Workshop on

"The Mathematical Theory of Particle Suspensions"

January 20 - 22, 2020

organized by

Arianna Giunti, Richard Höfer, Jonas Jansen, Juan Velázquez

- **Monday, January 20, Lipschitz lecture hall**

09:00 - 10:00	**François Golse** (Paris, Ecole polytechnique) *From the kinetic theory of gases to models for aerosol flows*
10:00 - 10:30	Coffee break and registration
10:30 - 11:30	**Richard Schubert** (Aachen) *A local version of Einstein's formula*
11:30 - 12:30	**David Gérard-Varet** (Paris Diderot) *The effective viscosity of suspensions beyond Einstein's formula*
12:30 - 14:30	Lunch break
14:30 - 15:30	**Matthieu Hillairet** (Montpellier) *Homogenization of the Euler equations in perforated domains*
15:30 - 16:00	Coffee break
16:00 - 17:00	**Valeria Ricci** (Palermo) *Derivation of macroscopic models for thin sprays from multiphase Boltzmann models with inelastic collision kernel*

- **Tuesday, January 21, Lipschitz lecture hall**

09:00 - 10:00	**Laurent Desvillettes** (Paris Diderot) *About thick sprays*
10:00 - 10:30	Coffee break
10:30 - 11:30	**Antoine Gloria** (Paris Sorbonne)

	A homogenization approach to effective properties in dilute media
11:30 - 12:30	**Ayman Moussa** (Paris Sorbonne) *Some recent results and open questions about the Vlasov-Navier-Stokes system*
12:30 - 14:30	Lunch break
14:30 - 15:30	**Athanasios Tzavaras** (KAUST) *Kinetic models for the description of sedimenting suspensions*
15:30 - 16:00	Coffee break
16:00 - 17:00	**Pierre-Emmanuel Jabin** (Maryland) *Quantifying complexity and propagation of chaos in large stochastic systems of interacting particles*
17:00 - 18:00	**Christiane Helzel** (Düsseldorf) *Modelling and simulation of sedimentation in suspensions of rod-like particles*

- **Wednesday, January 22, lecture hall in Wegelerstraße**

10:00 - 11:00	**Amina Mecherbet** (Paris Diderot) *A model for suspension of clusters of particle pairs*
11:00 - 11:30	Coffee break
11:30 - 12:30	**Kleber Carrapatoso** (Montpellier) *Mean-field limit of the Stokes equation around random spheres*
12:30 - 14:00	Lunch break
14:30 - 15:30	**Marta Leocata** (Lyon) *The Vlasov-Fokker-Planck-Navier-Stokes system as a scaling limit of particles in a fluid*
15:00 - 15:30	Coffee break
15:30 - 16:30	**Richard Höfer** (Bonn) *The method of reflections and its applications for inertialess suspensions*

All the talks on Monday and Tuesday take place in the Lipschitz lecture hall located in the first floor in Endenicher Allee 60.
All the talks on Wednesday take place in the lecture hall in the first floor of Wegelerstraße 10.