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Domain decomposition methods for pseudo spectral approximations. I. Second order equations in one dimension. (English) Zbl 0637.65077

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Multidomain pseudo spectral approximations of second order Neumann-Dirichlet boundary value problems in one dimension are considered. The equation is collocated at the Chebyshev nodes inside each in subinterval. Different parching conditions at the interfaces are analyzed. Some numerical experiments are discussed.

Reviewer: [K.Najzar](#)

MSC:

[65L10](#) Numerical solution of boundary value problems involving ordinary differential equations

[65L20](#) Stability and convergence of numerical methods for ordinary differential equations

[34B05](#) Linear boundary value problems for ordinary differential equations

Cited in **1** Review
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Keywords:

domain decomposition methods; collocation method; stability; convergence; Multidomain pseudo spectral approximations

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