

# THE CRM APPLIED MATHEMATICAL PHYSICS (CAMP) SEMINARS



Pilar Guerrero Contreras

*Department of Mathematics, UCL*

## Towards a model of growth and patterning in the vertebrate neural tube

### Abstract:

In the context of development, it is important to understand the mechanisms that coordinate growth and patterning of tissues. These processes occur as a result of cell adhesion, migration, division, differentiation and death, and involve multiple processes acting at the cellular and molecular level. We are working in modelling the spatial patterning of the neural tube in the vertebrate embryo. In order to describe three-dimensionally packed cells in the vertebrate neural tube tissue both mathematically and physically, we have been developing novel geometrical model using vertex model where we introduce the inter-kinetic movement as a new interpretation of target area and developing new tools for model validation.

**Date:** March 15, 2016

**Place:** Room Pol-2

**Time:** 12:00

