



# Indian Institute of Technology Kanpur

## INSTITUTE LECTURE SERIES

December 18, 2023 (Monday) | 3.00 pm | L-16

**Speaker: Prof. Umesh K. Mishra**

**Dean College of Engineering, UC Santa Barbara**

**Talk Title: UC Santa Barbara: Innovating for Social Impact**

### About the Speaker



Umesh K. Mishra is a Distinguished Professor of the University of California, the Donald W. Whittier Professor of Electrical and Computer Engineering and the Richard A. Auhll Dean of the College of Engineering at UC Santa Barbara. He received his B.Tech from IIT Kanpur, India, his M.S from Lehigh University in Bethlehem, PA., and his Ph.D. in 1984 from Cornell University in Ithaca, NY. He has supervised 76 Ph.D theses to completion with 15 of them being women and 65 of them in the field of Gallium Nitride (GaN) materials and devices. 11 of his students are members of the faculty in prestigious universities, with 5 of them being women. His students have founded/co-founded 10 companies. He co-founded the first start-up in the world to commercialize RF GaN transistors and LEDs in 1996 (Nitres) which was acquired by CREE (now Wolfspeed) in 2000. Umesh co-founded Transphorm in 2007 to commercialize GaN transistors for power conversion where he serves as CTO (NASDAQ:TGAN; Technology Pioneer at the World Economic Forum, 2013).

He has over 1000 papers (>70,000 citations; h-index 130) and over 100 patents. Umesh received the NSF Presidential Young Investigator Award and the ISCS Young Scientist Award for his work on Indium Phosphide (InP) and Gallium Arsenide (GaAs)-based microwave HEMT devices. He received the IEEE Jun-Ichi Nishizawa Medal, the David Sarnoff Award, the ISCS Welker Medal and the ISCS Quantum Device Award for his contributions to the development and commercialization of GaN electronics. GaN is the technology that powers all 5G base stations currently being deployed and is disrupting the power conversion market. He also received the IEEE-MTT Society Distinguished Educator Award in 2016 and the Faculty Research Lecturer recognition, the highest award to a faculty member by the UCSB Academic Senate, in 2018. He is a Fellow of the IEEE, an International Fellow of the Japanese Society of Applied Physics, Fellow of the National Academy of Inventors, a Member of the National Academy of Engineering and a Distinguished Alumnus of IIT Kanpur.

### Abstract of the Talk

This talk will give an overview of the unique College of Engineering renowned for its collaborative culture and its ability to translate science, through innovation to technology in the service of society. It does so because of the hyper-connected faculty and shared facilities and welcoming environment for academics and industry. The College exemplifies the value of teamwork over siloed excellence, and the speaker will share his own journey to illustrate how it has helped him and his students achieve their professional dreams. The talk will inspire creative, passionate and inspired students to choose UC Santa Barbara for their Ph.D. education and as a launchpad for an exceptional professional career.

All are cordially invited to attend

Office of Dean Research & Development