# Abstracts

## Electromagnetic/Circuit co-optimization of lumped component and physical layout parameters using generalized layout components

*J. Sercu and F. Demuynck. "Electromagnetic/Circuit co-optimization of lumped component and physical layout parameters using generalized layout components." 2002 MTT-S International Microwave Symposium Digest 02.3 (2002 Vol. III [MWSYM]): 2073-2076 vol.3.*

This paper describes the concept of a generalized parametric layout component which enables one to simultaneously optimize the physical layout variations together with lumped passive and active component parameters. This is realized by a seamless integration of a electromagnetic simulator within a circuit simulation and optimization tool. The electromagnetic S-parameter model is generated dynamically for each set of layout component parameters, as selected by the optimizer. An electromagnetic model database keeps track of the generated S-parameter models for later reuse. This concept is illustrated in the design of an RF board low noise amplifier circuit.

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