

## Workshop II: The Boltzmann Equation: DiPerna-Lions Plus 20 Years

### Wednesday April 15, 2009

- 8:00–8:50 *Check-In/Light Breakfast (Hosted by IPAM)*
- 8:50–9:00 *Welcome and Opening Remarks*
- 9:00–9:50 **Russel Caflisch** (Institute for Pure and Applied Mathematics)  
*DiPerna-Lions: Past, Present and Future*
- 10:00–10:15 *Break*
- 10:15–11:05 **David Levermore** (University of Maryland)  
*From DiPerna-Lions to Leray*
- 11:15–11:30 *Break*
- 11:30–12:20 **Laurent Desvillettes** (École Normale Supérieure de Cachan)  
*About Renormalized Solutions and the Structure of Collision Kernels*
- 12:30–2:30 *Lunch (on your own)*
- 2:30–3:20 **Nader Masmoudi** (New York University)  
*Hydrodynamic Limit of the Boltzmann Equation and Boundary Layers*
- 3:30–4:00 *Break*
- 4:00–4:50 **Robert Glassey** (Indiana University)  
*Asymptotic Behavior of Solutions to Vlasov Systems*
- 5:00–7:00 *Reception and Poster Session (Hosted by IPAM)*

### Thursday April 16, 2009

- 8:15–9:00 *Continental Breakfast*
- 9:00–9:50 **Reinhard Illner** (University of Victoria)  
*The Cauchy Problem for the Boltzmann Equation and Discrete Velocity Models: Revisiting Alternative Methods and Exploring Old Overgrown Avenues*
- 10:00–10:15 *Break*
- 10:15–11:05 **Kazuo Aoki** (Kyoto University)  
*Fluid Dynamics for a Vapor-Gas Mixture Derived from Kinetic Theory*
- 11:15–11:30 *Break*

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- 11:30–12:20 **Sergej Rjasanow** (Universität des Saarlandes)  
*Three-Way Decomposition of the Boltzmann Distribution Function*
- 12:30–2:30 *Lunch (on your own) <br>Women's Lunch at IPAM, invitation only*
- 2:30–3:20 **Shih-Hsien Yu** (National University of Singapore)  
*Invariant Manifolds for Stationary Boltzmann Equation*
- 3:30–4:00 *Break*
- 4:00–4:50 **Cory Hauck** (Los Alamos National Laboratory)  
*Realizability in Entropy-Based Moment Closures for Gas Dynamics*

### Friday April 17, 2009

- 8:15–9:00 *Continental Breakfast*
- 9:00–9:50 **Robert Strain** (Princeton University)  
*Global Existence and Newtonian Limit for the Relativistic Boltzmann Equation near Vacuum with Some Short Range Interactions*
- 10:00–10:15 *Break*
- 10:15–11:05 **Ricardo Alonso** (University of Texas at Austin)  
*Classical Inequalities for the Boltzmann Collision Operator*
- 11:15–11:30 *Break*
- 11:30–12:20 **Irene Gamba** (University of Texas at Austin)  
*The Cauchy Boltzmann Problem for Soft Potentials with Integrable Angular Cross Section*
- 12:30–2:30 *Lunch (on your own)*
- 2:30–3:20 **Vladislav Panferov** (California State University, Northridge (CSU Northridge))  
*Time-Dependent Plane Wave Solutions of the Boltzmann Equation: Global Existence and Propagation of Regularity*
- 3:30–4:00 *Break*
- 4:00–4:50 **Seung Yeal Ha** (Seoul National University)  
*Particle and Kinetic Models for Flocking*

