanon, Pakistan, Qatar, UK and USA.

The two sessions of panel discussion on themes: 'Islamic Finance: Realities and Challenges', and 'Islamic Finance Solution for Industrial and Economic Development', further consolidated the deliberations of the event.

The meeting of GFIF also passed a resolution that declared Islamic finance education pivotal for the stability and growth of Islamic finance industry, and called for the Governments of OIC countries to set up funds for curriculum and infrastructure development for Islamic finance education at under-graduate and graduate levels.

THE CCRD OF CIIT SIGNS COOPERATION AGREEMENT WITH PIK, GERMANY

CIIT has set up its Center for Climate Research and Development (CCRD) in Islamabad. The objective of the Center is to study extreme weather conditions and associated environmental challenges by improving capabilities for scientific research, as well as to carry out studies and develop proposals on the consequences of climate change leading to formulation of adaptation and mitigation strategies. Broadly, CCRD will be working on monitoring of weather data climate change and its variability, impact assessment of climate change, adaptation and mitigation, and trans-disciplinary issues.

The CCRD will comprise multi-disciplinary research groups. It has established partnership with the prestigious Potsdam Institute for Climate Impact Research (PIK) of Germany through a five-year cooperation agreement signed on 5th April 2013, at CIIT, Islamabad. The agreement will promote research activities between the two institutions, facilitate exchange of scientists, and support the progress of the Center. The agreement creates provision for exchange of students, doctoral candidates or postdoctoral assistants, holding of jointly organized symposia, conferences and meetings on research issues and setting up of joint research projects at the continental and global levels.

CIIT HOLDS 51ST CONVOCATION IN ISLAMABAD

CIIT held its 51st Convocation on 9th of April 2013, during which the Caretaker Minister for Science and Technology of Pakistan, Dr. Sania Nishtar, awarded degrees to more than 550 successful students. Bachelors of Science degrees were awarded in Bioinformatics, Biosciences, Business Administration, Electrical (Telecommunication and Computer Engineering), Electronics, Mathematics and Architecture from Islamabad Campus. The Ph.D degrees were awarded to five students in Physics, eight in

Mathematics, one in Bio Sciences and two in Management Sciences. Graduate and post-graduate students bagged Campus medals, Institute medals and Chancellor's Gold medals with highest 3.3-3.89 CGPA in their respective disciplines.

The Rector CIIT, Dr. S.M. Junaid Zaidi in his address opined that the acquisition of knowledge and higher education is virtually transforming every aspect of today's world. The I.T institutions, he believed, have been trusted to be the centre stage of academia. Speaking on the occasion, the Executive Director COMSATS, who is also the Chairman Board of Governors CIIT, congratulated the successful students and encouraged them to uphold the finest traditions of academic integrity and devotion to the progress of their country. Appreciating the high quality education and outstanding research at CIIT, Dr. Qureshi also congratulated the Rector CIIT and his administrative and academic teams for elevating their Institute's ranking to a higher position, i.e. among top 10 universities of the country.



Guests of honour of the 51st Convocation of CIIT

2ND PAK-CHINA BUSINESS FORUM OF CIIT FOSTERS INDUSTRY-ACADEMIA LINKAGES

With a view to provide a platform for interaction between Chinese and Pakistani entrepreneurs and businessmen and form a link between industry and academia, COMSATS Institute of Information Technology (CIIT) in collaboration with the Pakistan Academy of Sciences and the Higher Education Commission of Pakistan, organized the 2nd Pak-China Business Forum (PCBF), from March 23-26, 2013. Companies, businesses and universities set up over 120 stalls at the Forum to display/demonstrate their technologies, products and research findings, with over 30 stalls belonging to companies from China. The holding of PCBF in Pakistan offers a unique opportunity for business-to-business match-making, attracting Foreign Direct Investment (FDI) from China; university-industry



A few participants of 2nd Pak-China Business Forum of CIIT

collaboration; technology transfer and promotion of entrepreneurship amongst Pakistani talent. Prominent business houses, scholars/experts from different walks of life and general public participated in this Forum. Local sponsors of the event included Rawalpindi Chambers of Commerce and Industry; Pakistan Software Export Board; Trade Development Authority of Pakistan; the Board of Investment; and Islamabad Chamber of Commerce and Industry.

The main features of the event included an exhibition of products, processes and technological ideas developed at COMSATS' Institute and other participating organizations; display of products by local and Chinese businesses; seminars, workshops and road shows, panel discussion sessions and side meetings with the Chambers of Commerce & Industry and related government entities. The proceedings of the Forum pertained to the following themes: Renewable energy technologies; New energy technologies; Information & Communication Technologies (ICT); Water conservation, purification & sanitation; General; and Biomedical materials.

CIIT SIGNS AN MOU WITH CNR-ITALY

With a view to promoting scientific and teaching cooperation, the Institute of Atmospheric Sciences and Climate (ISAC) of the Italian National Research Center (CNR), Italy, and CIIT, Abbottabad, have signed a Memorandum of Understanding for teaching and scientific exchange. The Director, CIIT Abbottabad, Professor Dr. Khan Gul Jadoon and the Director of ISAC-CNR, Italy, Dr. Cristina Sabbioni signed this MoU on 8th of March 2013.

The MoU creates provisions for the two Institutes to cooperate in research and exchange programmes for students, teachers, and researchers, in the framework of the PAPRIKA-Karakoram and *NextData* projects.

CIIT-PAKISTAN HOLDS SEMINAR IN ABBOTTABAD ON ETHICAL FITNESS

CIIT, Abbottabad, held a national seminar/workshop entitled 'Ethical Fitness: A Broader Perspective for Development' from 29th to 30th March 2013, in collaboration with the Higher Education Commission of Pakistan.

The major objective of the event was to create awareness among the audience about the ethical fitness and its impact on contemporary governance paradigms, vis-à-vis development in Pakistan.

The seminar/workshop was attended by 300 participants and seven speakers from various institutions from all over the country. The areas of topics chosen for the event's deliberations were: Programming the Mindset; The Role of Faculty in Character Building; Code of Ethics and Society; and the Ethics of Al-Ghazali: A Composite Ethics in Islam – all closely linked to the cause of Ethical Fitness. It was also felt that these areas were of considerable importance to the sustainable development of the society and findings of the seminar/workshop could be of interest for the higher education and national institutions of Pakistan.

ADMISSION FALL 2013 (For International Students)

Scholarships for COMSATS' Member States

COMSATS Institute of Information Technology (CIIT) is a premier university of the country with wide range of programmes, campuses and faculties of international repute.

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- Electrical Engineering
- Bio Sciences
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- Mathematics
- Meteorology

For information and admission procedure, please visit the website: www.comsats.edu.pk or ww2.ciit-isb.edu.pk/internationalstudents/



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SCIENCE, TECHNOLOGY AND DEVELOPMENT

RESEARCHERS MAKE BRICKS FROM WASTE AND DESERT SAND

Malaysian scientists at the Tenaga National University have produced prototype bricks, using waste from the mining, coal and steel industries (*SciDev.Net*, April 9, 2013). They mixed the materials, including quarry dust and iron oxide, with cement and water. As opposed to the traditional brick manufacturing, these bricks have been formed within moulds without applying pressure, reducing costs and simplifying the brick-making process. The researchers add that using waste materials rather than clay or shale conserves resources and maintains the soil-quality needed for sustainable agriculture development. The new bricks have a variety of promising properties, including resistance to corrosion and compression and can be used as an alternative to conventional bricks. Moreover, these bricks are more durable than traditional bricks in resisting weather-related freezing and thawing.

Elsewhere, Algerian scientists at the University of Kasdi Merbah and the Polytechnic School of Algiers have also developed and produced prototype bricks from concrete made from desert sand, that are strong, and provide good heat and sound insulation. These bricks could be produced cheaply in the southern region of Algeria, where Saharan sand is especially plentiful and available at minimal cost.

DISCOVERY TOWARDS EFFICIENT STORAGE AND REUSE OF RENEWABLE ENERGY

Researchers have developed a ground-breaking way to make new affordable and efficient catalysts for converting electricity into chemical energy, allowing homeowners and energy companies to easily store and reuse solar and wind power. According to a news report of *e! Science News* (March 31, 2013), the newly developed technology provides a relatively cheaper method of storing and reusing electricity produced by wind turbines and solar panels. The only by-product from such a 'green' energy system is water, which can be recycled through the system. To store and provide renewable power to a typical house would require an electrolyzer about the size of a fridge, containing a few litres of water and converting hydrogen to electricity with virtually no emissions. The technology goes beyond conventional thinking about catalysts, which typically are made from rare, expensive and toxic metals in a crystalline structure.

Laboratory tests show that these new catalysts perform as well or better than expensive catalysts now on the market, yet cost 1,000 times less. A commercial product in the current large-scale electrolyzer market is expected to be ready in 2014, while a prototype electrolyzer, using the new catalysts, would be ready by 2015 for testing in a home.

PRECISION AGRICULTURE IMPROVES FARMING EFFICIENCY AND FOOD SECURITY

According to a report of *e! Science News* (April 25, 2013), precision agriculture has an important impact on the serious issue of food security. Spatial variation is at the core of precision agriculture and geostatistics. All aspects of the environment vary from place to place over the Earth. The factors such as soil, landform, drainage and so on, all affect crop growth. Farmers have not been able to measure and map these factors in a quantitative way. Such measurements are now possible with the tools provided by geostatistics. Topological information is then used to predict values at places where there is no information for eventual mapping. Geostatistics can also be used to design sampling of the soil and crops to determine what the soil needs to improve crop growth, in terms of crop nutrients, lime and irrigation, etc. Geostatistical maps can then be used by farmers for decision-making.

Precision agriculture can help reduce the amount of fertilizers and pesticides used by applying inputs only where they are needed and in appropriate quantities. Apart from improving food security and crop quality, precision farming can also have a major effect on reducing adverse effects of agriculture on the environment.

CHINESE ACADEMY OF SCIENCES PLANS RESEARCH CENTRES TO AID DEVELOPING WORLD

The Chinese Academy of Sciences (CAS) is planning a new initiative to extend science cooperation with developing countries, including setting up research centres outside China, as well as new offices of the Academy of Sciences for the Developing Countries (TWAS) within China (*SciDev.Net*, April 18, 2013). Some centres, such as the 'China-Chile Joint Research Center for Astronomy', have been launched. The move follows last year's election of the first Chinese President of TWAS, Bai Chunli, who is also the President of the Chinese Academy of Sciences.

The planned new TWAS centres within China will aim to promote the cooperation and exchange of science, and the training of scientists. CAS is also planning to launch a programme to train hundreds of new Ph.D students, as well as senior scholars from developing countries at the Chinese research institutions. During March 2013, as part of the programme, the Academy called for applications for a new CAS-TWAS President's Fellowship Programme, which will offer 140 scholars a year from developing countries a chance to do Ph.D in China.

The first overseas research centre of CAS is planned to be launched in Kenya and will be jointly established with the Jomo Kenyatta University of Agriculture and Technology.

PROFILE OF HEAD OF COMSATS' S&T CENTRE OF EXCELLENCE

DR. EDUARDO POSADA FLÓREZ, DIRECTOR CIF – COLOMBIA

Dr. Eduardo Posada Flórez, a Colombian Physicist, is the Executive Director of COMSATS' Centre of Excellence in Colombia, the International Centre for Physics (CIF) and the Chairperson of COMSATS' Coordinating Council, comprising the Heads of Centres of Excellence.



Born in Bogotá, Colombia, in 1942, Dr. Posada completed his Bachelors in Physics (1966) from the University of Lausanne (Switzerland) and later, in 1972, received his Ph.D in Physics with honours.

Recognized as one of the fathers of Science, Technology and Innovation Policy in Colombia, Dr. Posada is the co-founder of CIF, where he has promoted several important projects in basic and applied research. Among its achievements to date include the steps taken in the creation of the interactive Museum of Science and Technology (known as Maloka), in Bogota, and the Science and Technology Act (Act 29 of 1990).

Dr. Posada is a Professor Emeritus at the National University of Colombia (1990). At the National University in Bogotá, he has served as the principal investigator of several projects founded by Colciencias (Administrative Department of Science, Technology and Innovation - Colombia), particularly in superconductivity and semiconductor physics. He also promoted several important institutions, like the Research Institute on Corrosion in Bucaramanga, the business incubator - Innovar, and several hi-tec industries. Some of his contributions in physics come from his research work on low temperatures, cryogenics and superconductivity that were undertaken in Colombia and in Europe.

Currently, Dr. Posada is the President of the Colombian Association for the Advancement of Science (ACAC), which is a promoter of the Colombian legislation for science and technology; the scientific fair 'Expociencia'; and the popularization journal 'Innovación y Ciencia'. He is the President of the Board of Directors of Maloka. Other centres for science, research and industry founded/co-founded by Dr. Posada include: Innovate Corporation (Business Incubator); Research Corporation for Corrosion; Liocol Ltd.; Holocol Ltd.; Tec-Laser SA; and Rexco Industries Ltd.

Dr. Posada has also been the Director of the Technical Physics Group (1975-1992) at the Research Laboratory in Coffee Chemistry of the National Federation of Coffee Growers. Besides his current full membership of Colombian Academy of Sciences, Dr. Posada has been the President of the Colombian Society of Physics (1984-1987); President of

the Association for International Physics Center [ACIF] (1982-1987), and President of the Association Interscience (1993-1994).

He has also been an active member of various councils, boards and committees, including:

- International Scientific Council of the International Centre for Theoretical Physics (ICTP) at Trieste (1984-1988);
- Board of the Faculty of Science at the National University of Colombia (1989-1990);
- Committee on Support of Research of the National University of Colombia (1990-1991);
- Board of the National Development and Industrial Quality (1990-1992);
- Board of the Nuclear Affairs Institute (1991-1994);
- Board of the National Bank Foundation (1992-2003);
- Commission on Science, Education and Development (1993-1994);
- Board of Directors of the Corporation Innovation (1994);
- Board of National Basic Science Programme (1992-1994);
- Board of the Research Corporation for Corrosion (1995 - to date).

During the presidential term (1990-1994), the then President Cesar Gaviria made him a member of the Mission of Science, Education and Development, also called Wise Mission in 1993.

Other awards and honours given to Dr. Posada include:

- The National Science Prize 'Alejandro Angel Escobar' (1989);
- Scientific Merit Medal in Gold Category Colombian Science Foundation (2006);
- Researcher Emeritus of the Attorney General's Office (2011);
- Award for Exemplary Colombian (Science) (2013).

As an academican, Dr. Posada has directed more than 30 under-graduate and graduate theses.

Dr. Posada Flórez is married and a loving father of three children.

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COMSATS' BRIEF AND ANNOUNCEMENTS

SELECTED FORTHCOMING SCIENTIFIC EVENTS IN COMSATS' COUNTRIES

22 - 24 June 2013	WCCIT 2013 — World Congress on Computer and Information Technologies, Sousse, Tunisia (www.wccit.net)
13 - 16 August 2013	CASAP 2013 — 4 th Colombian Meeting and International Conference on Air Quality and Public Health, Bogota, Colombia (www.casap2013.com)
30 June - 7 July 2013	PACOM 2013 — 8 th Pan African Congress of Mathematicians, Abuja, Nigeria (www.pacomabuja2013.org)

RETIREMENT OF DR. HASIBULLAH AS ADVISOR COMSATS SECRETARIAT

COMSATS Secretariat bid farewell to one of its most experienced officials, Dr. Hasibullah, in early 2013. Affiliated with COMSATS Secretariat since 2005 as Advisor (International Affairs), Dr. Hasibullah has greatly contributed towards COMSATS' scientific and technological programmes; meetings of its statutory bodies, and a number of assignments relating to publications and information dissemination. One of the most notable contributions of Dr. Hasibullah was his strong support for preparation of COMSATS' Future Strategy Document (2012-2016).



Dr. Hasibullah holds a Ph.D. in Chemistry from Cambridge (U.K) (1970) and M.Sc. Punjab University (1965). He also has a Postdoctoral training in EURATOM, Ispra, Italy (1975-77). Before joining COMSATS, Dr. Hasibullah had been affiliated with Pakistan Atomic Energy Commission (1966-2004), and Punjab University Institute of Chemistry (1965-66).

Dr. Hasibullah has also held diplomatic positions as Counsellor (Technical) at Embassy of Pakistan in Paris, France (1981-1987); and Minister (Technical) Embassy of Pakistan in Vienna, Austria (2001-2004). He has also served as Chairman Group of 77 and China in IAEA, Vienna, Austria (2003-2004).

CALL FOR PAPERS FOR COMSATS' JOURNAL – SCIENCE VISION: VOL. 18

Science Vision is a biannual scientific journal of COMSATS. It primarily aims at highlighting the important scientific and technological developments that have a bearing on socio-economic conditions of the people. It invites research as well as review articles that have general scientific descriptions, with comprehensive elucidation of the impact of S&T discoveries and innovations for creating understanding of the contemporary issues and challenges.

COMSATS invites scholarly contributions for the Volume 18 (January to December 2012) of its journal. Scientists, researchers, policy-makers and young scholars from S&T organizations and R&D institutions are encouraged to contribute articles on any scientific field of interest relevant to the focus of the journal. As per the policy of the journal, contributors are compensated for their time and efforts with a modest amount of honorarium.

For more details, please visit COMSATS' official website: www.comsats.org or the journal's website: www.sciencevision.org.pk. Contributions may be sent to the Chief Editor at: comsats@comsats.org.

A BRIEF ON COMSATS

The Commission on Science and Technology for Sustainable Development in the South (COMSATS) is an inter-governmental organization, with its Secretariat located in Islamabad, Pakistan.

COMSATS, currently, has 21 countries as its members, spread across three continents, i.e. Africa, Asia and Latin America. A network, of 18 International Science and Technology Centres of Excellence, is also affiliated with COMSATS to contribute to scientific development of its Member States. For detailed information, please visit COMSATS' website: www.comsats.org.

COMSATS NETWORK OF INTERNATIONAL S&T CENTRES OF EXCELLENCE

- Bangladesh Council of Scientific and Industrial Research (BCSIR), Bangladesh
- Centro Internacional de Física (CIF), Colombia
- COMSATS Institute of Information Technology (CIIT), Pakistan
- Council for Scientific and Industrial Research (CSIR), Ghana
- Embrapa Agrobiologia, Brazil
- Higher Institute for Applied Sciences and Technology (HIAST), Syria
- Industrial Research and Consultancy Centre (IRCC), Sudan
- International Center for Chemical and Biological Sciences (ICCBS), Pakistan
- International Center for Climate & Environment Sciences (ICCES), China
- International Centre for Environmental and Nuclear Sciences (ICENS), Jamaica
- Iranian Research Organization for Science and Technology (IROST), Iran
- National Mathematical Centre (NMC), Nigeria
- National Research Centre (NRC), Egypt
- Royal Scientific Society (RSS), Jordan
- Tanzania Industrial Research and Development Organization (TIRDO), Tanzania
- TÜBİTAK Marmara Research Center (MAM), Turkey
- The Biosphere Reserve – Beni Biology Station (BBS), Bolivia [Under Review]
- University Cheikh Anta Diop (UCAD), Senegal