

INTERNATIONAL SYMPOSIUM ON PHYSICS

March 26-30, 2007

The International Symposium on Contemporary Physics a 5-day event, organized by the National Centre for Physics was held at the Earth Science Auditorium, QAU campus from March 26 to March 30, 2007. The opening of the Symposium had a feature of its own as no VVIP (according to Pakistan's protocol) was invited to inaugurate. It was a purely science affair and the organizers felt that the presence of leading physicists of the world, including a Nobel Laureate, was enough to give the proceedings a solemn and significant hue it deserved. Another characteristic that made it unique was that no formal invitations were issued for participation. The information was disseminated by displaying posters containing the program at prominent scientific and educational institutions, welcoming all those interested. It was, nonetheless, a well attended session, as the 500-seat auditorium was full to capacity. Later also the talks didn't lack knowledgeable audience.

TV INTERVIEW: In the early hours of March 26, a 'Live' interview was telecast from PTV as a 'curtain raiser'. Prof. Riazuddin and Dr. Fahim Hussain appeared to answer questions pertaining to NCP in particular and science scenario in Pakistan in general.

THE SUPPLEMENT: A four-page newspaper supplement was published in THE NEWS combined (Karachi, Lahore and Islamabad) on the eve of the Symposium (March 26). It contained a Message from [Dr. Ishfaq Ahmad](#), Special Adviser to the Prime Minister of Pakistan, President Academy of Sciences and Chairman, Board of Governors, NCP. Articles from [Prof. Riazuddin](#) on the Genesis of NCP; by [Dr. Nisar Ahmad](#), Associate Director-General on "Research & Other Facilities at NCP"; by [Dr. Arshad Mohammad Khan](#) ED, GCISC on "Climate Change: Study of Impacts and Adaptation Measures in Pakistan"; by [Dr. Hafeez Hoorani](#), Director NCP on "NCP & International Scientific Cooperation"; by [Shahid A. Khan](#), Director CES on "Creation of Capability for Earthquake Forecast in Pakistan"; and a common article "Hitch Your Wagon To The Stars" by [Essen Burney](#) NCP's media consultant.

THE OPENING: Before starting the proceedings with recitation of a select ayah from Holy Qur'an, H.E. Mr. .. Italy's Ambassador to Pakistan – by virtue of his being the citizen of Italy where Abdus Salam International Centre for Theoretical Physics was located and on whose pattern NCP was visualized and established, was requested to grace the dais. He lauded the efforts of NCP for making science popular in developing countries and wished NCP every success in its program. Dr. K. R. Sreenivasan Director, ASICTP and Dr. Fahim Husain of QAU were also asked to preside over the proceedings.

KEY-NOTE ADDRESS: Professor Riazuddin, one of the leading members of the team of physicists, which was instrumental in having the NCP established and its first Director-General, in his brief address welcomed the distinguished guests and highlighted Centre's activities in the past and its future program.

“Never before in Pakistan,” he said in his key-note address, “we have had the occasion to gather such a distinguished faculty on such a broad spectrum of subjects of topical interest.” He thanked the speakers who traveled long distances to share their knowledge with physicists from developing countries. He was particularly indebted to Dr. Prof. K. Von Klitzing not only for his participation in the Symposium, but also for his consent to deliver a talk.

He then briefly explained NCP’s origin that it was “the fulfillment of his (Professor Salam) dream to bring renaissance of science in Islamic countries.” He lauded the uncommon perseverance and unyielding pressure of Pakistani physicists to ensure that the coming generations weren’t deprived of a facility, the “lack of which drove first rate scientists to migrate to foreign lands.”

NCP seeks to accomplish its mission by (i) fostering advanced scientific research, especially in frontier areas of physics and mathematics by establishing core research groups in selected fields with a critical mass of active researchers; (ii) creating an international forum for the exchange of scientific information through our visitors program, comprehensive courses, workshops, conferences and seminars; (iii) establishing linkages for collaboration in research with active international research centres like ICTP, CERN; (iv) providing facilities for conducting research to the visitors and local groups, thereby promoting collaborative research; (v) inducting high quality post doctoral and pre-doctoral fellows; and (vi) creating user oriented national facilities.

“At NCP,” he said, “work is under progress on developing a number of multi-user national facilities to be ready in a couple of years.” They were:

- Establishment of 15 SDH – 2 Pelletron Atomic Accelerator and an associated experimental physics laboratory for research and training in low energy nuclear physics and material science.
- Establishment of an Institute of Vacuum Science and Technology.
- Establishment of a laboratory for the design, synthesis and characterization of materials with nanometer dimensions with the goal of establishing world class research in several areas of nano-sciences and nano-technologies.
- Establishment of an earthquake centre for scientific and technological aspects of earthquake forecasting, particularly physics of earthquakes and prediction methods used.
- Global Change Impact Study Centre (GCISC) has also become a part of NCP. The objectives are to scientifically study through mathematical modeling the current and likely future global trends and analyze and evaluate their impact in the areas such as climate, water, food, agriculture, environment and biodiversity, etc.

As, he said, international scientific collaborations play a major role in the science of a country, NCP has already established international scientific linkages with:

- European Organization for Nuclear Research (CERN), Geneva, Switzerland

- Abdus Salam International Centre for Theoretical Physics, Trieste, Italy.
- Efforts were underway to establish linkage with Advanced Light Source at Lawrence Berkeley National Laboratory, Berkeley, California.

As regards broad categories for future development of NCP, Prof. Riazuddin enumerated the following:

- Human Resource Centres of Excellence in (a) High Energy Physics; (ii) Synchrotron Light Source and Accelerator Physics; (iii) Advanced Scientific Computing.
- Large Scientific Computer facility
- Making a beamline for SESAME (a synchrotron light source developed in Jordan for the use of Middle Eastern countries) for potential users of synchrotron radiation in their research work.
- Light Source for Pakistan – a long term strategic plan.

In the end of his address, Prof. Riazuddin advising the students who were in attendance in large numbers, quoted Professor Abdus Salam, the Nobel Laureate who said, “Just as in the 16th Century A.D. when the European Men discovered new continents and occupied them, the frontiers of science are being conquered one after another. Do you not feel as passionately as I do that our men should also be in the vanguard of making these conquests?” He hoped that “some of you will have the passion to do so.” He added: “In the process you may make a discovery in science which becomes a part of history.” He ended by quoting Professor Salam again: “Scientific knowledge is a shared heritage of all mankind. East and West, South and North have all equally participated in its creation in the past, and, we hope they will in future. This joint endeavor in sciences is one of the unifying forces among the diverse people in this globe.” ([To see full text of Prof. Riazuddin’s key-note address click here](#)).

P.S. He particularly thanked the institutions that cooperated and entered into agreement for future cooperation with NCP in pursuing its agenda. NCP, though hosts and co-hosts a number of such international science gatherings every year to provide an opportunity to physicists from developing countries to rub shoulders with world leaders in physics, the Symposium is its exclusive.

The most illustrious among those who attended, besides Prof. Dr. K. Von Klitzing, the 1985 Nobel Laureate who later delivered a talk on “New Phenomena in Semiconductor Quantum Structures” were: Mr. K. Sreenivasan and Dr. H. Schopper, respectively Director ASICTP, Trieste, Italy and Director of SESAME, Amman, Jordan. Their presence was of great significance as NCP has very close and active working relationship with these two international scientific organizations. They also addressed the Symposium in their fields of expertise later during the course of the Symposium. ([For the speakers and their talk titles click here](#)).

CONCLUDING: The Symposium came to an end in the afternoon of March 30. It concluded with as serene and composed a ceremony as it began. Professor Riazuddin,

who, in his key-note address welcomed the distinguished guests on March 26, concluded the proceedings on March 30 with a note of thanks to the guests and bid them farewell.

He reflectively mentioned about NCP's humble beginning. In January 1999, he said, although the Centre functioned from one room, even then it organized a one-day symposium, which opened a new horizon in physics in Pakistan. NCP's rapidly increasing activities since then, its own charter and buildings with state-of-the art laboratories and a promising future, are the testimony that country badly needed research in fundamental science.

25 leading physicists of the world, including one Nobel Laureate responded to NCP's invitation. They came from India, USA, Europe, Russia, Canada, Germany, Austria, Nepal, and delivered talks on subjects of interest to the scientific community of developing countries, with a particularly emphasis to Pakistan. The lectures delivered were of particular interest to post-doc scholars, students studying for doctorate and Master's degrees in various disciplines of physics. Young scholars, from almost all over Pakistan, attended talks in a large number. They listened attentively, took notes and asked very pertinent questions, manifesting their interest to learn and knowledge of the subjects.

One of the guests, who were invited to speak on behalf of the participants, congratulated NCP for a well-organized Symposium, excellent arrangements, quality lectures, which stimulated the student community to such an extent that repeating similar Symposia in future has become imperative. He paid rich tributes to the leadership of Professor Riazuddin on whose call the "Who-is-Who" in the world of physics responded.

NCP is presently functioning from one portion of a block loaned by Quaid-i-Azam University and would soon be shifting to its own buildings sprawling over 10 acres of land, from where it expects to hold its future conferences and symposia.