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Equations with discontinuous nonlinear semimonotone operators

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Abstract: The aim of this paper is to present an existence theorem for the operator equation of Hammerstein type $x + KF(x) = 0$ with the discontinuous semimonotone operator F . Then the result is used to prove the existence of solution of the equations of Urysohn type. Some examples in the theory of nonlinear equations in $L_p(\Omega)$ are given for illustration.

Keywords: semimonotone operators, uniformly convex Banach spaces

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