# Abstracts

## Finite-Element Analysis of Dielectric Waveguides with Curved Boundaries

The modes of dielectric waveguides with curved boundaries are computed efficiently using a curved-sided (isoparametric) second-order finite element rather than the more usual triangular element. A novel way of placing the virtual boundary is described. Results are obtained for dielectric rod and elliptical waveguides, and compared with earlier results. The method is used to analyze a single-mode fiber-optical coupler.

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