



学术报告

ACADEMIC LECTURE

题目: Evolving Packaging Technologies for Signal Integrity

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Abstract

The ever growing demands in system performance and cost reduction, have been posing challenges of electrical system designs. Meanwhile, signal integrity margin keeps shrinking as electrical interconnect bandwidth boost. As a result, accurate modeling, appropriate design trade-offs, as well as new packaging technologies are required to achieve future product electrical specifications and maintain system cost-effectiveness.

Dr. Lei Shan at IBM Research will present his experiences in high performance system designs. In addition to the knowledge and skills required for the precision design of high-speed electrical interconnections, the seminar will cover fundamental concepts of signal integrity in digital systems, signal propagation over various packaging structures (TSV/PKG/PCB), hardware characterizations, emerging packaging technologies, and the effects of manufacturing limitations/tolerances.

Presenter

Dr. Lei Shan received his MS degree in Electrical Engineering in 1998 and PhD degree in 2000 from Georgia Institute of Technology. In 2001, he joined IBM T. J. Watson Research Center, as a Research Staff Member, where he works on high speed electronics/optoelectronics sub-system designs and multi-physics modeling and system qualifications. He designed and demonstrated high speed packages for 50Gbps multiplexer and demultiplexer based on IBM SiGe BiCMOS technology in 2001, and thereafter he led the packaging development for 10G Ethernet as well as Terabus optical links on printed circuit board. His recent research interests are in precision designs for signal/power integrity and extending associated electrical limits in high-performance computing systems. Dr. Shan has authored over 40 publications with three Best