



COMSATS Newsletter

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

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Contributions from readers are welcome on any matter relevant to the mission of COMSATS, namely the promotion of South-South cooperation in science and technology for sustainable progress of the developing countries. The responsibility for the accuracy of any information rests with the original source. Views expressed in this publication do not necessarily reflect those of its editors, publisher or COMSATS.



Senior officials of COMSATS Secretariat with the re-appointed Executive Director, Dr. Imtinan Elahi Qureshi

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From the Executive Director's Desk

The development prospects for the South during the current Gregorian year appear to be a mixed bag. It is anticipated that the ongoing worldwide financial and economic crisis would continue to affect the growth of low-income countries, in spite of the marginal rise in their share of global GDP during the last couple of years. The UN report on "World Economic Situation and Prospects 2013" notes, "For many developing countries, the global slowdown will imply a much slower pace of poverty reduction and narrowing of fiscal space for investments in education, health, basic sanitation and other critical areas needed for accelerating the progress to achieve the Millennium Development Goals (MDGs)". This stark outlook may be further aggravated due to uncertainties of global climate change effects. The year 2012 witnessed a record high occurrence of extreme weather events and there is no guarantee that this will not happen again in 2013. The recipes for mitigating climate change effects are, unfortunately, still a matter of heated debates among the delegates of industrialized and developing countries, as seen during the Doha Climate Conference¹. It is feared that the most vulnerable countries in terms of economic or environmental conditions will continue to pay the price for the follies of others.

Desperate conditions lead to greater urgency for collective response and closer cooperation. Thus, there has been a surge in South-South cooperation and coordination at political, economic and scientific levels during the recent years. The bigger scale as well as the expanded scope of the cooperation now encompasses bilateral, trilateral and multilateral fora and areas of common concern in health, education, energy and social inclusion. The more traditional areas, such as technology sharing and scientific collaboration, continue to attract significant attention in view of their ability to provide necessary tools for building modern economies. This collaboration framework would, hopefully, become stronger and more effective in the current and ensuing years.

COMSATS is a potent player in the arena of South-South cooperation. During 2013, two important meetings will be held in Accra, under the aegis of COMSATS and the Ministry of Environment, Science, Technology and Innovations, Republic of Ghana, in association with the Ghana's Council for Scientific and Industrial Research. The first meeting will seek the renewed commitment from high-level officials of COMSATS' twenty-one Member

¹ Martin Khor, 'An analysis of the Doha Climate Conference (COP18)', South Bulletin 71 (28 Feb., 2013)

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NEWS/ACTIVITIES/HIGHLIGHTS FROM COMSATS SECRETARIAT

THE INCUMBENT EXECUTIVE DIRECTOR COMSATS TO RETAIN HIS POSITION FOR A SECOND TENURE

Dr. I. E. Qureshi has been re-appointed as the Executive Director of COMSATS for a second four-year term. Acting on the advice of international stakeholders, the Government of Pakistan decided to offer a second term of office to Dr. Qureshi, which he accepted in order to maintain the momentum of COMSATS' thrust towards greater impact of the organization and continuity of a number of new initiatives launched during his first term, including:

- Holding of Commission meeting at the level of the representatives of Heads of State/Government, inter alia, leading to: renewal of Member States' commitment, pledges for Annual Membership Contributions from a number of Member States; establishment of an Endowment Fund of US \$ 10 million, election of a new Chairperson of COMSATS Commission, necessary;
- Personal visits countries and scientific institutions to induct new Member States and new members of the Network of Centres of Excellence;
- Implementation of COMSATS' five-year strategy approved in 2011;
- Launching of three International Thematic Research Groups and preparations for six more groups;
- Enlargement of the scope of capacity-building activities in collaboration with ISESCO and the Pakistan National Commission for UNESCO;
- Execution of programmes approved by the Coordinating Council with respect to science policy, distinguished professorship and technology parks;
- Thrust on high-quality publications in cooperation with TWAS and other partners, as well as publication of COMSATS' journal 'Science Vision' and COMSATS Newsletter;
- Campaign to improve financial health of the organization through increased grants from the Government of Pakistan, Annual Membership Contributions and the Endowment Fund.

In a letter written on behalf of the current Chairperson, H.E. Dr. Dramani Mahama, the President of the Republic of Ghana, addressed to the Prime Minister of Pakistan, glowing tributes were paid to Dr. Qureshi. H.E. Ms. Sherry Ayittey, the former Minister for Environment, Science and Technology, Republic of Ghana, remarked:

"Dr. Imtihan Qureshi is a very affable man who carries out his duties very conscientiously and efficiently. This is manifested in the impressive work output that is produced by the COMSATS Secretariat and the general support he has received from COMSATS Coordinating Council."

Dr. Qureshi who joined COMSATS as Executive Director in

2008, after having previously served for three years in the Permanent Mission of Pakistan to the United Nations in Geneva, has been engaged in a vigorous campaign of enhancing COMSATS' international role through its core activities of promoting South-South cooperation in Science and Technology in Member Countries. He earned laurels from COMSATS' Coordinating Council, which noted in a consensus resolution as follows:

"The members of the Coordinating Council of the Commission on Science and Technology for Sustainable Development in the South (COMSATS), in their 15th meeting held in Turkey from 24th to 25th May, 2012, are pleased to acknowledge and appreciate the leadership and diligence of the incumbent Executive Director, Dr. Imtihan Elahi Qureshi for significantly strengthening the organization since taking charge in September 2008. His achievements during the first tenure of four years have been outstanding."

Commenting on the notification of Dr. Qureshi's re-appointment issued by the Ministry of Science and Technology, Government of Pakistan, the Chairman of COMSATS International Coordinating Council, Prof. Eduardo Posada observed in an e-mail:

"It is a very positive decision that will guarantee a promising future to our institution"

COMSATS' OFFICIALS MEET THE SECRETARY GENERAL PNCU

On January 23, 2013, the Executive Director COMSATS paid a courtesy call on the new Secretary General of Pakistan National Commission for UNESCO, Mr. Iftikhar Hussain. Accompanied by Mr. Tajammul Hussain, Advisor (Programmes), and Ms. Huma Balouch, Assistant Director (Programmes), at COMSATS Secretariat, the Executive Director met the Secretary General PNCU at the latter's office in Islamabad. Mrs. Sajida Nasreen, Assistant Secretary General, was also present on the occasion.

The main purpose of the meeting was to follow-up on COMSATS' proposal for a Sub-regional project, entitled: COMSATS-UNESCO South-South Regional (Asia-Pacific) Technical Cooperation Programme (Biennium 2012-13).

E.D. COMSATS MEETS THE AMBASSADOR OF SUDAN TO ISLAMABAD

On January 31, 2013, the Executive Director held a meeting with H.E. Mr. Al-Shafie Ahmed Mohamed, Ambassador of Sudan at the Embassy of the Republic of Sudan in Islamabad. Mr. Tajammul Hussain, Advisor (Programmes) COMSATS, also attended the meeting. Dr. Qureshi briefed



COMSATS' officials imparting training on Tele-Health

the Ambassador about his visit to Sudan, from 20th to 22nd November 2013, where he participated in the 6th Islamic Conference of Ministers of Higher Education and Scientific Research; held meetings with senior officials of Sudanese Ministry of Science and Communication, and Ministry of Industry; and visited the Industrial Research and Consultancy Centre (IRCC) in Khartoum, which is COMSATS' Centre of Excellence in Sudan.

The Ambassador showed keen interest in securing scholarship opportunities for Sudanese students to study in Pakistan. He noted that over 500 Sudanese students are presently studying at various institutions in Pakistan. The Ambassador was informed about the standing offer of scholarships to study at various campuses of COMSATS Institute of Information Technology (CIIT) and that the applications of interested Sudanese students have been forwarded to CIIT for processing.

COMSATS SECRETARIAT HOLDS TRAINING ON TELEHEALTH

A four-day training workshop on Tele-health was organized by COMSATS Secretariat, from 22 to 25 January 2013, in Islamabad. COMSATS' Telehealth team, comprising its

Principal Medical Officer, Dr. Azeema Fareed, and Sr. Assistant Director (Systems), Mr. Nisar Ahmad, imparted the training. The training specifically aimed at training staff of two telehealth initiatives in the country, one being the Telehealth Centre in Zhob having the patronage of Human Development Foundation (HDF), and two, the Gokina Telehealth Centre, recently set up by COMSATS Internet Services (CIS).

The participants were given hands-on training and explained basic telehealth techniques and operational procedures for carrying out tele-consultations. A special session on tele-dermatology was held that covered image acquisition, common terminology and biopsy sampling of dermatology related patients.

COMSATS PARTICIPATES IN A WORKSHOP ON NATIONAL QUALITY POLICY OF PAKISTAN

COMSATS participated in the Consultative Workshop on National Quality Policy (NQP) held on February 26, 2013, in Islamabad, Pakistan. The workshop was organized by the Ministry of Science and Technology (MoST), Government of Pakistan, under the European Union funded Trade Related Technical Assistance (TRTA II) programme, which is being implemented by UNIDO in association with ITC and WIPO. Mr. Farhan Ansari, Assistant Director (Programmes), COMSATS Secretariat, represented COMSATS at the workshop and took active part in discussions to highlight issues and challenges facing the National Quality Infrastructure in Pakistan, and to propose a rational way forward with an aim to formulate National Quality Policy of Pakistan.

The participants of the workshop called for stronger leadership and commitment at NQI institutions, effective exploitation of natural resources available in the country, and enhancement of exports through value-added services. The establishment of endowment funds, enhanced linkages between public-private sectors, strong political will and effective implementation of the policies, and increased commercialization activities were identified as ways to ensure financial sustainability in this sector.

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States to sponsor the bilateral and multilateral joint scientific ventures within the group. The primary focus of this meeting would be to enhance the level of funding for COMSATS' initiatives as well as to consider the ways and means to increase R&D expenditure as a whole, which is currently less than 1% of GDP in most countries. One of the ways of convincing money managers in Member States to do so is to highlight the advantages that their R&D Centres get through cooperation with other members of COMSATS' Network of international S&T Centres of Excellence. The second meeting, on 2-3 May 2013,

will provide such an opportunity, when the Heads of eighteen Centres of Excellence meet in COMSATS' forum of Coordinating Council. The honourable President of Ghana, as a highly respected scholarly leader of a progressive African country, and elected Chairperson of COMSATS, is expected to give his blessings to the participants of the two meetings in their endeavours for achieving the long cherished goal of rapid development through unity and cooperation.

COMSATS Secretariat is looking forward to active participation from all Member Countries in both meetings.

BIOGRAPHIES OF EMINENT SCIENTISTS: ABDUS SALAM

Miriam Lewis*

Abdus Salam was born in Jhang, a small town in what is now Pakistan, in 1926. His father was an official in the Department of Education in a poor farming district. His family has a long tradition of piety and learning.

When he cycled home from Lahore, at the age of 14, after gaining the highest marks ever recorded for the Matriculation Examination at the University of the Punjab, the whole town turned out to welcome him. He won a scholarship to Government College, University of the Punjab, and took his MA in 1946. In the same year he was awarded a scholarship to St. John's College, Cambridge, where he took a BA (honours) with a double First in mathematics and physics in 1949. In 1950 he received the Smith's Prize from Cambridge University for the most outstanding pre-doctoral contribution to physics. He also obtained a PhD in theoretical physics at Cambridge; his thesis, published in 1951, contained fundamental work in quantum electrodynamics which had already gained him an international reputation.



Salam returned to Pakistan in 1951 to teach mathematics at Government College, Lahore, and in 1952 became head of the Mathematics Department of the Punjab University. He had come back with the intention of founding a school of research, but it soon became clear that this was impossible. To pursue a career of research in theoretical physics he had no alternative at that time but to leave his own country and work abroad. Many years later he succeeded in finding a way to solve the heartbreaking dilemma faced by many young and gifted theoretical physicists from developing countries. At the ICTP, Trieste, which he created, he instituted the famous "Associateships" which allowed deserving young physicists to spend their vacations there in an invigorating atmosphere, in close touch with their peers in research and with the leaders in their own field, losing their sense of isolation and returning to their own country for nine months of the academic year refreshed and recharged.

In 1954 Salam left his native country for a lectureship at Cambridge, and since then has visited Pakistan as adviser on science policy. His work for Pakistan has, however, been far-reaching and influential. He was a member of the Pakistan Atomic Energy Commission, a member of the Scientific Commission of Pakistan and was Chief Scientific Adviser to the President from 1961 to 1974.

Since 1957 he has been Professor of Theoretical Physics at Imperial College, London, and since 1964 has combined this

position with that of Director of the ICTP, Trieste.

For more than forty years he has been a prolific researcher in theoretical elementary particle physics. He has either pioneered or been associated with all the important developments in this field, maintaining a constant and fertile flow of brilliant ideas. For the past thirty years he has used his academic reputation to add weight to his active and influential participation in international scientific affairs. He has served on a number of United Nations committees concerned with the advancement of science and technology in developing countries.

To accommodate the astonishing volume of activity that he undertakes, Professor Salam cuts out such inessentials as holidays, parties and entertainments. Faced with such an example, the staff of the Centre find it very difficult to complain that they are overworked.

He has a way of keeping his administrative staff at the ICTP fully alive to the real aim of the Centre - the fostering through training and research of the advancement of theoretical physics, with special regard to the needs of developing countries. Inspired by their personal regard for him and encouraged by the fact that he works harder than any of them, the staff cheerfully submit to working conditions that would be unthinkable here at the International Atomic Energy Agency (IAEA) in Vienna. The money he received from the Atoms for Peace Medal and Award he spent on setting up a fund for young Pakistani physicists to visit the ICTP. He uses his share of the Nobel Prize entirely for the benefit of physicists from developing countries and does not spend a penny of it on himself or his family.

Abdus Salam is known to be a devout Muslim, whose religion does not occupy a separate compartment of his life; it is inseparable from his work and family life. He once wrote: "The Holy Quran enjoins us to reflect on the verities of Allah's created laws of nature; however, that our generation has been privileged to glimpse a part of His design is a bounty and a grace for which I render thanks with a humble heart."

** The biography was written by Miriam Lewis, now at IAEA, Vienna, who was at one time on the staff of ICTP (International Centre for Theoretical Physics, Trieste).*

This biography was written at the time of the award and later published in the book series Les Prix Nobel/Nobel Lectures.

Abdus Salam died on November 21, 1996.

LIFE OF PROF. ABDUS SALAM: CHRONOLOGY OF EVENTS

1926

Abdus Salam is born on 29 January in the country town of Jhang, British India's Western Punjab (later Pakistan) the eldest of seven brothers and two sisters. His father, a teacher and official in the Department of Education; his mother, a housewife.

1940

At 14, scores the highest marks ever recorded for the Matriculation Examination at the University of the Punjab and wins a scholarship to join the Government College, Lahore.

1943

Publishes his first scientific paper, entitled: "A Problem of Ramanujam" at the age of 17.

1946

Graduates from the Government College obtaining a Master's degree in mathematics. Awarded a scholarship to St. John's College, Cambridge.

1949

Obtains a Bachelor of Arts degree with double first-class honours in mathematics and physics in only two years, instead of the normal three.

1950

Publishes an article in the influential journal "Physical Review" for the first time. Awarded Smith's Prize, St. John's College, Cambridge for the most outstanding pre-doctoral contribution to physics. Completes Ph.D. in theoretical physics.

1951

Invited to spend a year at the Institute for Advanced Study in Princeton, NJ, where Einstein works.

Returns to Pakistan as Professor of Mathematics at the Government College in Lahore.

1952

Receives Ph.D. Becomes head of the Mathematics Department of the University of Punjab.

1954

Returns to Cambridge as a lecturer in mathematics and Fellow of St. John's College. Visits Pakistan occasionally as adviser on science policy to the Government.

1955

Attends and serves as scientific secretary at the first Atoms for Peace Conference convened by the United Nations in Geneva and helps set-up the United Nations Advisory Committee for Science and Technology.

1956

Develops the groundbreaking idea of neutrino parity violation, but postpones publication until next year, losing first claim rights. Joins the Imperial College, London.

1957

Becomes Professor of Applied Mathematics at Imperial College.

1959

At only 33 years of age, becomes the youngest Fellow of the Royal Society of London.

1960

Becomes Professor of Theoretical Physics at Imperial College where, with Paul Matthews, creates the Theoretical Physics Group.

As delegate from Pakistan, proposes the creation of the International Centre for Theoretical Physics to the International Atomic Energy Agency (IAEA).

1961

Becomes Chief Scientific Adviser to the President of Pakistan.

1964

With the help of the IAEA, the Italian Government and the city of Trieste, the International Centre for Theoretical Physics (ICTP) is founded in Trieste, marking the successful end to a non-stop four-year journey characterized by intense planning, discussions and diplomatic negotiations.

As Director, presides over the Centre's inaugural workshop, the International Seminar on Plasma Physics, on 5 October.

1968

Presents the theory which shows how the electromagnetic and weak forces may be considered manifestations of a single more fundamental force, the electroweak force.

Organizes a cycle of evening lectures to inaugurate ICTP's new site, with the participation of some of the most outstanding scientists of the time: Bethe, Dirac, Heisenberg, Klein, Lifshitz and Wigner.

1973

With Jogesh Pati, puts forward the idea of quark-lepton unification, which later develops into the widely investigated branch known as Grand Unified Theory (GUT).

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ARTICLE: COUNTING ON WOMEN IN DEVELOPMENT

Shirley Malcom*

Gender analysis must become integral to development policy. But the first step is to count women in, says UNCSTD gender adviser Shirley Malcom.

Research, policy and development programmes have, for the most part, failed to take women into account. But without separate and gender-specific assessment of these programmes, we will not know what works best — for both women and men.

In the developing world, women's roles are especially important in food security, water management, biodiversity, energy, education and care of the young and old.

There are plenty of examples of where 'counting women in' has led to good policy, programmes and outcomes. We need to build on them by 'mainstreaming' gender into science, technology and innovation (STI) policy — a process that should begin with reliable baseline data.

Challenging Assumptions

Agricultural policies often do not support smallholder subsistence farmers who, in Africa, are mostly women; or they fail to provide them with scientific knowledge to improve the quality and yield of their food crops.

For example, African women farmers are estimated to produce 20 per cent more than men from the same access to land and inputs, with only one per cent of the land and seven per cent of extension services. By how much could global agricultural production increase if women had the same access to support and services as men?

In post-genocide Rwanda, women have made major contributions to the economic recovery of the country by supporting their families and community development. This was a result of changes in policy that allowed land ownership by women, who are now heads of households in the country. It also followed from women seeking knowledge of growing coffee, available from agricultural extension workers.

In Namibia, a palm tree conservation project was failing until the rights of local women to manage the forest were reinstated. Palm trees began to die months after women were asked to cut production of baskets made from palm leaves, used to store and carry milk and water. An investigation eventually revealed that the trees started to die

when their care was transferred from the women, but once they regained this responsibility the plantation revived.

Examples abound in research too. The symptoms of heart disease and action of aspirin were assumed to be the same for men and women, until research done on both groups showed this was not the case. Experience has taught us it is a mistake to make assumptions about sex or gender.

Embedding Gender Analysis

These examples of positive change are a good start, but they are not enough. Unless this practice of gender analysis becomes an integral part of policy and decision making, long-term, sustainable development will not be realised.

Too often, good policy depends on the work of individuals committed to gender equality, but changes in leadership or priorities can derail good intentions.

We need a systemic approach — if a requirement is in place that includes a process for pre-decision assessment and post-decision monitoring of proposals, for research or development projects, the information needed for advocacy and action will be in place.

Baseline data, once available, can be used to help establish a case for gender-sensitive policymaking as well as to document its value.

Some may argue that this kind of data collection, analysis and application would be too costly. But we need to compare this with the cost of programmes that do not work, people who are not served and development that is not realised.

And while establishing an assessment system that can be used to support gender mainstreaming may add costs, maintaining it should not.

Surveying the Situation

Recent initiatives by the UN Conference on Trade and Development (UNCSTD) to document the importance of applying a 'gender lens' to STI policymaking in development are important first steps.

One such step is a current UNCSTD survey of member country policies, which will help to determine if the infrastructure for gender analysis even exists. This involves a review of a country's data systems — sources and locations, for example, and access to computers — to determine what types of gender data are being collected. And if they are being collected, can they be disaggregated by sex and other characteristics?

International Women's Day
8th March 2013

"No nation can rise to the height of glory unless your women are side by side with you" — Muhammad Ali Jinnah

In the long run, we will need a process to determine what is being counted in member countries, what these data can tell us, and how this information affects the choices we make in science, technology and innovation.

But this is only the first step. At the end of the day, leadership will be needed to act on the results of the survey — to invest in gender-sensitive policies and programmes, to understand

and value women's roles in development and to exercise the political will to translate data into deeds.

Mainstreaming gender in STI will lead us to ask different questions and ask questions differently; to formulate more effective policies and programmes, and to seek solutions in development that are sensitive and responsive to the roles that women and men play in the lives of their communities and the future of their countries.

* **About the Author:** Shirley Malcom (smalcom@aaas.org) is Head of the Directorate for Education and Human Resources Programmes at the American Association for the Advancement of Science (AAAS). She is also Co-Chair of the Gender Advisory Board at UNCSTD and the Gender InSITE campaign.



AAAS Photo

Courtesy: *ScienceDev.Net* (13 August 2012)

contd. from page 5 ... 'Life of Abdus Salam'

1974

Again with Pati, publishes his most cited paper, which puts forward the evocative notion of lepton as the fourth "colour" quantum number. The same year, writes with John Strathdee his famous paper on the formalism of superspace in supersymmetric quantum field theories. Pakistani Parliament declares Ahmadis non-Muslims. As a member of the Ahmadiyya Community, resigns from his position as Chief Scientific Adviser to the President, grows a beard in protest, and adopts the name Muhammad "to prove himself a Muslim".

1979

Shares the Nobel Prize for Physics with Steven Weinberg and Sheldon Glashow, Harvard University (USA), "for their contribution to the theory of the unified weak and electromagnetic interaction between elementary particles, including, inter alia, the prediction of the weak neutral current".

1980-1981

Is conferred numerous honours and awards for his scientific work as well as receives recognition for his contribution to the progress of peace and international scientific co-operation.

1983

Creates, and serves as first president of the Third World Academy of Sciences (TWAS) in Trieste, with the purpose to recognize, support and promote excellence in scientific research and encourage the pursuit of the same in developing countries.

1984

Publishes the first edition of his collected essays "Ideals and Realities". It will be translated into ten different languages.

1988

Establishes the Third World Network of Scientific Organizations (TWNISO) in Trieste, in order to improve the status of science and technology in the South.

Conceives the setting-up of an International Centre for Science and High Technology (ICS), with the intention to extend the charter of ICTP from fundamental science to high technology and its industrial applications, for the benefit of developing countries.

1990-1994

Develops a project to set up a network on 20 international centres of excellence in various fields of applied science, technology and environment modelled on ICTP, to be located in the South

1994

Retires as Director and becomes President of ICTP.

1996

Professor Abdus Salam, Director of the International Centre for Theoretical Physics (ICTP), Trieste, from 1964 to 1993, and President, from 1994 to 1996, dies in Oxford on 21 November 1996 after a long illness. He is buried next to his parents in Rabwah, Pakistan.

1997

On the occasion of a memorial meeting in November, ICTP is renamed "the Abdus Salam International Centre for Theoretical Physics".

1998

To honour his services, the Government of Pakistan issues a commemorative stamp carrying his portrait. In an accompanying statement, declares him to be "one of the most outstanding scientists of Pakistan".

Courtesy: 'Abdus Salam - Timeline', © ICTP, <http://salam.ictp.it/salam/timeline>

ACTIVITIES/NEWS OF COMSATS' CENTRES OF EXCELLENCE

AN AGREEMENT SIGNED BETWEEN RSS-JORDAN AND USAID

An agreement was signed between the Royal Scientific Society (RSS) and the USAID's Public Action for Water, Energy & Environment Project (PAP) in Jordan. The agreement was signed on January 2, 2013, in Amman, Jordan, by Dr. Odeh Al-Jayyousi, Vice President for Science and Research of RSS, and Mr. Robert Cardinali, Chief-of-Party PAP. PAP is a national education and communication programme that was introduced to support USAID's technical and policy investments and to support government's specific priorities and initiatives in the Jordanian water and energy sectors.

The agreement entails collaboration between the two organizations to promote the participation of youth and community-based organizations (CBOs) in addressing issues of water conservation and energy efficiency, especially through the application of water-saving devices and energy-saving light-bulbs, in the areas of Ajloun, Mafraq and Ramtha. The project, to be implemented over sixteen months, aims to improve consumer behaviors related to water and energy use in cooperation with CBOs in the targeted areas. The project activities will be implemented in collaboration with the Jordanian Higher Council for Youth, the Ministry of Education, and Directorate of Women's Affairs.

CIIT STRENGTHENS ACADEMIC LINKAGES

H.E Nawaf Khalifa Ibrahim Saraireh, the Ambassador of Hashemite Kingdom of Jordan to Pakistan, accompanied by Prof. Ekhlief Tarawneh, President University of Jordan and Dr. Zaid Eyadat, Dean School of International Studies and Political Science, University of Jordan, visited the Islamabad Campus of COMSATS Institute of Information Technology, on February 19, 2013. The Jordanian delegation visited the engineering labs, nano technology center and the central library at the Islamabad Campus.

Giving a briefing at CIIT, Prof. Tarawneh informed that the University of Jordan offers 30 doctoral programmes, 81 Master's Programmes, 16 programmes leading to specialization in medicine and 130 international programmes at the under-graduate and graduate levels in all fields. He also noted that the University is offering academic programmes in Information Technology. Prof. Tarawneh showed keen interest in developing close relationship between the two institutions in terms of faculty and student exchange, dual degree programmes and joint research projects. He expressed enthusiasm on the participation of CIIT in organizing an international conference to be held during summer this year.

On February 14, 2013, Mr. Zeeshan Riaz, Permanent

Representative of Warwick University in Pakistan, visited CIIT and delivered a talk on the post-graduate training, research programmes and scholarship opportunities at Warwick University. While giving a brief introduction on the University, Mr. Riaz informed that the University is ranked 5th in the UK and 50th in the world. He also provided guidelines on the entry requirements at the University.

On January 3, 2013, Prof. Dr. Muhammad Iqbal Choudhary, Director International Center for Chemical and Biological Sciences (ICCBS), based in Karachi, Pakistan, visited the Chemistry Department of CIIT Abbottabad. In order to discuss and explore means for collaboration in academics, and R&D between the two institutions, Dr. Choudhary held a meeting with Dr. Khan Gul Jadoon, Director CIIT Abbottabad, Prof. Dr. Rehana Rashid, Chairperson Chemistry Department and other senior faculty members of the Abbottabad Campus. During the meeting Prof. Dr. Fatima Bhash, an eminent researcher of ICCBS, accompanied Dr. Choudhary. During the visit, Dr. Choudhary also delivered a lecture titled "Drug Discovery and Development - Success Stories".



Delegation of Jordan with officials of CIIT at Islamabad campus

A three-member delegation of CIIT visited two universities of Malaysia, the University of Malaya (UM) and the University of Technology, Petronas (UTP), from 12-18 January, 2013. The delegation comprised Dr. Shahid A. Khan, Incharge Islamabad Campus and Dr. Sajjad Mohsin, Dean Faculty of Information Science and Technology, CIIT, Islamabad. The visit helped in strengthening CIIT's collaboration with the two Malaysian universities.

CIIT HOLDS SEMINARS ON EDUCATION

The newly established Centre for Policy Studies (CPS) at CIIT, Islamabad, held a one-day seminar on "The Role of Academia in Socio-economic Development," on February 23, 2013.



R/V TÜBİTAK MARMARA Research Vessel

Eminent speakers of the seminar included the Dean and Director IBA, Karachi; Vice Chancellor LUMS, Lahore; Dean NUST Business School, Islamabad; Representative of Centre for Policy Studies; Founder and President Heartfile; Former Director General IFPRI; Member Board of Governors SDPI, as well as some Faculty Members of CIIT.

All the speakers were of the opinion that it was essential to forge a strong industry-academia linkage for socio-economic development. The speakers dilated on the fact that besides providing education, the role of academia should be to invest in human capital and new ideas by developing co-operation with public and private sectors. It was agreed that through capacity building and sound research, the gap between theorists and practitioners can be bridged by the government acting as an intermediary.

With an aim to generate an enlightened discourse identifying and highlighting factors with a direct impact on education system, a Seminar on the theme "Education, Politics & Power" was organized by the Department of Humanities at the CIIT's Islamabad Campus, on February 7, 2013.

TÜBİTAK MAM TO LAUNCH ITS RESEARCH VESSEL

A 'Center of Excellence for Marine Research' is being established at TÜBİTAK Marmara Research Center in compliance with International Maritime Organisation (IMO) and EU Environmental/Water Directives. The aim is to share information with other national research institutions. The centre will comprise a well-equipped research vessel and a laboratory catering to various marine research activities, including on-site measurement, sampling, analysis and data collection for multi-disciplinary studies.

The centre is expected to help monitor the increasing maritime traffic around Turkey, primarily in the İstanbul and Çanakkale Strait, for identifying pollution risks, taking relevant precautions and maintaining the ecological diversity. Many universities, governmental institutions and

civil organisations can benefit from this opportunity in terms of environment, forestry, urbanisation, agriculture, fishing, tourism, and maritime).

The research vessel, named R/V TÜBİTAK Marmara Research Vessel, will have a Wet Lab; Dry Laboratory; Biology Laboratory; Temperature Controlled Laboratory; and Computer Laboratory each. The vessel will have the capacity to carry 12 crew member and 11 researchers. Apart from the electrical equipment, the vessel will be carrying research equipment including a Unit with a capacity of 3 tons of A-Frame; Multi-Purpose Oceanographic Winches; Depth Sounder Multibeam; Single Beam Depth Gauge; Acoustic Flow Meters; CTD Probe; Multi Water Sampler. It is designed to be 41,2 m long, 9,55 m wide, and 4,50 m high and will be able to acquire a maximum speed of upto 14 knots.

ACTIVITIES AT IRCC-SUDAN

Some recent news/activities related to Industrial Research and Consultancy Centre (IRCC), Sudan, include:

- Constitution of a new Board of Directors of IRCC by the Sudanese Minister of Industry. The Board will be chaired by Prof. Ahmed Eltayb, who is a former State Minister of Higher Education and Scientific Research of Sudan.
- A team of IRCC experts visited Traditional Gold Mining sites in the eastern Sudan.
- The Chemical, Food and Engineering Industry laboratories are being equipped with new and refurbished machinery.
- Signing of an MoU between IRCC and Kinana Sugar Company, Sanad Society and Alidikar Bank for jointly producing Eucalyptus oil.

ANNOUNCEMENT

The African Mathematical Union (AMU), in cooperation with the National Mathematical Centre (NMC), Abuja; Nigerian Mathematical Society (NMS); Mathematical Association of Nigeria (MAN) and the Government of Federal Republic of Nigeria, is pleased to announce the convening of the 8th Pan African Congress of Mathematicians to be held in Abuja, Nigeria, from 30 June to 7 July 2013. The congress will be preceded by a Pan-African Mathematics Olympiad (PAMO) from 23 to 30 June 2013.

The Congress will be based on the Theme: Contemporary Developments in the Mathematical Sciences as Tools for Scientific and Technological Transformation of Africa. It is expected to attract Mathematical scientists from Africa and other parts of the world. Highlights of the events will include a pre-Congress General Assembly, pre-Congress Pan African Mathematical Olympiad (PAMO), book exhibition, social activities, round tables and excursions.

SCIENCE, TECHNOLOGY AND DEVELOPMENT

TRACKABLE DRUG-FILLED NANOPARTICLES FOR TREATING CANCER

A new study published by Swedish scientists in Particle & Particle Systems Characterization and reported in *e!Science News* (28 February 2013) shows how nanoparticles can be used to secure effective delivery of cancer drugs to tumour cells and how the particles can be combined with drugs to make them visible in MR scanners and thus be trackable. These nanoparticles, named 'theranostic nanoparticles', have been developed by combining therapy and diagnostics in one and the same nanomaterial.

The new study has resulted in a method of making such theranostic nanoparticles that spontaneously form themselves out of tailored macromolecules (polymers). By tracking the theranostic nanoparticles through the body, researchers can learn about how the drug is taken up by the tumour and how efficacious the treatment is. The researchers filled the nanoparticles with the chemotherapeutic doxorubicin, which is used to treat cancer of the bladder, lungs, ovaries, and breast. They showed, through experiments on cultivated cells, that the particles while harmless in themselves are effective at killing cancer cells when loaded with the drug.

It is hoped that one day this research will lead to tailored chemotherapy treatments that specifically seek out tumour cells. In that the drug can be delivered more precisely to the tumour; the treatment can be made much more effective with greatly reduced side-effects.

ROBUST MEDICAL TECHNOLOGY FOR POOR COUNTRIES

According to WHO statistics, more than 70 per cent of the more complex medical devices sent to Africa are never used due to a lack of adequate infrastructure or maintenance personnel. In an attempt to address this concern, reports *SciDev.Net* (18 February 2013), the Swiss Federal Institute of Technology in Lausanne (EPFL) is developing a device, in collaboration with Swiss research institutions and companies, having the combination of both X-ray and ultrasound imaging, which is expected to be launched under EPFL's EssentialTech initiative.

The scanner will be designed to work in places with only basic medical infrastructure and carry on running for up to five hours in case of power loss. The X-ray unit will use a digital detector rather than film and chemicals, which are more expensive. It is expected that the scanner could provide 90 per cent of the imaging needs of a typical district hospital, helping to diagnose tuberculosis, fractures and complications related to pneumonia, and to check up on women during pregnancy.

ONLINE GLOBAL RENEWABLE ENERGY ATLAS LAUNCHED

According to a *SciDev.Net* news report (1 February 2013), the open access 'Global Atlas for Solar and Wind' was launched on 13th January 2013, at the annual General Assembly of International Renewable Energy Agency (IRENA), an inter-governmental organization based in Abu Dhabi, United Arab Emirates. The users of this atlas may identify areas of interest for future investment by visualizing data on wind and solar resources, and calculate the amount of power that can be generated from a renewable energy resource and thus assess its economic potential. Aimed at both the public and private sectors, the atlas' end-users are most likely to be policymakers and private companies looking to support or invest in renewable energy.

The information in the atlas comes from data providers from all over the world. Solar maps for Africa, Asia, Europe and Latin America are already available on the site. At present, 39 countries have declared their support for the project of IRENA, including Egypt, Ethiopia, Iraq, Mexico, Nigeria, Peru, Saudi Arabia, the Seychelles, South Africa and the United Arab Emirates. Participating countries can share data, manpower and expertise. The plan is for the atlas project to gradually expand to become a true global online atlas of renewable energy, including hydroelectric power as well as bioenergy and geothermal energy.

RAPID, POINT-OF-CARE TESTS FOR SYPHILIS

Syphilis is on the rise worldwide and there is an urgent need for reliable and rapid screening, particularly for people who live in areas where access to healthcare is limited. As many as 50 million people worldwide are being treated for syphilis and about 12 million new cases are diagnosed every year.

According to a research reported by *e!Science News* (27 February 2013), an international research team led by scientists at the Research Institute of the McGill University Health Centre (RI-MUHC) in Montreal, has demonstrated that rapid and point-of-care tests (POC) for syphilis are as accurate as conventional laboratory tests. The findings call for a major change in approach to syphilis testing and recommend replacing first line laboratory tests with POC tests globally, especially in resource-limited settings.

Currently, syphilis is screened using conventional laboratory-based tests that can take up to three weeks to deliver results. Rapid and POC tests can be performed on a simple finger stick sample, one patient at a time, and the results communicated to the patient within 20 minutes, saving time and helping doctors order confirmatory tests and rapidly flagging patients who need treatment.

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

PROF. ASHRAF H. SHAALAN, PRESIDENT NRC – EGYPT

Prof. Ashraf H. Shaalan is the President of National Research Centre (NRC), a Centre of Excellence of COMSATS in Egypt, which is affiliated with the Egyptian State Ministry of Scientific Research and Technology, since November 2009.

Prof. Shaalan did his MB.B.Ch. (Bachelor of Medicine, Bachelor of Surgery) in 1983 and M.Sc. in Paediatrics in 1987 from the Faculty of Medicine, Ain-Shams University, Egypt. He completed his Ph.D in Childhood Studies from the Institute of Postgraduate Childhood Studies of the same university in 1993. Prof. Shaalan also holds Certification of "Human Participation Protection Education for Research Teams", from the National Institute of Health, USA (2002).



Previously, Prof. Shaalan was the Vice President of the Academy of Scientific Research and Technology from August 2008 to November 2009. From September 2004 to January 2009, he served as the Head of Medical Research Division of NRC. Prof. Shaalan has also taught at the Biological Anthropology Department of NRC for about five years.

As the President of the largest interdisciplinary research institute in the Middle East, Prof. Shaalan has devoted himself to the promotion of interdisciplinary research cooperation among NRC's 110 research departments. Under his leadership, the Centre successfully executed its 9th research programme (2010-2013) and is currently pursuing its 10th programme for the years 2013 to 2016. During this period, the Centre constructed two new research buildings for frontier sciences; redeveloped much of its campus; equipped the various labs with essential and new instruments and equipment; introduced new research strategies towards product development and customer-oriented research projects, and tasked hundreds of juniors and pre-senior personnel on missions abroad.

The research work carried out by Prof. Shaalan mainly concerns Paediatrics and Anthropology. Having a wide experience in science and technology management, Prof. Shaalan played an active role in preparing Egypt's science, technology, and innovation policy; and building partnerships among analogous academia, government and industry.

At international fora, Prof. Shaalan has been a proponent of regional collaboration in science and technology. He has actively contributed as:

- Member of the National Flour Fortification Alliance, selected by the United Nations World Food Programme (2007);
- Co-founder of Middle East and North Africa Nutrition Association – MENANA (2004);
- Elected treasurer for the African Nutrition Leadership

Programme Association Board and the representative of the programme in North Africa (2002);

- Fellow of the First African Nutrition Leadership Programme (2002); and
- Fellow of Salzburg Seminar, Session 398: Achieving Food Security through Community-based Food Systems (2002).

Prof. Shaalan is the founder, co-founder and member of many scientific societies in Egypt and abroad. He also has been member of many scientific committees, including:

- Medical and Nutrition Specialized Council, Academy of Scientific Research and Technology, Egypt (2009);
- Egypt-Italy Science Year Committee (2008);
- The National Nutrition Committee, Academy of Scientific Research and Technology, Egypt (2007);
- Executive Committee of Arab Society for Medical Research (2006);
- The Higher Nutrition Committee, Ministry of Health and Population (The Egyptian Nutrition and Food Strategies: 2005-2015);
- Medical Ethics Committee, National Research Centre, Egypt (2005).

In recognition of his scientific excellence, Prof. Shaalan has won the following national awards:

- Award of Recognition from Giza Medical Syndicate for the distinguished role of the applicant in medical services and for the promotion of the health status in Giza Governorate, Egypt.
- Award of Recognition from the High Institute of Childhood Postgraduate Studies, and the Center of Childhood Studies, Ain-Shams University, Egypt.

As an academic, Prof. Shaalan has published more than 30 articles in local and international scientific journals. The theme of majority of these studies is child growth and development, child nutrition and assessment of nutritional status. Prof. Shaalan is also the Editor of the Medical Journal of NRC and Member of scientific boards of Journal of Egyptian Society of Neuro developmental disorders in Children and the Bulletin of the National Nutrition Institute, Egypt.

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COMSATS' BRIEF AND ANNOUNCEMENTS

SELECTED FORTHCOMING SCIENTIFIC EVENTS IN COMSATS' COUNTRIES

21-25 May 2013	PSSN's 13 th National Scientific Meeting, Cebu City, Philippines (www.pssnonline.org)
03-07 June 2013	CCPOP-GHANA2013 – 2 nd Climate Change and Population Conference on Africa, Accra, Ghana (www.ug.edu.gh/ccpop-ghana2013/)
08-12 July 2013	School and Advanced Workshop on Modern Electronic Structure Computations, Islamabad, Pakistan (www.ciit.edu.pk)

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.

16th COORDINATING COUNCIL MEETING & 2nd CONSULTATIVE COMMITTEE MEETING Accra, Ghana, (1-3 May 2013)

The Commission on Science and Technology for Sustainable Development in the South (COMSATS) is pleased to announce the convening of its 2nd Consultative Committee Meeting and 16th Coordinating Council Meeting in Accra, Ghana, from 1st to 3rd May 2013. The meetings are being hosted by the Ministry of Environment, Science, Technology and Innovations, Government of Ghana, and COMSATS' Centre of Excellence in Ghana, the Council for Scientific and Industrial Research (CSIR). The Consultative Committee in its 2nd meeting would, inter alia, deliberate on strengthening the coordination between Focal Points and Centres of Excellence of COMSATS; and enhancing the role of Focal Points to address the financial issues facing the organization. Concurrently, members of the Coordinating Council will meet, in order to review the present activities of the Network, as well as to decide its future course of action.

On behalf of CSIR, Ghana, and the Commission itself, I take this opportunity to invite all the members of COMSATS' Consultative Committee and Coordinating Council to join us in Accra. We look forward to your active participation and valuable contributions.

Tajammul Hussain

Advisor (Programmes), COMSATS Secretariat
husseint@comsats.net.pk

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 (ICES), 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