Norfolk State University
College of Science, Engineering, and Technology
Department of Engineering

Invited Talk: Silicon Photonics

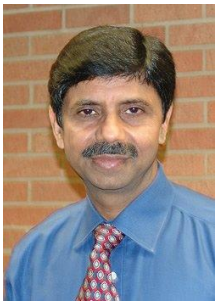
Speaker: Dr. Sacharia Albin

Professor of Engineering, Norfolk State University

Time: 3:00PM – 4:00PM, Mar.8th, 2017

Location: Auditorium, Room 1088, EASC Building

Abstract: The silicon integrated circuits cannot keep up with the demand for high switching speed and data volume due to the explosive growth of wireless communication, computing and internet. Silicon Photonics which is the integration of optical and electronic devices will enable faster data transfer over longer distances. This presentation provides an overview of the science and engineering of Silicon Photonics. Material properties and fabrication technologies of a few critical photonic devices will be discussed. Norfolk State University has established state of the art cleanroom facilities for Silicon Photonics. Avenues of collaboration between UMES and NSU in Silicon Photonics research and education will be highlighted.



Dr. Sacharia Albin is a Professor of Engineering at Norfolk State University. He joined NSU in July 2011 as the Chair of the Engineering Department. He received his BS and MS degrees from the University of Kerala, India, and his Ph.D. from the University of Poona, India. He was a design engineer in microelectronics at Hindustan Aeronautics, India for three years. He was awarded a Post-Doctoral Research Fellowship by the Science and Engineering Research Council at the University of Liverpool, UK. Dr. Albin conducted research on Si and GaAs electronic devices and semiconductor lasers at the research laboratories of GEC and ITT and published numerous articles in this field. Prior to joining NSU, he was a professor and graduate program director of Electrical and Computer Engineering at Old Dominion University. He has advised 14-PhD and 16-MS students. His research has been supported by grants from NSF, DOE, NASA, DoD, VMEC, and private foundations. He received numerous awards: Doctoral Mentor Award 2010; Excellence in Teaching Award 2009; Most Inspiring Faculty Award 2008; Excellence in Research Award 2004; and Certificate of Recognition for Research - NASA, 1994. He is a Senior Member of the IEEE, and a Member of the Electrochemical Society, and SPIE. His current research is in nanomaterials and photonics.