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Existence of multiple positive solutions for nonlinear m-point boundary value problems. (English) Zbl 1030.34026

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Summary: Here, we afford some sufficient conditions to guarantee the existence of multiple positive solutions to the nonlinear m-point boundary value problem for the one-dimensional p-Laplacian

$$\big(\varphi_p(u')\big)' + a(t)f(t,u) = 0,\ t \in (0,1), \quad u(0) = 0,\ u(1) = \sum_{i=1}^{m-2} a_i u(\xi_i).$$

MSC:

34B18 Positive solutions to nonlinear boundary value problems for ordinary differential equations

34B10 Nonlocal and multipoint boundary value problems for ordinary differential equations

Keywords:

one-dimensional p-Laplacian; existence; multiple positive solutions

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