

Institute Lecture

Paradigm Shift for the R&D Enterprise in India: Innovation Through a Symbiotic Partnership Between Universities and National Laboratories

Prof. Satish V. Kulkarni

Formerly Division Leader, New Technologies Engineering Division, Lawrence Livermore National Laboratory, Livermore, California and Executive Director, Office of Laboratory Programs, University of California Office of the President, Oakland, California



15th Jan 2016, Time: 5.15 PM, Venue: L-12

Abstract

Today, the US national laboratories occupy a unique position in the US R&D enterprise. The traditional path for the flow of knowledge among universities, labs and industry has altered from a linear to a mutually interconnected one. In addition, as corporate R&D has shrunk, many see the national labs as filling that gap. As such these labs are playing a role that often transcends their mission space.

Another unique feature of the Department of Energy national labs is that they are typically operated by university/industry consortia resulting in a symbiotic relationship between them and the universities. This confluence of education, basic sciences and technology development has resulted in a vibrant innovation culture. In this context, it may be worthwhile for India to give a kaleidoscopic turn to its R&D structure to facilitate a much stronger and formal interaction between the universities (incl IITs) and its national laboratories. With a focus on the Lawrence Livermore National Laboratory (LLNL), this talk will also highlight the partnerships and collaborations among the ten campuses of the University of California, LLNL and industry which have revolutionized many S&T areas and spawned billion dollar companies.

About the speaker

Prof. Kulkarni's experience in industry, national laboratory, university and federal government covers a wide range of diverse fields and skills with demonstrated leadership and accomplishments. His various assignments included:

Until recently, Prof. Kulkarni was the Director of Energy Initiatives at Virginia Tech and concurrently, Research Professor of Engineering Science and Mechanics. His role was to integrate university-wide efforts and develop initiatives in the energy domain. He also taught graduate courses entitled "S&T and Policy: Their Interplay" and "Sustainable Innovation." Earlier, he was Associate Vice-President for New Initiatives and Partnerships at Georgetown University. Previously, he was the Counselor for Science, Technology, Environment and Health Affairs at the Embassy of the United States of America in New Delhi, India with the Department of State. He helped facilitate a steady interaction and dialog between US and India in the nuclear energy/science field and was responsible for the climate change portfolio and worked closely with the White House Council on Environmental Quality. He also developed the terms of reference of the Joint Indo-US S&T Endowment Fund for Innovation and Entrepreneurship as part of the Indo-US S&T Agreement that was signed in July 2009 by Secretary of State, Hillary Clinton, and India's Foreign Minister. While at the University of California Office of the President's Office of Laboratory Management as Executive Director, he helped develop, communicate and implement a 'three national laboratories (Lawrence Berkeley, Los Alamos and Lawrence Livermore), ten UC campuses, one corporate strategy'. As Division Leader of the New Technologies Engineering Division in the Engineering Directorate at Lawrence Livermore National Laboratory (LLNL), he transformed the Division from its nuclear testing focus to a multi-program role in homeland security, non - proliferation, energy & environment and biosciences.

Recently, Prof. Kulkarni has presented several invited talks: at Lawrence Livermore Lab on the US-India Civil Nuclear Agreement, at Karlsruhe Institute of Technology in Germany on enhancing industry university partnerships, and at the FICCI Education Summit in New Delhi on a new approach for strengthening India's research enterprise.

Prof. Kulkarni has a BS and MS in Civil Engineering from Calcutta University and IIT Kanpur, respectively and Ph.D. in Engineering Mechanics from Virginia Tech where he was the recipient of the Society of Sigma Xi Research Award for outstanding graduate research. In 2009, he was inducted into the Academy of Engineering Excellence at Virginia Tech for 'meritorious lifetime achievements and contributions to the engineering profession' and appointed member of its College of Engineering Advisory Board. In 2012, he received the Graduate Alumni Achievement Award during the Commencement at Virginia Tech for 'establishing an exemplary record of innovative scientific, educational, and policy leadership in national and international arenas'.

Tea at 5:00 PM

All interested are welcome.

Amalendu Chandra
Dean of Research and Development, IIT Kanpur