



December 21, 2005

## President of India Launches Historic Indo-U.S. University Network

### *U.S. Universities See Value in Education, Research Cooperation*

By Doug Ramsey



Indian President APJ Abdul Kalam (left) addresses students and faculty, including UCSD computer scientist Rajesh Gupta (on video monitor at left) in Coimbatore.

The Government of India and universities from the United States and India have inaugurated an ambitious E-learning collaboration to enhance science and engineering education at Indian universities and to boost the supply of world-class engineers available for corporate and academic research in both countries.

The President of India, Dr. APJ Abdul Kalam, participated in the network's launch this month, giving the inaugural lecture via satellite from New Delhi to students at a dozen far-flung Indian college campuses. The interactive seminar – on India's research challenges – came one day after nearly two dozen U.S. universities joined with several Indian institutions in the Indo-U.S. Inter-University Collaborative Network in Higher Education and Research.

"If we start today it takes ten years to train a good quality teacher, but we need to improve Indian education now," said VS Ramamurthy, Secretary of India's Department of Science and Technology, which is co-sponsoring the initiative with the Indian Space Research Organization (ISRO). "We are very happy that leading institutions from the United States see the benefit in this collaboration, because if you bring in a certain uniformity of training across the globe, it helps everyone."

"Many of us in higher education depend critically for research and innovation on bright young minds," said Ramesh Rao, director of the University of California, San Diego (UCSD) division of the California Institute for Telecommunications and Information Technology (Calit2). "It behooves us to reach out proactively and nurture this talent pool."



UCSD Division Director Ramesh Rao (right) and Calit2 special projects manager Jerry Sheehan were part of the Calit2 delegation visiting India in December.

of Mata Amritanandamayi Center's Amrita University, the founding Indian university in the network.

Their lectures will initially be beamed to Amrita's three other campuses (in Amritapuri, Bangalore, and Kochi) and other universities over Edusat, the country's first satellite devoted exclusively to educational programming. Organizers hope the lectures will eventually reach classrooms on 100 campuses across India, but the initial rollout involves 15 universities, including the three Indian Institutes of Technology (in Kanpur, Chennai and Mumbai) and most of the second-tier National Institutes of Technology located in each Indian state.

Many of those universities have been unable to attract or retain world-class faculty, and therefore are limited in their ability to turn out candidates for top jobs in engineering, computer science, biotechnology and other fields.

"One of the biggest drawbacks of information technology [IT] has been that it has taken away some of the best people from the teaching profession in Indian universities," explained Amrita vice chancellor Venkat Rangan, chief

[Print this story](#)
[Email this story](#)

#### Related Links

[Amrita University](#)
[Indo-U.S. July 2005 MoU](#)
[UC Office of the President](#)
[Jacobs School of Engineering](#)
[Calit2](#)
[Global Engineering Education Exchange](#)
[QUALCOMM](#)
[Microsoft](#)
[Cadence Design Systems](#)
[Indian Space Research Organization](#)
[Department of Science and Technology, India](#)

#### Top Stories


[New Director Takes Over at UC San Diego's Center for Networked Systems](#)

[Researchers Quantity More Noise in Gene Expression](#)
[In Social Sciences Supper Club presentations on "The Challenges of Autism,"](#)

[President of India Launches Historic Indo-U.S. University Network](#)
[Cancer Researchers Determine Specific Amount of Vitamin D Needed to Cut Colon Cancer Risk in Half](#)

architect of the Indo-U.S. initiative. "So the thought came to us: how can we use IT in the form of high-speed connectivity, multimedia and interactivity to overcome the drawbacks of IT?"

The original memorandum of understanding was signed last July in Washington, D.C. during Indian Prime Minister Manmohan Singh's state visit to the United States. Initial signatories included the University of California Office of the President, UCSD, UC Berkeley, Calit2 and its sister institute CITRIS, as well as Cornell, Carnegie Mellon, Case Western, and the State University of New York at Buffalo.



Indian and U.S. participants on hand for the launch in New Delhi of the education and research collaboration.

In December, 15 more American universities joined the initiative, including Harvard, Princeton and Yale, most of which were represented at the formal

launch in New Delhi. Other U.S. university partners include Purdue, Georgia Tech, University of Massachusetts-Amherst, University of Washington, University of Texas-Austin, University of Wisconsin-Madison, University of North Dakota, University of Maryland, University of Michigan, University of Illinois at Urbana-Champaign, as well as UCLA and UC Santa Cruz.

Indian and U.S. educators agreed to broaden the scope of cooperation to include research, and they held a roundtable discussion in New Delhi – chaired by Rajagopala Chidambaram, principal scientific advisor to the Government of India – to discuss potential areas of research collaboration. "Today most of the low-hanging fruit in research is gone, and many problems are global problems that require interdisciplinary and international teams," said Amrita's Rangan. "These are global challenges for scientists and engineers from all over the world."

"Since we are a research engineering school, I cannot imagine teaching without research," said Frieder Seible, dean of UCSD's Jacobs School of Engineering. "It's too early to announce specific research projects, but there are certainly areas where it is natural to work with India." Seible cited his own field of structure engineering, including infrastructure sensors and sensor networks to mitigate man-made and natural disasters, as well as the entire IT-driven area.

"There was a strong sentiment that we cannot do teaching without having a concurrent research component, so this was a refinement of the earlier engagement," added UCSD computer science and engineering professor Rajesh Gupta, who will chair one of four standing committees of Indo-U.S. scientists. "We boiled it down to four separate groups, including the one I'm leading on embedded systems, where we identified focus areas, including automotive software, automotive embedded systems and nanotechnology." The other standing committees will explore research collaboration on disaster warning and management technologies, IT services, among other areas.

UC officials, led by Calit2's Rao and UC Director of International Strategy Development Gretchen Kalonji, also held discussions on possible funding of joint research projects by India's Technology Information Forecasting and Assessment Council (TIFAC), whose charter is to promote industry-university collaborative research. "India is a strategic partner for the future of the 10-campus UC system," said Kalonji, who toured all four Amrita campuses in southern India, "and the distance-learning platform is a powerful one." TIFAC may also fund top Indian graduate students on 18-month research fellowships on UC campuses.



The launch of the Indo-U.S. network, in part funded by Microsoft, coincided with a visit by the company's chairman and founder Bill Gates to India, where he announced plans to invest \$1.7 billion over the next three to four years. Microsoft sees improved engineering education as essential to its plan to increase its Indian workforce from 4,000 to 7,000 – including many engineers for its R&D facility in Bangalore.

"Part of India's great success in the IT sector comes from the fantastic investment that the government has made over decades in institutions like the Indian Institutes of Technology," Gates told a meeting of the Confederation of Indian Industry attended by the U.S. university representatives. "India only has six or seven million seats at its universities, and it will need 20 to 25 million, so I think this is a great opportunity to rethink the idea of a university."

"Today the university combines many elements – great lectures, study groups, students in the lab – and the lecture piece should be broken off," explained Gates, who was making his fourth visit to India in the past few years. "The very best lectures from India or the U.S. or Britain will be available in streaming video, so students can consume that [knowledge] wherever they want, and

U.S. universities clearly believe that helping to improve engineering education in India could result in more Indian candidates choosing U.S. campuses to do their Ph.D. "Many of our best students are from India, and we look forward to inviting more students from India to our College of Engineering," said Rosalyn Pertzborn, director of University of Wisconsin-Madison's Office of Space Education.

American educators hope the initiative will also lead to opportunities for American students to study in India. Joseph Mook of the State University of New York at Buffalo is also chairman of the Global Engineering Education Exchange. "As chairman my job is to encourage U.S. students to go abroad," he said. "This is a great cultural opportunity."

they don't have to go do that all together in one place."

"As Bill Gates said, teaching and research may be very different ten years from now," agreed Stella Pang, associate dean of graduate education at the University of Michigan. "It's important to consider that the campus where we educate will not be limited to the physical campus where we are located."

"I feel it is a rediscovery of the past, to some extent," observed Arabinda Mitra, executive director of the Indo-U.S. Science and Technology Forum. "In the 1970s there was a major program called the

Satellite Instruction Television Experiment between NASA and ISRO, which brought distance education to the nooks and corners of this country at a time when the term IT was not yet even coined. I'm glad that almost forty years later, this is being rediscovered."

The launch of the Indo-U.S. network coincided with a visit by Microsoft chairman and founder Bill Gates to India, where he announced plans to invest \$1.7 billion in R&D. As one of the three U.S. companies funding the university initiative, Microsoft sees improved engineering education as essential to its plan to increase its Indian workforce from 4,000 to 7,000 – including many engineers for its R&D facility in Bangalore.

"Part of India's great success in the IT sector comes from the fantastic investment that the government has made over decades in institutions like the Indian Institutes of Technology," Gates told a meeting of the Confederation of Indian Industry attended by the U.S. university representatives. "India only has six or seven million seats at its universities, and it will need 20 to 25 million, so I think this is a great opportunity to rethink the idea of a university."

"Today the university combines many elements – great lectures, study groups, students in the lab – and the lecture piece should be broken off," added Gates, who was making his fourth visit to India in the past few years. "The very best lectures from India or the U.S. or Britain will be available in streaming video, so students can consume that wherever they want and don't have to go do that all together in one place."

"Teaching and research may be very different ten years from now," agreed Stella Pang, associate dean of graduate education at the University of Michigan. "It's important to consider that the campus where we educate will not be limited to the physical campus where we are located."

University officials hope to raise further private funding for the initiative from corporations in the U.S. and India. On May 31, 2006, Calit2 and UCSD's Jacobs School will host a one-day "Indo-U.S. Summit on Education, Science and Technology for Society" in San Diego .

"We expect CEOs from major Indian and American technology companies as well as officials from governmental and non-governmental organizations," said Calit2 division director Ramesh Rao. "Our goal is to explore new avenues for Indo-U.S. collaboration on education and research programs designed to improve science and engineering talent for corporations and universities in both countries."

Media Contact: [Doug Ramsey](#), 858-822-5825 or cell 619-379-2912.

[External Relations Depts.](#) [Campus Directory](#) [Search](#) [Contact Us](#)

E-mail [Janet Howard](#) for any comments regarding this webpage. Updated daily by [University Communications Office](#)  
Copyright ©2001 Regents of the University of California. All rights reserved.

 Official web page of the University of California, San Diego