SEMINAR ANNOUNCEMENT

DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING
Faculty of Engineering
Website: https://www.eng.nus.edu.sg/ece/

Area: Integrated Circuits & Embedded Systems

Host: Dr. Tao TANG

TOPIC	:	**How To Use PYTHON And SKILL To Optimize The Layout Of The Fundamental Circuit - INVERTER?**
SPEAKER	:	**Mr Han WU** **Graduate Student, ECE Dept, NUS**
DATE	:	**Monday, 22 February 2021**
TIME	:	**10.30AM to 11.00AM**
WEBINAR	:	**Join Zoom Meeting** **https://nus-sg.zoom.us/j/81669825089?pwd=M3lscWh2dUd6ZEF5TjVvajNiUXNYdz09** **Meeting ID: 816 6982 5089** **Password: 012962**

ABSTRACT

Python as a general-purpose programming language has been adopted in the industry and academic for its simplicity in automation. People can use it to batch process large quantity documents or scripts. In the circuit design field, the SKILL is a programming language to build circuits such as schematic and layout. In the integrated circuits, Inverter is the fundamental brick whose rising and falling time balancing is crucial in high-speed circuit design. Graphic User Interface (GUI) based CAD tools can easily optimize the schematic parameter of the INVERTER's PMOS and NMOS transistor sizes. However, the layout cannot be optimized by the GUI based CAD tools, which characterizes the final chip performance. In this seminar, the Python would be introduced to combine with SKILL language which can do the parameter optimization for the layout of INVERTER. Furthermore, this methodology can be extended to other circuit blocks design as well such as NAND, NOR, etc.

BIOGRAPHY

Mr. Han WU received his B.Eng. degree in Electronic Science and Technology, M.E. degree in Microelectronics and Solid-State Electronics from College of Opto-electronic Engineering, Chongqing University, Chongqing, China, in 2013 and 2016. He is a Ph.D. student in the Electrical and Computer Engineering Dept., National University of Singapore since 2017. His research focuses on energy-efficient high-speed links, ultra-low power system-on-chip design, MEMS sensor interface circuit design, etc.