THE CRM APPLIED MATHEMATICAL PHYSICS (CAMP) SEMINARS

CENTRE DE RECERCA MATEMÀTICA

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Brain activity models

Abstract:

The study of spatio-temporal dynamics of brain activity is crucial for understanding the functional mechanisms of some physiological and behavioral processes. Using functional magnetic resonance imaging (fMRI) it is possible to deduce connectivity patterns and their changes in time, which in turn enables the use of graph theory to approach the spatio-temporal dynamics of this system.

With this model it is possible to use a stochastic approach, applying the Fokker-Planck formalism, to study periodic patterns, wavefront propagation and brain activity synchronization.

We discuss some specific results related to the study of resting brain activity in children and adolescents and their physiologic implications.

Date:	**January 10, 2017**
Place:	**Room C1/028**
Time:	**12:00**