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Solutions of superlinear elliptic equations and their Morse indices. (English) Zbl 0801.35026
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Summary: We consider here solutions of semilinear second-order elliptic equations with superlinear nonlinearities. And we present some relationships between their Morse indices and some qualitative properties. In particular, we show that for “subcritical” nonlinearities bounds on solutions are equivalent to bounds on their Morse indices.

MSC:

35J65 Nonlinear boundary value problems for linear elliptic equations
35B45 A priori estimates in context of PDEs

Cited in **7** Reviews
Cited in **86** Documents

Keywords:

Liouville theorem; semilinear second-order elliptic equations; superlinear nonlinearities; Morse indices

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