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Thanh Trung Nguyen* (nguyent@rowan.edu), Department of Mathematics, Rowan University, 201 Mullica Hill Road, Glassboro, NJ 08028. *An inverse source problem for a time-space fractional partial differential equation of parabolic type.*

An inverse problem of identifying an unknown spatial-dependent source term in a time-space fractional parabolic equation is considered. Under reasonable boundedness assumptions about the source function, a Holder-type stability estimate of optimal order is proved. Mollification and quasi-reversibility regularization methods are applied to solve the inverse problems. Error estimates of the regularized solution are proved for both a priori and a posteriori regularization parameter choice rules. The performance of the proposed regularization methods is illustrated with numerical examples.

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