Global solution and global orbit to reaction-diffusion equation for fractional Dirichlet-to-Neumann operator with subcritical exponent

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Abstract

We consider the reaction-diffusion equation for fractional Dirichlet-to-Neumann operator with subcritical exponent motivated by electrical impedance tomography (EIT) and a need to overcome the Non-locality of a fractional differential equation for modeling anomalous diffusion. We mainly deal with the asymptotic behavior of global solution and the boundedness of global orbit which allows us to show that any global solution is classical solution using Moser iteration technique.

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