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Elimination of spurious eigenvalues in the Chebyshev tau spectral method. (English)

Zbl 0717.65063

J. Comput. Phys. 91, No. 1, 228-239 (1990).

The authors present a simple modification of the Chebyshev tau method which avoids spurious eigenvalues, and apply it to finding the eigenvalues of the Orr-Sommerfeld equation.

Reviewer: J.D.P.Donnely

MSC:

- [65L15](#) Numerical solution of eigenvalue problems involving ordinary differential equations
- [65L60](#) Finite element, Rayleigh-Ritz, Galerkin and collocation methods for ordinary differential equations
- [34L15](#) Eigenvalues, estimation of eigenvalues, upper and lower bounds of ordinary differential operators

Cited in **11** Documents

Keywords:

[Chebyshev tau spectral method](#); [eigenvalues](#); [Orr-Sommerfeld equation](#)

Software:

[EISPACK](#)

Full Text: [DOI](#)

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