

# Program for the PDE Session

**Monday 25**      **Universidad de La Habana**  
**Edificio Varona, Salón 250 Aniversario**

9:00-10:30	Chair M. Esteban	Luis Caffarelli - Problems involving anomalous diffusion 1 (Mini-course)
10:30-11:00	Coffee break	Registration
11:00-11:30	Chair M. Esteban	N. Ackermann - An Invariant Set Generated by the Domain Topology for Parabolic Semiflows with Small Diffusion
11:30-12:00	Chair M. Esteban	X. Cabre - Saddle-shaped solutions of bistable diffusion equations
	Break	Registration
1400-1600	Opening Address	Aula Magna
1900-2200	Welcome Party	To be determined

**Tuesday 26**      **Capitolio**  
**Room 4**

9:00-9:30	Chairman E. Zuazua	I. Gamba - Propagation and creation of $L^1$ and $L^\infty$ estimates for the Boltzmann equation for variable hard potentials
9:30-10:00	Chair E. Zuazua	N. Wolanski - A free boundary problem for the $p(x)$ -laplacian
10:00-10:30	Break	
10:30-12:00	Chair E. Zuazua	L. Desvillettes - Population dynamics via infinite-dimensional reaction-diffusion (Mini-course)
	Break	
14:00-14:30	Chair F. Murat	P. Padilla - Genetic regulatory networks: a PDE approach
14:30-15:00	Chair F. Murat	D. Salort - Trace Theorem on infinite tree, application to human lung
15:00-15:30	Break	
15:30-1600	Chair F. Murat	J. Dolbeault - The two-dimensional Keller-Segel model after blow-up
16:00-17:30	Chair F. Murat	Hisao Fujita Yashima – Stochastic equations in population dynamics with diffusion (Mini-course)

**Wednesday 27 Capitolio  
Room 4**

9:00-9:30	Chair L. Desvillettes	T. Souganidis -
9:30-10:00	Chair L. Desvillettes	C. Mouhot - Hypocoercivity for kinetic models with a confining potential
10:00-10:30	Break	
10:30-11:00	Chair L. Desvillettes	B. Valiño – Obtaining shock solutions via Maslov’s theory and Colombeau’s Algebra for conservation laws with analytical coefficients
11:00-12:30	Chair L. Desvillettes	Luis Caffarelli - Problems involving anomalous diffusion 2 (Mini-course)
Break		
14:00-17:30	FREE	

**Thursday 28      Capitolio  
Room 4**

9:00-9:30	Chair X. Cabré	E. Zuazua - Flow control in the presence of shocks
9:30-10:00	Chair X. Cabré	H. Leiva - Interior Controllability of Thermoelastic Plate Equation
10:00-10:30	Break	
10:30-11:00	Chair X. Cabré	G. Ponce – On uniqueness properties of solutions to the classical dispersive equations
11:00-11:30	Chair X. Cabré	L. De Teresa - About insensitizing controls for the heat equation
11:30-12:00	Chair X. Cabré	J. Soler – Dispersive properties and stability of solutions for relativistic and non-relativistic models in astrophysics: application to black matter halos.
Break		
14:00-14:30	Chair H. Fujita	P.-E. Jabin - Mean field limit of interacting particles with singular potentials
14:30-15:00	Chair H. Fujita	F. Murat - Existence and a priori estimate for elliptic problems with subquadratic gradient dependent terms
15:00-15:30	Coffee break	
15:30-1600	Chair H. Fujita	R. Galeano Andrades - Small data existence for the Boltzmann equations in L1
16:00-17:30	Chair H. Fujita	R. Abreu – Generalized Moisil-Théodoresco systems and Cauchy integral decompositions

**Friday 29**

**Capitolio  
Room 4**

9:00-9:30	Chair G. Ponce	Maria J. Esteban - Multipolar Hardy-like inequalities
9:30-10:00	Chair G. Ponce	L. Vega - On the stability of a singular vortex dynamic
10:00-10:30	Coffe break	
10:30-12:00	Chair G. Ponce	P.L. Lions – On Mean Field Games (Mini-course)
Break		
14:00-14:30	Chair G. Ponce	L.O. Castellano – Riccati's equation for the dispersion matrix in non-homogeneous periodic media
14:30-16:00	PLENARY LECTURE (Closing conference)	P.L. Lions – Analysis, Models and Simulations