FMSP Lectures

Arnaud Ducrot
(University of Bordeaux)

Asymptotic behaviour of a nonlocal logistic equation

October 30 (Fri) 15:00 ～ 16:15 Room 128

Abstract:

In this talk we consider a nonlocal logistic equation endowed with periodic boundary conditions modelling the motion of cells. This equation takes into account birth and death process using a simple logistic effect while the motion of particles follows a nonlocal Darcy law with a smooth kernel.

We first investigate the well-posedness of the problem before investigating the long time behaviour of the solutions. The lack of asymptotic compactness of the semiflow is overcome by using a Young measure framework. Using a suitable energy functional, we establish the convergence of the solutions with respect to the Young measure topology.