Forefront of PDEs: modelling, analysis & numerics

Preliminary schedule

Monday, Dec 12, 2016

09:00-09:15 *Opening*
09:20-10:00 Bardos: On boundary effect for zero viscosity limit of solutions of Navier-Stokes equations
10:05-10:45 Tadmor: On the two-dimensional pressure-less Euler equations
10:50-11:20 *Coffee break*
11:20-12:00 Yang: Boundary layer for MHD
12:05-12:45 Wang: Boundary layer problem and zero viscosity-diffusion vanishing limit of the incompressible magnetohydrodynamic system with no-slip Dirichlet boundary conditions
12:50-14:30 *Lunch*
14:30-15:10 Schmeiser: Fractional diffusion as macroscopic limit of kinetic models
15:15-15:55 Bao: Multiscale methods and analysis for the Dirac equation in the nonrelativistic limit regime
16:00-16:20 *Coffee break*
16:20-17:00 Golse: Quantization of probability densities: a dynamical approach
17:05-17:45 Souganidis: to be announced

Tuesday, Dec 13, 2016

09:00-09:40 Mielke: Entropy entropy-production estimates for energy-reaction diffusion systems
09:45-10:25 Dolbeault: Nonlinear flows and optimality of entropy - entropy production methods
10:30-10:50 *Coffee break*
10:50-11:30 Carrillo: Nonlinear aggregation-diffusions in the diffusion-dominated and fair-competitions regimes
11:35-12:15 Shahgolian: Regularity of free boundaries for systems
12:20-14:00 *Lunch*
14:00-14:40 Burger: Degenerate PDEs in imaging and nonlinear spectral decomposition
14:45-15:25 Pietra: A plane wave virtual element method for the Helmholtz problem
15:30-15:50 *Coffee break*
15:50-16:30 Di Francesco: Deterministic particle approximations of macroscopic models for vehicular and pedestrian flows
16:35-17:15 Wolfram: On mean-field game models in socio-economic sciences
19:00-21:30 *Conference dinner*

Wednesday, Dec 14, 2016

09:00-09:40 Degond: to be announced
09:45-10:25 Zubelli: Quantifying the survival uncertainty of Wolbachia-infected mosquitoes in a spatial model
10:30-10:50 *Coffee break*
10:50-11:30 Tzavaras: Localization in dynamic plasticity: a study of parabolic regularisations of elliptic initial-value problems
11:35-12:15 Ascher: Handling stiffness in simulating and calibrating physics-based soft object deformation
12:20-14:00 *Lunch*
14:00-14:40 Pareschi: to be announced
14:45-15:25 Fellner: Regularity results of discrete coagulation-fragmentation models
15:30-16:10 Deuflhard: The grand four. Affine invariant Newton methods for nonlinear problems
16:15-16:30 *Closing*