# Abstracts

## Convergence-optimized, higher order vector finite elements for microwave simulations

*T.V. Yioultsis and T.D. Tsiboukis. "Convergence-optimized, higher order vector finite elements for microwave simulations." 2001 Microwave and Wireless Components Letters 11.10 (Oct. 2001 [MWCL]): 419-421.*

We introduce a general class of higher order parameter-dependent Whitney elements, unlike previous approaches that resulted in specific element definitions. All elements of this kind provide the same solution, but their convergence properties may be significantly different. The most essential fact, though, is the introduction of an optimization procedure, which reveals the existence of an optimal, with respect to convergence, element. The produced second order elements are tested in both two-dimensional (2-D) and three-dimensional (3-D) microwave simulations.

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