FOURTH WORKSHOP "Micro-Macro Modelling and Simulation of Liquid-Vapour Flows"

February, 4th – 6th, 2009 Room 008, Hauptgebäude, RWTH Aachen University

Program

Wednesday, February 4th

| 13:30 - 14:00 | Registration |
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| 14:00 - 14:15 | Opening |
| 14:15 - 15:00 | Eduard Feireisl (Academy of Sciences of the Czech Republic) Asymptotic behavior of complex fluid systems |
| 15:00 - 15:30 | Jenny Haink (Uni Stuttgart) Theory and Applications of Local Discontinuous Galerkin Schemes in Phase Transition Theory |
| 15:30 - 16:00 | Coffee Break |
| 16:00 - 16:45 | Helmut Abels (MPI Leipzig) Diffuse Interface Models for Compressible and Incompressible Vis- cous Fluids |
| 16:45 - 17:15 | Fathollah Varnik (Ruhr-University Bochum) Stability and dynamics of droplets |

Thursday, February 5th

| 9:00 - 9:45 | Charles Elliott (University of Warwick) Computational surface partial differential equations |
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| 9:45 - 10:15 | Mathieu Bachmann (RWTH Aachen) Numerical Simulation of Cavitation Bubbles by Compressible Two- Phase Fluids |
| 10:15 - 10:45 | Coffee Break |
| 10:45 - 11:30 | Christophe Chalons (Paris VII) Numerical approximation of a two fluid two pressure diphasic model |
| 11:30 - 12:00 | Philippe Helluy (Uni Strasbourg) A simple entropy fix for the VFRoe schemes |
| 12:00 - 13:30 | Lunch |

Thursday, February 5th (continued)

| 13:45 - 14:30 | Marcus Herrmann (Arizona State University) Detailed Simulations of Turbulent Liquid Jet Atomization |
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| 14:30 - 15:00 | Boris Haspot (Uni Heidelberg) Existence of weak solution for compressible fluid models of Korteweg type |
| 15:00 - 15:15 | Ali Zein (Uni Magdeburg) On the modeling and simulation of laser-induced cavitation bubbles |
| 15:15 - 15:30 | Maren Hantke (Uni Magdeburg) Bubble dynamics in a compressible liquid with phase transition |
| 15:30 - 16:00 | Coffee Break |
| 16:00 - 16:45 | Dieter Bothe (RWTH Aachen) Modeling and simulation of two-phase flows with mass transfer |
| 16:45 - 17:15 | Mohsen Alizadeh (Uni Göttingen) Bubble dynamics and shock waves |
| 19:30 - 22:00 | Dinner (Restaurant Magellan) |
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Friday, February 6th

| 9:00 - 9:30 | Dietmar Kröner (Uni Freiburg) Interface jump condition for the Navier-Stokes-Korteweg model |
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| 9:30 - 10:00 | Wolfgang Dreyer (WIAS Berlin) Sharp interface limits of phase field models in the context of liquid- vapor transitions |
| 10:00 - 10:30 | Coffee Break |
| 10:30 - 11:00 | Peng Zeng (RWTH Aachen) Simulation of primary breakup for diesel spray with phase transition |
| 11:00 - 11:30 | Christian Dickopp (RWTH Aachen) A homogeneous model for bubbly liquids |
| 11:30 - 11:45 | Closing |