Infinitely many homoclinic solutions for double phase problem on integers

Robert Steglinski¹

¹Lodz University of Technology

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Abstract

We consider a discrete double phase problem on integers with an unbounded potential and reaction term, which does not satisfy the Ambrosetti–Rabinowitz condition. A new functional setting was provided for this problem. Using the Fountain and Dual Fountain Theorem with Cerami condition, we obtain some existence of infinitely many solutions. Our results extend some recent findings expressed in the literature.

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