

SEMINAR ANNOUNCEMENT

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

Area: Microwave & Radio Frequency (MWRF)

Host: Dr Zhao Zhenyu

Technical Seminar Jointly Organized by ECE/NUS and IEEE Singapore EMC Chapter

TOPIC	:	Fast, Accurate, and Reliable Electromagnetic Compatibility Design for Integrated Circuits
SPEAKER	:	Dr Ling Zhang ZJU100 Young Professor, Zhejiang University, Hangzhou, China
DATE	:	Monday, 13 July 2026
TIME	:	10:30AM-11:30AM
VENUE	:	E3-06-01

ABSTRACT

The increasing complexity of integrated circuits poses significant challenges to electromagnetic compatibility design in terms of efficiency, measurement accuracy, and reliability. In this talk, we present a set of methodologies addressing these challenges from three perspectives: fast modeling, accurate measurement, and reliable design. Physics-based and data-assisted modeling approaches are developed to accelerate SI/PI design process, reducing the design cycle from days to minutes in representative cases. A broadband multi-port on-wafer calibration method based on a 64-term error model extends the four-port measurement bandwidth from 50 GHz to 110 GHz. In addition, a system-level design approach is introduced to enhance the robustness of integrated circuits against EMI and ESD. These results provide practical insights into the modeling, measurement, and design of high-speed integrated circuits.

BIOGRAPHY

Dr. Ling Zhang received the B.S. degree in electrical engineering from Huazhong University of Science and Technology, Wuhan, China, in 2015, and the M.S. and Ph.D. degrees from Missouri University of Science and Technology, Rolla, MO, USA, in 2017 and 2021, respectively, both in electrical engineering. From Jun. 2021 to Nov. 2023, he was a postdoc research fellow at Zhejiang University, Hangzhou, China. In Dec. 2023, Dr. Zhang officially joined Zhejiang University as a ZJU100 Young Professor and doctoral supervisor. Dr. Zhang has authored and co-authored more than 110 IEEE journal and conference papers. Dr. Zhang was the recipient of the Young Scientist Award in APEMC 2022, the 2024 IEEE EMC Society Herbert K. Mertel Young Professional Award, and the 2025 ACES-China Young Scientist Award.