The Institute of Electrical and Electronics Engineers(IEEE)
Galveston Bay Section
EMC Chapter Meeting

May 24th (Thursday 11:30am-1pm)
SPEAKER: Dr. Ihsan Erdin

PRESENTATION: Physical Insights and Analytical Methods for Signal Integrity in High-Speed Designs

While the signal integrity challenges due to increasing switching frequencies and sharper edge rates of data are becoming major bottlenecks in high-speed designs, the analysis tools are continuously playing catch-up. Although 3D-EM simulators are available today for analysis of critcical paths and design modules, they are very slow for practical purposes and can blur the designer's insight into the fundamentals of the problems they are trying to solve. This emphasizes the importance of analytical electromagnetic techniques in signal integrity. For serial data links, which can transmit data rates over 56 Gbps, the analysis of interconnect, discontinuities like crossing junctions, slots on reference planes and vias cannot be overstated. Conformal mapping methods combined with microwave analysis techniques will be discussed as a quick and accurate supplementary simulation tool to computationally intensive and opaque numerical methods. Physical insight into the underlying problems will be provided, enabling faster signal integrity analysis of disjoint modules as well as full systems

SPEAKER: Dr. Ihsan Erdin started his electromagnetic engineering career as a Research Fellow at Defense Research and Development Canada in 1995. After receiving his Ph.D. degree from Carleton University, Ottawa, Ontario in electrical engineering, he worked as a design engineer at Nortel in the development of telecommunication circuits from 2000 to 2007. Since 2007, he has been working as a Signal & Power Integrity Subject Matter Expert with the Engineering Design Services of Celestica, Ottawa. He is also an adjunct faculty member of the Electronic Department of Carleton University since 2007. His research interests include signal and power integrity analysis of high speed-high density printed circuits using analytical and computational electromagnetic techniques. Dr. Erdin is a member of the Professional Engineers Ontario and a senior member of IEEE. He serves as a Distinguished Lecturer and Signal and Power Integrity Technical Committee (TC-10) member of the EMC Society.

Boeing Bldg Rm 5C300 – 3700 Bay Area Blvd (just east of UH-Clear Lake)

Free parking in front of Boeing Building as well as in the adjacent parking garage.
Interested non-IEEE engineers, technicians, scientists, IEEE Members are all welcome!

11:30 AM – Lunch (Bring your own)
12:00 - 1PM – Program and Q&A

Boeing Badge or temporary badge is required: US Citizens please RSVP to george.c.may@boeing.com with your name & company/govt org; non-US Citizens can only attend virtually.

For those who will not be able to attend in person, Webex information is available in the announcement email.

Send questions to george.c.may@boeing.com IEEE GBS website: http://ewh.ieee.org/r5/galveston_bay