

THE DEPARTMENT OF ELECTRICAL & COMPUTER ENGINEERING SPEAKER SERIES

PRESENTS

System architecture, practical grounding and signal distribution

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Room W122, Engineering Building 2

LECTURE ABSTRACT

For larger complex electrical systems containment of high frequencies and signal distribution are key to ensure good enough noise integrity. Any high frequency content, particularly switching power electronics easily create cross talk problems on sensors and interfaces. Strictly conservative design rules are typically not practical as there are mechanical and cost constraints. The presentation gives an introduction about general noise coupling principles and conservative design rules. The last part of the presentation will show practical guidelines to control noise integrity while trying to minimize design overhead.

SPEAKER BIOSKETCH

Albert Hoefel works at Schlumberger as Scientific Advisor. He has an EE master's degree from Universitaet Karlsruhe (TH) and a PHD from TH Berlin, Germany. He joined Schlumberger in 1992, where he worked in R&E on Land Seismic Systems, Wireline, Drilling and Measurements and Artificial Lift with 17 granted patent applications. His work involved most aspects of electrical design: High resolution analog acquisition, telemetry, RF, digital design, micro-electronics, power electronics, motor control, signal processing, machine learning, sensor and system design.