

Adv. Oper. Theory 4 (2019), no. 2, 514–528

https://doi.org/10.15352/aot.1807-1400

ISSN: 2538-225X (electronic) https://projecteuclid.org/aot

EXISTENCE OF WEAK SOLUTIONS FOR AN INFINITE SYSTEM OF SECOND ORDER DIFFERENTIAL EQUATIONS

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Communicated by J. D. Rossi

ABSTRACT. In this paper, we investigate the existence of weak solutions for a boundary value problem of an infinite system of second order differential equations. As the main tool, a new Krasnosel'skii type fixed point theorem in Fréchet spaces is established in conjunction with the technique of measures of weak noncompactness.

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Date: Received: Jul. 22, 2018; Accepted: Nov. 13, 2018.

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²⁰¹⁰ Mathematics Subject Classification. Primary 45G15; Secondary 45M99, 46A04.

Key words and phrases. Fréchet space, infinite system of differential equations, measures of weak noncompactness, fixed point.

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