

**EUROPE-INDIA T2B CONFERENCE**  
*Partnership for Technical Education and Business Innovation*  
Paris, May 11<sup>th</sup>, 2007

**SUMMARY OF PLENARY SESSIONS AND WORKSHOPS**

IIT Alumni located in Europe held their second international annual event, EUROPE-INDIA T2B (Technology-to-Business) Conference, in cooperation with École Centrale Paris (ECP) in Paris on May 11<sup>th</sup>, 2007.

The conference consisted of plenary sessions and a series of parallel workshops, W1 to W8, on such major topics as Nuclear Energy, Natural Disasters and Industrial Accidents, Ground Transportation, Fossil and Biofuel Energy, Biotech, Process and Alternate Technology, Advanced Technologies / ICT, Environment and Safety, Aerospace Transportation. Special sessions on Technology Management, on Financing R&D Projects, and a forum for student interaction were also organized.

During the Inauguration and Opening Session, following the welcome speeches by ECP and the IIT EU AA (Mr. Kaushik, Convener), J. Bouchard (CEA, France) gave an overview of their activities in nuclear power generation. S. K. Jain (NPCIL, India) summarized the current status of nuclear power generation in India. Ambassador Mathai (Indian Embassy, Paris) stressed the importance for India of having the youth empowered through international linkages and technology deployment leading to capacity-building -- also, by participation in supply chains that would profit rural India.

**Workshop 1**

Dr. Jain (NPCIL) described the planned rapid growth of nuclear power generation in India. Dr. Raj (IGCAR) described the status of the fast-breeder reactor programme in India. Dr. Loubère (CNRS, Toulouse) talked about FICUS, the French-India Cyber University project. Mr. Roland (AREVA NP, France) talked about the multi-disciplinary staffing aspects for building a robust nuclear power generation programme. Mr. Grenèche (AREVA NC, France) talked about the current issue of France being able to collaborate with India due to requirements of the nuclear non-proliferation treaty. Prof. Banerji (IIT Bombay) talked about seismic engineering requirements.

**Workshop 2**

Mr. Lassagne (ENSAM-Lille) described the structure of research groups working in risk management from an international perspective. Prof. Schlenkhoff (BU Wuppertal) talked about the existing collaboration with IIT Madras related to civil engineering of coastal structures. Prof. Sundar (IIT Madras) described his research in the area of coastal hazards (Tsunami). Mr. Hill (IPPC, UK) talked about safety of oil refineries and other critical facilities. Mr. Bisch (Séchaud, France) summarized advances in earthquake engineering of structures. During the discussion period, Prof. Shastri (Hull, UK) described current views on disasters, man-made and natural, and industrial accidents, operational, accidental, and deliberate.

**Workshop 3**

Dr. Hertwich (DaimlerChrysler, Germany) described the role of electronics in automobiles. Mr. Bilaine (Renault, France) talked about their joint venture in India for producing a low-cost car, including regional cooperation with several IITs. Mr. Minhans (TU Darmstadt, Germany) reported on transport management under disaster conditions. Dr. Rastogi (Becker Technologies, Germany)

gave an introduction to the use of hydrogen as an alternative motor fuel. Dr. Huber (GKSS, Hamburg) talked about research on light-weight structures and their need for graduate students. Dr. Hamburger (FLUIDYN, France) described numerical simulations in road/rail transport. Mr. Goyal (Indian Railways) talked about their design and R&D requirements. Mr. Shanker (IIT Kanpur) described their cooperation with Indian Railways. Mr. Cadet (ALSTOM, France) described their power generation and rail transport capabilities.

#### **Workshop 4**

The following points emerged from the mix of talks by academic and industrial representatives. India needs to generate some 10,000 MW additional electric power every year. Biofuels are to play an increasingly important role as an alternate source of energy. ECP has joint biofuel projects with IITs to convert waste into energy. IFP described biofuel projects of importance for TOTAL and with a potential for collaboration with IITs.

#### **Workshop 5**

Mr. Nath (GL Group, Hamburg) talked about their work in the fields of international certification and standardization. Dr. Pettenkofer (HMI, Berlin) described their work in the area of photovoltaic energy. Mr. Gea (Bio-Modelling Systems, France) presented their work in biotechnology. Mr. Jain (Higher Designs, UK) talked about subsea pipeline technology. Mr. Dongare (NCL, India) summarized various related activities.

#### **Workshop 6**

Ms. Faber (RWTH Aachen, Germany) presented a new engineering PhD programme (AICES). Prof. (Ms.) Becker (INT-CNRS, France) described their collaboration with IISc Bangalore and IIT Gwalior, as well as GET in France and IIMs. Mr. Canda (HCL Technologies, UK-France) talked about their business process outsourcing services. Prof. Barua (IIT Guwahati) presented work on wireless mesh networks for rural areas in the developing world. Dr. Claeys (IMEC, Belgium) described their mission defined as advanced research in microelectronics. Their initiative 'IMEC goes India' includes agreements with IISc Bangalore, IIT Delhi, and IIT Kanpur, as well as with key players of the Indian semiconductor manufacturing industry.

Prof. Soucemarianadin (University Joseph Fourier, Grenoble) described the strong synergy between research and industry in their region with the goal of fostering strategic alliances with India. Dr. Simay (GET, France) talked about the work of this federation of higher education and research institutes in engineering and management in the field of ICT. Collaboration with TCS, IIT Guwahati, and BITS Pilani was mentioned. Dr. Badr (INSA-Lyon) talked about their programmes and agreements being negotiated with IITs, IISc, and other Indian institutions, including an Indo-European Symposium on the Frontier in Sciences and Technologies, June 2008. During the discussion period, Dr. Rolin (INT, France) described their international engineering education programme for students interested in a global career. Dr. Srivastava (IIT Kanpur) described their current research programmes in applied electronics.

#### **Workshop 7**

Dr. Bigot (ENM-Saint-Étienne) presented an overview of important aspects of Europe-India technology transfer. Dr. Droste-Franke (Europäische Akademie, Germany) described the ingredients of sustainable development. Dr. Blattner (FZK/MAP, Germany) talked about their research on explosion risk analysis relevant to hydrogen fuel cell development. Prof. Sundar (IIT Madras) reported on a bottom-up approach, as practiced in the case of protective structures against tsunamis, involving local people and field experiments, as well as collaboration with BU Wuppertal, Germany. Ms. Favre (INSA-Lyon) summarized their interaction with IITs. Mr. Rangdet (Environnement SA, France) gave an overview of measurement technology in the field of air quality.

## **Workshop 8**

Dr. Frank (EADS, France) presented a profile of the company, including the growing cooperation with India, such as with IIT Bombay and IIT Delhi. Mr. Lasalmonie / Mr. Barriere (SNECMA, SAFRAN Group, France) described their heavy involvement in India, including prizes for research excellence, awards for best PhDs and their supervisors to visit France, and a four-month fellowship for postdoctoral work in France. Dr. (Ms.) Tripathi (FLUIDYN, France) presented an overview of their work in numerical simulation with specialization in environmental flows and fluid-structure interaction. Dr. Gicquel / Prof. Candel (ECP, Paris) are involved in combustion research and simulation. Prof. Misra (IIT Bombay) reviewed the aerospace sector in India. The presentations highlighted growing opportunities in this sector for future collaboration with academic, research, and industrial groups in India.

## **Workshop 9**

Prof. Dutta (INSEAD, France) talked about innovation and technology strategy in a global world. Mr. Kurth (Karlsruhe University) described their executive master programs at the Hector School of Engineering and Management. Mr. Hoekstra (The Netherlands) talked about priorities for technology solutions/opportunities in India. Mr. Stich (RWTH Aachen) described their vision to strengthen IIT EU collaboration. Representatives of ENPC, ENS Cachan, ECP, and AREVA in France, as well as of IIT Kanpur and UNESCO contributed further presentations

In a final Consolidation Session, moderators of the workshops gave a brief summary of the presentations and topics of discussion. Ms. Bossmann (DAAD, Bonn) reviewed their scholarship programmes that support Indian graduate engineering students in Germany.

Mr. Tripathi, President, spoke in the name of the IIT EU AA to thank organizers, sponsors, moderators, panelists, members, and the large audience of graduate students and professionals from academia and industry, some 300 participants, for their effort and interest in making this second event of the Association possible. Prof. Biauxser (ECP, Paris) concluded the formal programme of the day.

Further special sessions were followed by a memorable Cultural Programme, managed by Mr. Ahuja, late into the night.