

Integrodifferential identification problems for thermal materials with memory in non-smooth plane domains

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Abstract. We prove an abstract existence and uniqueness theorem for an inverse problem related to the theory of materials with memory. In the concrete version of the problem the kernels to be identified depend on time and on a space variable. Thanks to suitable generation results, recently proved by the authors, we can solve our concrete problem in the space of bounded and measurable functions on a non-smooth plane domain.

Keywords: parabolic integrodifferential equations, non-smooth domains in \mathbf{R}^2 , inverse problems, materials with memory, analytic semigroup theory, integral operator equations in Banach spaces.

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