Abstracts

A Coupled-Mode Approach to the Analysis of Fields in Space-Curved and Twisted Waveguides

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A coupled-mode approach for solving Maxwell's equations in terms of unitary and reciprocal unitary vectors is deduced in a twisted space-curved coordinate system. Application of this method to the analysis of fields in a space-curved and twisted single-mode optical fiber and a twisted rectangular microwave waveguide is presented and compared with the results from existing literature.

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