

« N body gravitational dynamical systems from $N=2$ to infinity... »
September 9th, 2013 - December 13th, 2013

Workshop

« **Vlasov-Poisson : the numerical approach and its limits** »

Paris, France October 14th – 18th, 2013
Amphithéâtre Hermite

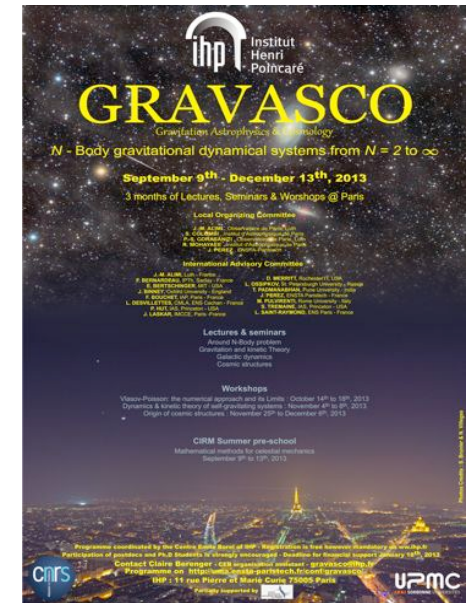
ORGANIZERS

Stephane Colombi (IAP, Paris, France)
Jihad Touma (American University of Beirut)
Christophe Alard (IAP, Paris, France)

SPEAKERS

Tom Abel (KIPAC, Stanford)
Christophe Alard (IAP, Paris, France)
Raul Angulo (Cosmology)
Nicolas Besse (Université de Lorraine, Nancy, France)
Olivier Bienaimé (Université de Strasbourg, France)
Stephane Colombi (IAP, Paris, France)
Walter Dehnen (University of Leicester, UK)
Hosein Haghi (IASBS)
Oliver Hahn (ETH Zurich, Switzerland)

Akram Hasani Zonoozi (IASBS)
Pierre-Emmanul Jabin (University of Maryland, USA)
Mir Abbas Jalali (Sharif Univ. of Tech. - Tehran, Iran)
Michael Joyce (Vassar College, NY, USA)
Carlo Lancellotti (Coll. of Staten Island, NY, USA)
Christophe Pichon (IAP, Paris, France)
Jerry Sellwood (Rutgers University, NJ, USA)
Jihad Touma (American University of Beirut)
Scott Tremaine (Institute for Advanced Study)



PROGRAM

Monday October 14th

09.30 am – 10.00 am	Registration and welcome Coffee on Ground floor of IHP	
10.00 am – 11.00 pm	Raul Angulo	Numerical Simulations of the Dark Universe.
11.00 am – 12.00 pm	Nicolas Besse	1. A (non exhaustive) review of semi-Lagrangian methods for the Vlasov equation.
12.00 pm – 02.00 pm	<i>Lunch time</i>	
02.00 pm – 03.00 pm	Michael Joyce	Controlling for discreteness effects in cosmological N body simulations.
03.00 pm – 04.00 pm	Tom Abel	Phase Space Structures in Cosmological N-body Simulations: There and Back Again.
04.00 pm – 04.30 pm	<i>Coffee break</i>	<i>Ground floor of IHP</i>
04.30 pm – 05.30 pm	Oliver Hahn	A new approach to simulate cold collisionless fluids.

Tuesday October 15th

09.30 am – 10.00 am	<i>Coffee break</i>	<i>Ground floor of IHP</i>
10.00 am – 11.00 am	Walter Dehnen	Phase-space mixing and its implications.
11.00 am – 12.00 pm	Jihad Touma	Collisionless Relaxation of an Instability: Topology of Capture and Escape in an N-body Simulation.
12.00 pm – 02.00 pm	<i>Lunch time</i>	
02.00 pm – 03.00 pm	Jerry Sellwood	Relaxation in spheres and disks.
03.00 pm – 04.00 pm	Mir Abbas Jalali	Finite Element Modelling of Stellar Systems and Debris Disks.
04.00 pm – 04.30 pm	<i>Coffee break</i>	<i>Ground floor of IHP</i>
04.30 pm – 05.30 pm	Olivier Bienaymé	Stellar disk kinematics within our Galaxy.

Wednesday October 16th

09.30 am – 10.00 am	Coffee break	Ground floor of IHP
10.00 am – 11.00 am	Pierre-Emmanuel Jabin	Mean Field limits for interacting particles: Smooth and singular forces.
11.00 am – 12.00 pm	Carlo Lancellotti	On the time evolution of Vlasov fluctuation fields.
12.15 pm – 02.00 pm	Lunch time	
02.00 pm – 03.30 pm	Scott Tremaine	1. Michel Hénon contributions about violent relaxation and stability of self-gravitating systems.
03.30 pm – 04.00 pm	Coffee break	Ground floor of IHP

Thursday October 17th

09.30 am – 10.00 am	Coffee break	Ground floor of IHP
10.00 am – 11.00 pm	Nicolas Besse	2. Statistical behaviour of the Vlasov-waves system and Quasilinear Theory.
11.00 am – 12.00 pm	Christophe Pichon	The secular evolution of an open collision-less system.
12.00 pm – 02.00 pm	Lunch time	
02.00 pm – 03.00 pm	Christophe Alard	A general class of cold self similar solutions of the Vlasov equation, and their close relation to dark matter and numerical simulations.
03.00 pm – 04.00 pm	Hosein Haghi	How primordial mass segregation can increase the size scale of the star clusters.
04.00 pm – 04.30 pm	Coffee break	Ground floor of IHP
04.30 pm – 05.30 pm	Akram Hasani Zonoozi	The evolution of distant Galactic star clusters: Investigation of initial conditions.
06.30 pm	Cocktail	On Ground floor of IHP

Friday October 18th

09.30 am – 10.00 am	Coffee break	Ground floor of IHP
10.00 am – 11.00 pm	Stephane Colombi	Vlasov-Poisson in one dimension: waterbags.
11.00 am – 12.00 pm	Scott Tremaine	2. Things I don't understand in Vlasov-Poisson numerics.
12.00 pm – 02.00 pm	Lunch time	