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Solvability of Projected Equations in Banach Spaces

We will discuss the solvability of a class of nonlinear differential equations on Banach spaces that relate to variational inequalities and complementarity problems. Such equations have been recently formulated in *B*-spaces, but their solvability has not yet been discussed. We offer a first insight into the question of existence of solutions for such equations and its implications for the study of applied problems related to such equations. They are a generalization of similar equations in Hilbert spaces, now widely used in applied equilibrium problems in networks, game theoretic and economic problems.