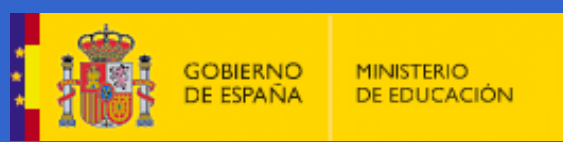




DEPARTAMENTO DE  
MATEMÁTICA APLICADA



# Seminario de Matemática Aplicada

## Nathaël Alibaud

Département de Mathématiques de Besançon, Université  
de Franche-Comté

### “Diffusion as singular Homogenization of generalized Frenkel-Kontorova system of particles”

We study the homogenization of an infinite system of ODEs that generalizes the classical Frenkel-Kontorova system of particles in its fully overdamped version. This work follows the one of Imbert, Forcadel and Monneau (2008) that shows that the homogenized limit solves a first-order Hamilton-Jacobi PDE, after an hyperbolic rescaling. In this talk, we shed light that non-linear diffusive phenomena can be caught by using parabolic rescalings.

Organizado por el Departamento de Matemática Aplicada de la UCM, el Grupo  
MOMAT y el IMI.

Collaborators: Ariela Briani and Regis Monneau.

Fecha: Lunes 29 de junio, a las 12.00 horas  
Seminario Alberto Dou (aula 209)  
Facultad de CC Matemáticas, UCM.