

THE LOG PERIODIC

www.scvemc.org Santa Clara Valley Chapter of IEEE Electromagnetic Compatibility Society

IEEE/EMC Society Meeting: Tuesday, February 9, 2010

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Time: Social 5:30 p.m. Presentation 6:30 p.m.

Place: Applied Materials Bowers Cafeteria
3090 Bowers Ave., Santa Clara, CA 95051-0804

Subject: Common Misconceptions about Inductance and Current Return Path

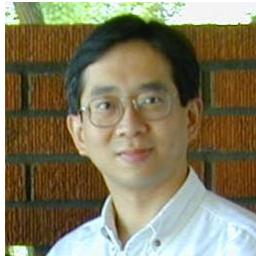
Speaker: Dr. Cheung-Wei Lam, Apple, Inc.

Abstract:

Agenda:

In today's high-speed digital system design, a good understanding of inductance and current return path is important to signal integrity and EMI control. Unfortunately, several key concepts about the two have often been misunderstood or overlooked. This presentation will discuss the key concepts and some common misconceptions about inductance and current return path. Examples will be given at the chip and PCB levels.

Speaker Bio:



Dr. Cheung-Wei Lam is currently the Chief EMC Technologist at Apple, where he has implemented a fully automated and customized EMC layout and schematic checking system. At Apple, he is also engaged in chip, PCB and system level EMC design and research. Prior to joining Apple, he was a Co-Founder and Principal Engineer at Transcendent Design Technology and, earlier, a Principal Engineer in Viewlogic's Advanced Development Group (formerly Quad Design Technology). From 1988 to 1993, he was with the MIT Research Laboratory of Electronics, where his focus was on modeling of high-speed interconnects and superconducting transmission lines. Dr. Lam received the B.S. degree in electronics from the Chinese University of Hong Kong, and the S.M. and PhD degrees in electrical engineering and computer science from MIT. He has authored or presented numerous technical papers and presentations on EMC and signal integrity related subjects in the US, in Europe and in Asia. He was a co-recipient of the best paper award at the 1996 IEEE EMC Symposium. He is a past IEEE EMC Society Distinguished Lecturer and currently serves in the IEEE EMC Society Respected Speakers Bureau. He has also served on the IEEE EMC Society TC-9 Computational Electromagnetics committee, the IEEE EMC Society TC-10 Signal Integrity committee, and the SAE EMC Modeling Task Force committee.

$$\nabla \times \vec{E} = -\frac{\partial \vec{B}}{\partial t}$$

$$\nabla \times \vec{H} = \frac{\partial \vec{D}}{\partial t} + \vec{J}$$

$$\nabla \cdot \vec{D} = \rho$$

$$\nabla \cdot \vec{B} = 0$$

Food & Refreshments:

Light Dinner and beverages will be served for a fee.
Coffee, tea, and snacks are served free of charge.



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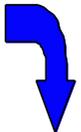
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