

IEEE Southern Alberta / TRILabs



**High-speed System Integrity:  
Understanding system-wide design challenges to meet  
SI, PI and EMI requirements**

**Speaker: Andrew Byers, Ansoft**

**Date: Tues. Nov. 3 Time: 3-4pm**

**Location: TRILabs (7777-10 St. NE, Calgary)**

This talk will focus on the convergence of SI, PI and EMI (or RFI) analysis in modern, high-performance electronics. Increased integration and shrinking form factors are pushing these types of electrical simulations together more than ever, and new methodologies are emerging to help engineers understand how design decisions can impact all of these areas simultaneously. These methodologies are fundamentally rooted in robust electromagnetic analysis, and a new class of tools is enabling this to happen. We will discuss some of the algorithmic breakthroughs that have enabled these system-scale simulations to be feasible. Additionally, the emergence of large compute clusters and multi-core architecture has helped tremendously, and the methods by which simulators are taking advantage of this parallel computing paradigm will be discussed. Real-world design examples will be shown to help illustrate the message of the talk.

**Andrew Byers** received a BS and MS in Electrical Engineering at the University of Colorado in Boulder. He worked for over 4 years at Tektronix helping design high-speed instrumentation using electromagnetic simulation tools. He then spent three years as an application engineer at Ansoft before accepting the NW regional account manager position, which he has held for the past two years.

**Refreshments will be provided.**

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