

"A Non-Iterative Formulation for 2D Optical Waveguide Discontinuity Problems Based On Padé Approximants"

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Abstract

In this letter, we propose a simple non-iterative formulation for the analysis of optical waveguide discontinuity problems. The formulation, which is based on rotated branch cut Padé approximation scheme, is both accurate and efficient. It is computationally fast due to its non-iterative nature. The effectiveness of the proposed approach is demonstrated by modeling an optical waveguide air facet. Calculations show good agreement with previously published results.