

**Workshop on**  
**“Scaling Limits and Effective Theories in Classical and Quantum Mechanics”**

organized by

**Chiara Saffirio (U Zurich), Benjamin Schlein (U Zurich),  
Sergio Simonella (TU Munich), Jakob Yngvason (U Vienna)**

**September 22 - 26, 2014:**

• **Monday, September 22, 2014**

09:00 – 09:30 **Opening & Registration**

09:30 – 10:20 **Herbert Spohn**

*Equilibrium time correlations for quantum anharmonic chains*

10:30 – 11:00 *coffee/tea break*

11:00 – 11:50 **Giovanni Gallavotti**

*Equivalence of Non-Equilibrium Ensembles and Representation of Friction in Turbulent Flows: The Lorenz 96 Model*

12:00 – 12:30 **Amit Einav**

*Subadditivity of the entropy on a sphere*

12:30 – 14:00 *lunch break*

14:00 – 14:50 **Maxime Hauray**

*A quantum jump process modelling decoherence induced by the environment*

15:00 – 15:30 **Sara Marino Aceituno**

*A quantum jump process modelling decoherence induced by the environment*

17:00 *Apero/Reception*

• **Tuesday, September 23, 2014**

09:30 – 10:20 **Mario Pulvirenti**

*Backward clusters, correlations and wild sums for a hard sphere system in a low density regime*

10:30 – 11:00 *coffee/tea break*

11:00 – 11:50 **Thierry Bodineau**

*The Brownian motion as the limit of a deterministic system of hard-spheres*

12:00 – 12:30 **Giada Basile**

*Fick's law for the Lorentz model*

12:30 – 14:00 *lunch break*

14:00 – 14:50 **Laurent Desvillettes**  
*About the structure of Landau's operator of collision*

15:00 – 15:50 **François Golse**  
*Kinetic models in extended phase space*

• **Wednesday, September 24, 2014**

09:30 – 10:20 **Mathieu Lewin**  
*Derivation of nonlinear Gibbs measures from many-body quantum mechanics*

10:30 – 11:00 *coffee/tea break*

11:00 – 11:50 **Peter Pickl**  
*Mean field limits for gases of large volume*

12:00 – 12:30 **Marcello Porta**  
*Mean-field evolution of fermionic systems*

12:30 – 14:00 *lunch break*

14:00 – 14:50 **Jan Philip Solovej**  
*Bogolubov theory at positive temperature*

15:00 – 15:50 **Christian Hainzl**  
*On the time-dependent BCS equation*

16:00 – 16:30 *break*

16:30 – 17:00 **Julien Sabin**  
*The Hartree equation for infinite quantum systems*

17:00 – 17:30 **Paolo Antonelli**  
*On a class of nonlinear Schrödinger equations with nonlinear damping*

19:30 *Social Dinner*

• **Thursday, September 25, 2014**

09:30 – 10:20 **Jani Lukkarinen**  
*Hydrodynamics without scaling limits: thermalization in harmonic particle chains with velocity flips*

10:30 – 11:00 *coffee/tea break*

11:00 – 11:50 **Alexander V. Bobylev**  
*Boltzmann equation and hydrodynamics beyond the Navier-Stokes level*

12:00 – 12:30 **Kleber Carrapatoso**  
*Kac's program for the Landau equation*

12:30 – 14:00 *lunch break*

14:00 – 14:50 **Raffaele Esposito**  
*Stationary solutions to the Boltzmann equation and their hydrodynamic limit*

15:00 – 15:30 **Mahir Hadzić**  
*On the small redshift limit of steady states of the Einstein-Vlasov system and their stability*

- **Friday, September 26, 2014**

09:30 – 10:20 **Juan José Lopez Velázquez**

*Singularity formation for kinetic equations with cubic nonlinearities*

10:30 – 11:00 *coffee/tea break*

11:00 – 11:50 **Robert Seiringer**

*Validity of the Bogoliubov Approximation for the Excitation Spectrum of Weakly Interacting Bosons*

12:00 – 12:30 **Phan Thanh Nam**

*Bogoliubov correction to the Hartree dynamics of bosons*

**All talks take place at the ESI, Boltzmann Lecture Hall**