

Mohamed Ben Salah

Title:

On some inverse source problems governed by fractional diffusion equations

Abstract:

This talk is concerned with inverse source problems for some fractional diffusion equations. The first inverse problem is governed by a time-fractional diffusion equation. It consists in identifying an unknown source term support from boundary measurements of the potential field. The second one is related to the fractional Laplacian operator. The aim is to reconstruct an unknown source term from internal noisy measured data. The leading term of the mathematical model equation is governed by the fractional spectral Laplacian. The last problem is related to a space-time fractional diffusion equation, that is to identify the spatial component in the source term from partially observed data.