

## SEMINAR ANNOUNCEMENT

DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING  
COLLEGE OF DESIGN AND ENGINEERING  
Website: <https://cde.nus.edu.sg/ece>

**Area: Integrated Circuits & Embedded Systems**

**Host: Associate Professor Jerald Yoo**

**IEEE Solid-State Circuit Society (SSCS) Distinguished Lecture**

<b>TOPIC</b>	:	<b>Introduction to Silicon Photonics Systems and Their Modeling</b>
<b>SPEAKER</b>	:	<b>Professor Kim Jaeha Seoul National University (SNU)</b>
<b>DATE</b>	:	<b>Thursday, 3 November 2022</b>
<b>TIME</b>	:	<b>4:00PM to 5:00PM</b>
<b>VENUE</b>	:	<b>Block E5, Room E5-02-32 NUS College of Design and Engineering, NUS</b>

### ABSTRACT

Silicon photonics systems integrate photonic components such as optical waveguides, couplers, resonator, etc. along with electronic components on the same silicon chip to realize high-bandwidth, high-density, and low-power communication. This talk provides an overview of common photonic devices such as microring modulators, Mach-Zehnder modulators, electro-absorption modulators, etc. and demonstrates how to model various wavelength-division multiplexing (WDM) systems tightly interacting with analog or digital electronic components and simulate them efficiently in SystemVerilog/XMODEL.

### BIOGRAPHY



Jaeha Kim is currently Professor at Seoul National University (SNU), Seoul, Korea and his research interests include low-power mixed-signal circuits and their design methodologies. He founded Scientific Analog, Inc. in 2015, developing EDA tools for analog/mixed-signal modeling and simulation in SystemVerilog. He received B.S. degree in electrical engineering from Seoul National University in 1997, and M.S. and Ph.D. degrees in electrical engineering from Stanford University in 1999 and 2003, respectively. Prior to joining SNU, Prof. Kim was with Stanford University as Acting Assistant Professor, with Rambus, Inc. as Principal Engineer, and with Inter-university Semiconductor Research Center (ISRC) at SNU as Post-doctoral Researcher. Prof. Kim is a recipient of the Takuo Sugano award for outstanding far-east paper at 2005 ISSCC and is cited as Top 100 Technology Leader of Korea in 2020 by the National Academy of Engineering of Korea.

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