




Indian Institute of Technology Jodhpur Office of Industry Immersion Program

The Vanguard Lecture

Speaker	Professor Kota Murali Group Executive Vice President Technology and Innovation The Manipal Group Co-Founder & CEO, Vijna Labs	
Date	9 th October 2017	
Lecture Title	Nanotechnology : Enabling the Future of Electronics and Computing	
Abstract	<p>The revolution in Information, Communication and Electronics technology has been possible due to incredible progress made in scaling of semiconductor devices. With scaling reaching the nanoscale dimensions, quantum effects start to play a dominate role along with associated materials and device scaling challenges. In this talk, we will discuss various quantum effects, materials and device innovations related to charge transport, high-k metal gate technology and novel device architectures for improved performance, power and area scaling. Finally, we will discuss some exciting applications of devices in context of Internet of Things and briefly describe some of our work on energy efficient data center technologies.</p>	
Attendees	<i>I Year EE B.Tech. Students</i> <i>+ II Year EE B.Tech. Students</i> <i>+ III Year EE B.Tech. Students</i> <i>+ M.Tech EE Students</i> <i>+ Ph.D. EE Students</i> <i>+ Any other interested student</i>	
Venue	Room Number: 308, Lecture Hall Building	
Time	4.15 PM	
About Speaker:	<p>Dr. Murali Kota is the Group Executive Vice President for Technology and Innovation, The Manipal Group and the Co-founder and CEO of Vijna Labs, a newly incorporated technology solutions and incubation company of The Manipal Group. Till recently, Murali was a Distinguished Member of Technical Staff for Advanced Technology Development at GlobalFoundries and a Chief Technologist at the IBM India Semiconductor R&D and, also a member of IBM India Systems & Technology leadership team. Between IBM and GlobalFoundries, Murali has led technology innovation in semiconductor nano materials and electronics for 32/22/14nm and emerging 7nm technology nodes. He has also led IBM's initiative on solar-water cooled-HVDC based energy efficient data center technology and IoT projects on Smart Water Networks. He is a recipient of several awards, including the US DoE HPC4Mfg Grant Award, Best of IBM (awarded to 500 out of 400+K employees), two IBM Outstanding Technical Achievement Awards, INSA and NASI Young Scientist Award, INAE Young Engineer Award and MRSI Medal. Murali is also an Adjunct Professor at University of Southern California, Los Angeles and at Indian Institute of Technology, Jodhpur. He has over 75 journal/ conference papers and 30 issued/filed US patents.</p> <p>Murali obtained his Masters and PhD from Massachusetts Institute of Technology. He got his Bachelors from Bangalore University, while also being a KVPY Fellow at the Indian Institute of Science and Jawaharlal Nehru Centre for Advanced Scientific Research. He has worked in various technology areas including Semiconductor Nano Materials and Electronics, Superconducting/Spin and NMR based Quantum Devices and Computing, Energy Efficient Data Center Technologies, IoT for Smart Water Networks and related areas.</p>	