

# Università degli Studi di Trieste

## Dipartimento di Fisica

### Seminario

## **Nicole Cusimano (Alumna)**

Australian Research Council Centre of Excellence for Mathematical and Statistical Frontiers,  
Queensland University of Technology, Brisbane, Queensland, Australia

April 12, 4.00 PM - Lecture room A, F building, Dip. di Fisica – via Valerio 2 – Trieste

## **Fractional diffusion and population of models in cardiac electrophysiology.**



This talk provides an overview of two projects I undertook during my PhD in applied mathematics and the following year as postdoc at the Queensland University of Technology, Brisbane (Australia). The first project deals with differential operators of non-integer order that have been used with success in a variety of practical applications to describe transport processes in media characterised by spatial connectivity properties and high structural heterogeneity altering the classical laws of diffusion. The second one introduces the population of models approach, a method often used to build a set of parameters able to capture and describe the variability observed in experimental data. In both cases, particular reference will be made to mathematical models of cardiac electrophysiology.

Organizzazione a cura di: E. Milotti, E. Vesselli

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**Everyone interested in the topic is welcome to attend**

Informazioni: [seminari@ts.infn.it](mailto:seminari@ts.infn.it)