Abstracts

Finding waveguide modes via implicit operator projection in the Krylov subspace

This work presents an approach toward solving electromagnetic operator eigenproblems based on implicit operator projection in the Krylov subspace. It is shown that this scheme allows reduction in both memory and computational cost of finding modes in dielectric guides for a proposed iterative solver based on the implicitly restarted Arnoldi method. Still, the generality of the presented method provides the means to use it with a number of algorithms which apply the concept of Krylov subspaces.

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