AN EFFICIENT NUMERICAL ALGORITHM FOR COMPUTING DENSELY DISTRIBUTED POSITIVE INTERIOR TRANSMISSION EIGENVALUES

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摘要

In this work, we propose a robust and efficient eigensolver for computing densely distributed spectrum of the two-dimensional transmission eigenvalue problem (TEP) which is derived from the Maxwell's equation with Tellegen media and the transverse magnetic mode. The discretized governing equations by the standard piecewise linear finite element method result in a large-scale quadratic eigenvalue problem (QEP). Our numerical simulation shows that half of the positive eigenvalues of the QEP are densely distributed in some interval near the origin.

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