



# Giving back through innovation

George Joseph on the IIT 2013 Global Conference

Nobel Laureate Amartya Sen and former Mexican president Vicente Fox were among the keynote speakers at the Indian Institute of Technology 2013 Global Conference in Houston.

Organized by the Houston-based PanIIT USA, December 5-8, it was attended by over 1,600 people who discussed the theme 'Inspiring Innovation for Tomorrow.'

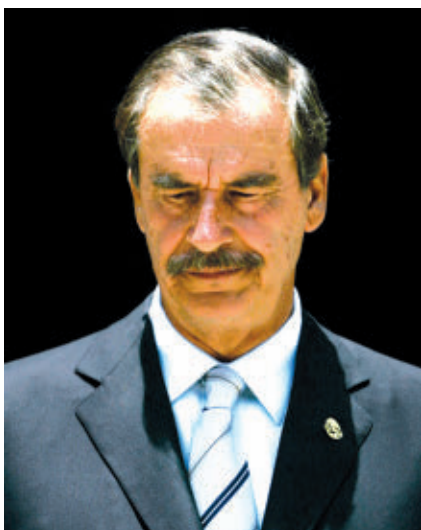
"The conference was about giving back through inspiring innovation for tomorrow. It was not only about promoting the IIT brand, but to encourage and initiate giving back to the alma mater, India and greater humanity through innovation," said Partha Sarathi Chatterjee, marketing and media chair, PanIIT.

The conference chose STEEL threads — Sustainability, Technology, Education, Energy and Life Sciences — as the five key areas for weaving innovative solutions.

Over 22 hours of discussions, programming and events were held, focusing on the STEEL threads and identifying and developing solutions to help make the world a better place



Nobel Laureate Amartya Sen, left, keynotes the event in Houston; it is held every alternate year in a different city. San Jose, Washington DC, Chicago and New York City have hosted it earlier. The next one is scheduled for Toronto.



An archival photograph of former Mexican President Vicente Fox, who was also a keynoter.

Arjun Sen, president, ZenMango and Restaurant Marketing Group in Denver and president, PanIIT USA (2014-2015), said, "I challenged the audience of alums to be proactive, constructive and positive. Some of us donate money but along with donating money, there is more each of us can do."

"Here is the 7-step request I made for each alum to consider: Visit your campus, mentor a student, befriend a faculty, offer an internship to a student, hire a student or write a letter of reference for a student, brag shamelessly about your campus and your actions, finally, anywhere anyone is being negative about your campus or IIT in general, step in/intervene. Negative energy is a killer."

"IITians want to make a difference to the world and desire to give back," Chatterjee added. We know that we are privileged to have that education. IITians do not want to just sit on their laurels, but want to leverage their intellect, fame and prosperity to significantly contribute to the nation and world. They want to address current and future issues, making the world a better place to live. The conference helped them to focus on these."

A competition for business plans was won by Vipin Tyagi, co-founder, VerdeEn Chemicals, who took home the grand prize of \$5,000.

VerdeEn is a recycling solutions company that recovers and manufactures high purity lead alloys and oxides by recycling used lead-acid batteries through clean, innovative and safe processes.

Jyoti Agrawal took second place for \$3,000 for Science Tomorrow, which has been serving customers from government agencies, corporations and small businesses in advanced materials, structural health monitoring, corrosion monitoring, threat detection, product development, and materials characterization.

Asoke and Ruma Deysarkar pledged \$1 million for IIT-KGP to set up a Center for Petroleum Engineering.

One delegate approached IIT-KGP to start a student sponsorship program and will pay for student tuition for one

student (\$90,000 per year) while another said he would start two new Pan IIT chapters in the New York /New Jersey area after being inspired by the conference.

"This year's conference was about that selfless, self-motivated spirit, which drives towards higher goals," Chatterjee said. "Growing up in India, I always valued the IIT brand. To me, it not only signified brilliance but also, the dedication and diligence required to achieve one's goals."

"I want to establish that our success in our professional lives can be attributed to the experiences of those four years — we benefited immensely. Remember, our education and campus existence were subsidized to a large extent by the general public."

"Also, on an individual basis, we were lucky to be blessed with an IIT education, where we learned fast and we applied ourselves... It is time to think about giving back — not necessarily through financial contribution but through ideas, innovation, and organization towards a better future for the greater humanity."

## Highlights

The world is becoming more energy efficient, but growing economies and an increasing world population will increase energy demand, according to David Khemakhem, an energy and technology advisor for Exxon Mobil.

He spoke about how India would require more than twice its current level of energy by 2040 and Asia would likely need to import more than 70 percent of its oil by 2040, up from 45 percent currently.

Compare that to North America, which has benefited from hydrocarbons discovered in unconventional plays, and is expected to meet its own energy demands by 2040.

He also highlighted how energy efficiencies in everything from light bulbs to the electric grid were helping economic growth.

Andrew Gould, chairman, British Gas Group, said that successive supply and demand crises had often been solved, at least partially, through the application of technology.

Gould said that due to the public perception of oil and gas as a dying fossil fuel industry, oilfield technology expertise might shift to the East.

"I know many do not like to hear me saying this. But when we recruit at US and European universities, graduating students think of oil and gas as a fossil fuel industry that is dying. On the other hand, graduates at universities in the Middle East and Asia are enthusiastic about the prospects of working to advance oilfield technology."

Rob Gardner of ExxonMobil provided a long-term view of the world's energy future and said that natural gas would be the fastest energy source in future years.

Rustom K Mody, vice president, technology, Baker Hughes, spoke about high temperature and high pressure conditions faced during down hole drilling operations.

He discussed the need for more automation on the drilling rig floor, fully integrating, the surface operations with the sub surface, with advanced sensors that can virtually measure all drilling and subsurface related parameters.

Kirk A Shireman, deputy director, Lyndon B Johnson Space Center, spoke about resolving problems with water contamination, both organic and in-organic.

A discussion on how Massive Open Online Course was transforming education was led by Anant Agarwal, president, edx; David Leebron, president, Rice University, Houston, among others.

Madhav Chavan, CEO, Pratham, led the discussion on transformative models for large-scale impact in early and K-12 education.

At the session on life sciences, John Mendelsohn, past president, MD Anderson Cancer Center, spoke about the advances to sequence the genome of patients and their cancers. Atul Varadhachary, AlphaDev LLC moderated the session.

Stoehen R Igo, director, Entrepreneurial Institute, Methodist DeBakey Heart and Vascular Center, spoke on non-invasive heart procedures.

Apollo 13<sup>th</sup> program manager Gene Kranz narrated the efforts made to save the lives of the three astronauts during the unsuccessful mission.

Blake Irving, CEO, GoDaddy, highlighted how technology had advanced in recent years.