

# Program *Bridging the Scales in Glasses*, Düsseldorf, July 18–20, 2012

## Wednesday, July 18th

12:00 – 13:20 registration + lunch

13:20 – 13:30 opening

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### Session 1, Chair: Helmut Hermann

13:30 – 13:55 Gerhard Wilde (Univ. Münster)

*Atomic mobility inside shear bands and the impact on tracer diffusion, nanocrystal nucleation and growth*

13:55 – 14:20 Fathollah Varnik (Univ. Bochum)

*Flow heterogeneity in hard sphere glasses: Connecting MD studies with lattice Boltzmann simulations*

14:20 – 14:45 Segun Gideon Ayodele (MPIE Düsseldorf)

*Flow heterogeneity in colloidal hard sphere glasses: A study of the fluid dynamics model*

14:45 – 15:10 Alexandre Nicolas (LIPhy, Saint Martin d’Heres, France)

*A finite restructuring-time mesoscopic model for the rheology of soft glasses*

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15:10 – 15:40 coffee

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### Session 2, Chair: Stefan Egelhaaf

15:40 – 16:05 Thibaut Divoux (ENS, Lyon, France)

*The fluidization dynamics of a “simple” yield stress fluid*

16:05 – 16:30 Miriam Siebenbürger (HZ Berlin)

*Switch-on of shear and creep in colloidal glasses*

16:30 – 16:55 Pinaki Chaudhuri (Univ. Düsseldorf)

*Onset of flow in a confined colloidal glass*

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16:55 – 17:30 break

17:30 – 18:30 internal meeting AK 4

## Thursday, July 19th

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### Session 3, Chair: Marco Laurati

09:30 – 09:55 Claus Heussinger (Univ. Göttingen)

*Jamming and glassy dynamics in driven granular systems: “melting a glass by freezing”*

09:55 – 10:20 Michael Schmiedeberg (Univ. Düsseldorf)

*New formulation of the jamming phase diagram of soft and hard spheres*

10:20 – 10:45 Suvendu Mandal (MPIE Düsseldorf)

*Reentrant glass transitions in confined hard-sphere glasses*

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10:45 – 11:15 coffee

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### Session 4, Chair: Pinaki Chaudhuri

11:15 – 11:40 Carsten Schroer (Univ. Münster)

*Potntial energy landscape analysis of a supercooled model system under a microrheological perturbation*

11:40 – 12:05 David Winter (Univ. Mainz)

*Non-linear single-particle response of glass-forming systems to external fields*

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12:05 – 14:00 lunch

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### Session 5, Chair: Gerhard Wilde

14:00 – 14:25 Florian Kargl (DLR Köln)

*Rheology and crystal growth in supercooled  $Al_2O_3$*

14:25 – 14:50 Uwe Hoppe (Univ. Rostock)

*Structure of  $Nb_2O_5-NaPO_3$  glasses by X-ray and neutron diffraction*

14:50 – 15:15 Kai-Uwe Hess (LMU München)

*Structural role of Fe in a peralkaline silicate melt*

15:15 – 15:40 Peter Häussler (Univ. Chemnitz)

*On processes of structure formation – a fundamental new approach*

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15:40 – 16:10 coffee

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**Session 6, Chair: Fathollah Varnik**

16:10 – 16:35 Helmut Herrmann (IFW Dresden)

*Local and effective properties of metallic-glass-based nano-composites — Theoretical approach*

16:35 – 17:00 Marco Laurati (Univ. Düsseldorf)

*Transient response of concentrated colloidal dispersions to shear*

17:00 – 17:25 Tatjana Sentjabrskaja (Univ. Düsseldorf)

*Glasses of binary colloidal mixtures in equilibrium and under shear*

17:25 – 17:50 Christoph Scherer (Univ. Mainz)

*Glass structure with well-defined thermal history and glassy dynamics*

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## Friday, July 20th

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### Session 7, Chair: Uwe Hoppe

09:00 – 09:25 Fan Yang (DLR Köln)

*Structural relaxation of a bulk metallic glass-forming Zr-Ti-Cu-Ni-Be liquid*

09:25 – 09:50 Nima Hamidi Siboni (RWTH Aachen)

*Time evolution of elementary structural events in amorphous materials*

09:50 – 10:15 Imad Ladadwa (Univ. Münster)

*Crowding phenomenon of scattered probe atoms in a supercooled binary Lennard-Jones mixture*

10:15 – 10:40 Matthias Hein (Univ. Düsseldorf)

*A glass close to a rough surface*

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10:45 – 11:15 coffee

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### Session 8, Chair: Florian Kargl

11:15 – 11:40 Philipp Kuhn (DLR Köln)

*MD simulation of metallic solidification under shear flow*

11:40 – 12:05 Ferdinand Somorowsky (Fraunhofer ISC, Würzburg)

*Porous vycor glass: Interrelation between morphology, structure and water uptake*

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12:05 lunch and departure