Relaxation of nonlinear impulsive controlled systems on Banach spaces[☆]

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Abstract

Relaxation control for a class of semilinear impulsive controlled systems is investigated. Existence of mild solutions for semilinear impulsive controlled systems is proved. By introducing a regular countably additive measure, we convexify the original control systems and obtain the corresponding relaxed control systems. The existence of optimal relaxed controls and relaxation results is also proved.