

## **Co-Design for SI/PI/EMI: Physics, Methods, and Tools for Design and Discovery**

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The increasing functionality, design density, and processing and data rate, as well as product cost pressures results in increasingly greater challenges in high-speed digital design. There are many signal integrity, power integrity, and EMI challenges that must be overcome to ensure a successful design. However, these problems are not mutually exclusive of each other, and thoughtful co-design can avoid or mitigate potential problems across the design. Implicit in the co-design approach is an underlying knowledge of signal propagation and non-ideal effects and parasitics, and noise and interference physics. In addition to this understanding and its application with good engineering, is a modeling and simulation tool set to aid in the design and discovery process. This seminar will present several EMI/SI/PI co-design concepts through examples and discuss the underlying physics and approaches, as well as tool sets and modeling for design discovery.