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Abstracts of Short Communications and Posters

Section:

9. Ordinary Differential Equations and Dynamical Systems

1991 MS Classification: 34A55

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Inverse spectral problems for ordinary differential equations

Boundary value problems for second-order ordinary differential equations having turning points inside the interval are investigated. We establish properties of the spectra and study inverse problems of recovering the boundary value problem from given spectral characteristics. For these inverse problems uniqueness theorems are proved and algorithms for the solution are provided. Some applications are presented.

Reference: G. Freiling, and V. Yurko, Inverse problems for differential equations with turning points, *Inverse Problems* **13** (1997), 1247-1263.