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Quadratic functionals with a variable singular end point. (English) Zbl 0779.49026
Commentat. Math. Univ. Carol. 33, No. 3, 411-425 (1992).

Summary: We introduce the definition of coupled point with respect to a (scalar) quadratic functional on a noncompact interval. In terms of coupled points we prove necessary and sufficient conditions for the non-negativity of these functionals.

MSC:

- 49K15** Optimality conditions for problems involving ordinary differential equations
- 34C10** Oscillation theory, zeros, disconjugacy and comparison theory for ordinary differential equations
- 34A12** Initial value problems, existence, uniqueness, continuous dependence and continuation of solutions to ordinary differential equations

Cited in **1** Review
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Keywords:

singular quadratic functional; Euler-Lagrange equation; conjugate point; coupled point; necessary and sufficient conditions

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