

Some inverse problems related to the heat equation with memory in non smooth spatial domains

Fabrizio Colombo

Dipartimento di Matematica

Politecnico di Milano Via Bonardi n. 9

20133, Milano, Italy

e-mail: `fabcol@mate.polimi.it`

Abstract. – We consider the problem of identifying relaxation kernels for integrodifferential equations of parabolic type. Such problems are related to the theory of stratified materials with memory in cylindrical domains in \mathbf{R}^3 and in domains with corners in \mathbf{R}^2 . The relaxation kernels depend on time and one spatial variable. Our fundamental tools are: the theory of analytic semigroups, optimal regularity results and fixed point arguments.

Keywords: integrodifferential system, heat equation with memory, theory of analytic semigroups, optimal regularity results, fixed point arguments, identification problem.

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