

Well-Posedness Analysis on Determination of a Nonlinear Source Term [□]

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Abstract

An inverse parabolic problem of determining a nonlinear source term with form of $f(x; t; u) = a(x; t)g(u)$ is investigated. Sobolev compact embedding theorem and integral estimation skills are applied to prove its existence on Hölder space. And with aids of an integral identity, uniqueness and average stability for the source term's inversion are constructed.

Keywords Inverse problem of nonlinear source term; Hölder space; existence and uniqueness; integral identity; stability

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