



# Scientific Foresight 2008

(A Symposium on Contemporary Science and Technology)

**Date: 20, 21 and 22 December 2008**

**Venue: Sri Krishna Memorial Hall, Patna, India**

Patna (Bihar) is all set to host its Fourth Scientific Foresight '08 at Sri Krishna Memorial Hall from Dec 20 to Dec 22. This three-day event brings scientists, academicians, entrepreneurs, experts and young scholars from India and abroad on a common platform for exchanging ideas on contemporary science, technology and more. Determined to ignite young minds and to promote entrepreneurs, scientific foresight strives to become a collaborative platform for academia, industry and policy makers.

Scientific Foresight is the only event of its kind to bring together more than 200 experts from India and abroad. These experts come from various science/technical disciplines and institutes. More than 4000 students are expected to participate.

Dr. M J Warsi, Professor, Wahington University, St. Luice, USA. Prof. Col. P.S. Bajaj, Ex- Chairman IMT-DOLI and Chairman- Magtech Institute of Management, Dr. V.N. Sharma , Ex- Prof, IIT Kanpur, Prof. Nituj Gupta, Director, ABES Institute of Management and many more will share their vision on the forum.

The three day affair will have 10 seminar sessions and display of industrial products, models and innovative posters. The event will witness paper presentations and panel discussions on subjects that include Biotechnology, Nanotechnology, Nuclear Physics, Alternate Energy Source, Genetics, Polymers, Robotics, Artificial Intelligence, Open Source Computing, Science and Spirituality, Agriculture Technology, VLSI Design amongst other contemporary subjects that may determine our future.

Scientific Foresight is a vow to restore Bihar's rightful place as the center for intellectual discourse. Bihar has been the most revered seat of higher education in the past and has produced great minds like Aryabhata, Rishi Shushrut, and Chanakya, just to name a few. Bihar is known for its ancient knowledge culture as is reflected in Nalanda and Bikramshila Universities.

However what makes this event unique is the participation of a large number of students. The event is a result of the efforts of students from the region encouraged by the professionals from industry connected through various online channels.

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# Scientific Foresight 2008

## Day 1

“Scientific Foresight 2008”, a symposium to nurture and promote scientific knowledge and research among the youth of Bihar, was inaugurated by Hon. Deputy CM of Bihar, Shri Sushil Kumar Modi at S.K.Memorial Hall on 20 December 2008. Shri Modi called for promotion of scientific temperament among the students. He recalled the valuable contribution of great Indian scientists like Prof. J.C.Bose and Aryabhat, and pointed out that there has never been dearth of talent in Bihar. Students of Bihar need to acquaint themselves with IT and communicative skills to bring themselves at par with their counterparts in other states. Shri Modi encouraged the organizers of this symposium and assured his support to their future initiatives under “Scientific Foresight”.

The Keynote Address was delivered by Prof. S.I. Ahasan, Pro V.C., Patna University, in which he talked on the development of “21<sup>st</sup>. Century Biology” with special reference to Genomics. He stressed on the role of Bioinformatics in future studies of Biology. Prof. Shashank Shekhar, the Organising Secretary, in his welcome address spoke on the vision and mission of Scientific Foresight. NRI Shri Ramraj Pandey, who is also the Convener, Scientific Foresight, dwelt on the growth of this scientific initiative in Bihar. He said that this is the third annual initiative with international collaboration and efforts are under way to promote its future growth in order to benefits students of different science streams. Dr. Ashok Ghosh, Dept. of Environment and Water Management, A.N.College, Patna conducted the Inaugural Session. Dr. Nupur Bose delivered the vote of thanks.

Technical Session 1 on Entrepreneurship, Information Mangement and Technology, Process Engineering was chaired by Prof. Col. P.S. Bajaj, Ex-Chairman, IMT, Ghaziabad. He spoke on “Role of Emotional Intelligence towards Organizational Effectiveness and Entrepreneurship”. His talk on Personality Models acquainted the audience with concept of emotional intelligence, and desired attitude towards organizational development. Two special lectures were delivered on “Entrepreneurship” by Manish Prasad, PACE Institute, and on “Bringing out Leadership Qualities through Change” by Aakash, Dir., REBEL Institute, Patna. The paper titled “Unfolding the Science of Software Testing” was presented by Ms. Shobha Rani, where she discussed the need for software testing and the processes involved.

Technical Session 2 on Electronics, Communication, Bioinformatics, Nanotechnology, Hardware, Automotive Technology, was chaired by Prof. Dolly Sinha, Dept. of Physics, M.M.College, Patna. Dr. Anant Krishnan, IIT-Mumbai, talked on “Role of IT in unleashing latent creativity”. He highlighted the human resource crisis where there is either a shortfall of skills required, or the skills present are higher than the market requirements. He suggested how the imbalance may be minimized with inputs from IT. V. Rajan, a student from BIT, Mesra, made an impressive presentation on “Design of Sigma Delta-Automatic Algorithm in VLSI”. Dr. Rakesh Kumar, Dept. of Physics, Patna Women’s College, spoke on “Precursor Method, Magnetic and Optical Behaviour of Nickel and Nickel-Zinc Ferrite Nanoparticles prepared using Citrate”, the findings having prospects of usage in various sectors like Optical Devices and Transformer Cores. The last presentation on “Microbially Fabricated Synthesis of Silver Nanoparticles” by Anuradha Prakash, Resource Person, Dept. of EWM, A.N.College, Patna. Silver Nanoparticles thus prepared from microbes have various uses, particularly in medical field and waste water treatment. This session invited many interactions with the student audience. The concluding speech for today’s sessions was made by Sri Ramraj Pandey, Convener, Scientific Foresight

Technical Sessions on **Career Counseling** and Environmental Sciences will be conducted on 21 December in the same venue from 9 a.m. onwards. The proposed speakers include Dr. Vinay Kanth, Dr. Parminder and Ms. Rabia Kidwai, New Delhi. They are expected to provide a wealth of information on the topic.



# Scientific Foresight 2008

## Day 2

On 21 December 2008, the second day of Scientific Foresight 2008 Symposium, 3 sessions on vistas ranging from Career Counseling, to Environmental and Life Sciences were conducted.

Technical Session 1 was on Career Counseling on Various Industrial Opportunities, being chaired by Mr. Nituj Gupta, was conducted by Dr. Aparijita, Patna Women's College. Prof. Vinay Kanth addressed the students on the innumerable career options available these days. He exhorted the youth to pursue their professions as per their individual aptitude. At the same time, he called for skill upgradation to keep up with the competitiveness of this age of globalization. Mr. Nituj Gupta, Chairman, ABES Institute, Ghaziabad, informed the audience about his organization's activities. He acquainted the students with expectations organizations have from prospective employees. An interesting hour of audience interactions with Prof. Kanth followed. Dr. Parmindra Ranjan, Dept. of Physics, J.P. University, and Visiting Faculty, Bhabha Institute, Mumbai, enlightened the audience on various aspects of intellectual development. Rabia Kidwai, a social scientist, with her energetic approach struck an instant rapport with the youthful audience. Her interactions centered on liberalizing the attitude of the youth of Bihar. Ms. Kidwai gave innovative insights on selection of careers, and she exhorted the youth to follow their fields of interest as their careers for the betterment of their home state. This session saw a lively response from dignitaries, academicians and students.

Technical Session 2 on "Earth and Environmental Sciences, Natural Resource Management" was chaired by noted environmentalist, Prof. R.N. Trivedi. Special Lectures were delivered by Dr. V.N. Sharma, from IIT-Kanpur [State of Environment in India], Dr. Bihari Singh [Working and Design of an Environmentally Safe and Sustainable Toilet]; Dr. Ashok K. Ghosh [Water Issues of Bihar]; and Dr. Nupur Bose [Climate Change and Terrestrial Ecology] from A.N. College, Patna. This was followed by eight presentations by professors and research scholars on topics ranging from various pollutants and contaminants to environmental conservation options.

Technical Session 3 on "Life and Medical Sciences, Biophysics, Biochemistry" saw Dr. Uday Kumar Pathak, Mahavir Cancer Sansthan deliver his impressive Chairman's Speech on Life and Medical Sciences. He traced the origin of life forms and discussed the chances of their survival in the light of indiscriminate anthropogenic interventions in Nature. Health is basic to all existence and development. Therefore, lifestyle changes with respect to Nature's boundaries are to be promoted. He focused on the need for improving the health scenario in Bihar. Dr. N.K. Mishra, Retd. Prof. of Zoology, Patna University, also contributed to the session. Dr Farid Ahmad, Post-doctoral scientist, Dept. of Medicine, University of Munich, Germany presented a paper on "Cancer Stem Cells", wherein he pointed to greater incidence of this disease in developed countries. India reports 2.5 million cases at any given time, 65% of whom die of the disease. His exposition dwelt on characteristics of cancer cells and role of stem cells, so as to term cancer as "a stem cell disorder". Pankaj Kumar from Virginia Tech., USA presented his research paper on "Chaotic Advection in pulsed source-sink symptoms" that has relevance in the emerging field of Biotechnology in terms of computational costs. Abhishek Ranjan, Abhay and Chandan from Dept. of EWM, A.N.College, collectively presented details of their innovative "Gravitational Generator" for sustainable power supply at micro-level. Lecture on "MDR Tuberculosis" was delivered by Ravi Verma. Dr. Shashank Shekhar conducted this session.

On 22 December the morning session on "Higher education in India and abroad" will begin at 9a.m. In the afternoon, His Excellency, the Governor and Chancellor of the Universities of Bihar, Shri R.L.Bhatia will deliver the Valedictory Address and distribute prizes among the student- participants.



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## Day 3

The 3day Symposium “Scientific Foresight 2008” concluded on 22<sup>nd</sup> December 2008 at S.K. Memorial Hall. His Excellency, Hon. Governor and Chancellor of the University of Bihar, Shri R.L.Bhatia delivered the valedictory address in which he defined Scientific Foresight as a social and intellectual movement among the youth of Bihar. He exhorted the organizer to carry this scientific initiative forward so as to benefit the state of Bihar. It was also attended by foreign delegates, Indian Scientists and Research and a large number of students.

This event saw about 30 special lectures on cutting edge requiring from biotechnology to nanotechnology, plunges to genetics, polymers to robotics, artificial intelligence to open source computers, life science to medical sciences, and environment sciences among others about 50 students and research scholars presented their research findings.

Technical session on career counseling and prospects of higher education in India and abroad generated massive student response. All their queries gave answered by panel of experts like Prof Vijay Kanth, Prof. Warsi, Ms. Rabia Kidvai, Mr. Ramraj Pandey and Prof. Shekhar.

Scientific foresight 2008 promises to make this forum more informative, innovative and reaching out to grass roots level in order to out latent potentiality in Bihar’s youth in the days to come.

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