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Existence of positive solutions for semipositone $(k, n-k)$ conjugate boundary value problems.
(Chinese. English summary) [Zbl 07404423]

Summary: By constructing a special cone and using the fixed point theorem concerning cone compression and expansion in norm type, without making any monotone-type assumption, the existence of positive solution is obtained in the paper for the two-point conjugate boundary value problem of the higher order $(k, n-k)$ differential system, in which nonlinearities are both semipositone and unbounded.

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

Keywords:
semipositone boundary value problems; positive solution; cone; fixed point theorem