



Semilinear Hyperbolic Integrodifferential Equations with Nonlocal Conditions

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Abstract: In this paper, we consider an abstract nonlocal semilinear hyperbolic integrodifferential equation in a Banach space. Using the theory of resolvent operators, we establish the existence and uniqueness of a mild solution under local Lipschitz conditions on the nonlinear maps and an integrability condition on the kernel. The existence of a classical solution of the problem considered is proved under some additional conditions on the nonlinear maps.

Keywords: *hyperbolic problem, integrodifferential equation, nonlocal Cauchy problem, mild and classical solutions.*

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