

Microwave Component Design Using Optimization Techniques

Abstract

Microwave engineers involved in CAD have been using optimization techniques for device, component and circuit modeling for decades. Automatic optimization in modeling, simulation and design is now taken for granted. However the continuous increase in computer capabilities, the development of more efficient techniques of analysis, and the challenge to produce new components with increased performance and reduced cost in a modest amount of time, pose new challenges on the efficient use of optimization techniques.

The purpose of this workshop is to illustrate the effective use of optimization techniques in the design of microwave components with state of the art analysis tools. It blends together methodological aspects of wide applicability, such as the space mapping technique and neural network approaches, design procedures currently applied in research and development centers, and the use of well-known and widely available full-wave tools for design purposes.

The workshop will bring together the foremost practitioners in these fields including microwave component designers, software developers and academic innovators. They will focus on the state of the art and address designers' needs for effective tools for optimal designs, including yield optimization, exploiting accurate physically based device and component models. It will address the challenge of real life optimization, i.e., to produce in a relatively short amount of time and with limited resources a design both competitive and innovative.

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