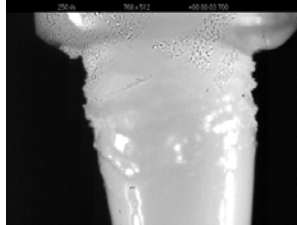
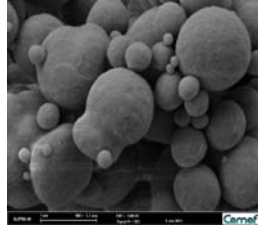
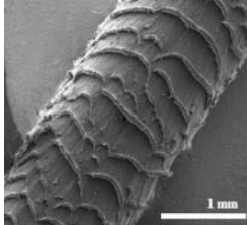




IMP-CEMEF-SIMM/ESPCI 1st workshop

Flow and Processing of Highly Filled Materials



Location: Institut Pierre-Gilles de Gennes -PARIS January 28-29, 2016

Organizing committee:

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Supported by:

-Le Groupe Français de Rhéologie, the TOTAL-ESPCI chair, the Saint GOBAIN-X-ESPCI chair, the MICHELIN-ESPCI chair, Hutchinson company

Framework and objectives

This workshop aims to explore the recent advances in Highly Filled Materials a relevant topic widely encountered in the field of rubber, thermoplastics, concrete suspension and ceramic pastes. The current tendency is to strongly increase the filler concentration, but this results in many new processing issues. Indeed these systems no longer behave like classical polymer melts, but more similar to pastes and slurries, the rheology of which remains puzzling. On the academic side, much progress is emerging in the field of flow and processing of these highly concentrated systems, and various experimental tools and models have been developed.

The format of the workshop is designed to foster dialogue and exchange between leading academic scientists and experts from industry, who will give their understanding/perspective on the flow and process issues of highly concentrated suspensions in polymers solutions or polymer melts.

This workshop focused on in-depth discussion is open to engineers and researchers from academia and industry.

Registration fee covers lunches each day and dinner: 140€

Registration will open October 15, 2015 (website : <http://esp.ci/nb135g>)

Registration dead-line: January 10, 2016

Program

January 28 (12:00 am) –January 29 (2:00 pm)

Thursday, January 28 th , 2016	
12h00-13h15	Welcome/Lunch
13h15-13h30	Introduction: P Cassagnau, F. Lequeux, R. Valette
13h30-14h00	E. Lemaire (LPMC, Université de Nice): Rheology of non-Brownian suspensions, the role of contact forces between particles
14h00-14h30	M. Wyart (NYU & EPFL): Jamming and Shear Thickening
14h30-15h00	G. Chatté (Tarkett & ESPCI): Shear-thickening and plastisol rheology
15h00-15h30	A. Colin (SIMM ESPCI): Flow of emulsions and suspensions in confined geometry
15h30-16h00	Coffee Break
16h00-16h30	C. Marraud (Safran-Herakles): Propergols processing
16h30-17h00	M. Cloitre (MMC ESPCI): Tunable rheology of pastes
17h00-17h30	O. Pouliquen (IUSTI, CNRS Marseille): The rheology of highly concentrated suspensions in yield-stress fluid
17h30-18h00	L. Guy (Solvay Silcea): Highly silica filled rubber processing
18h00-18h30	C. Carrot (IMP, University St Etienne): Viscoelastic effects in highly filled polymer systems
19h00-21h00	Diner
Friday, January 29 th , 2016	
8h30-9h00	M. Couty (Michelin, Clermont Ferrand): Effect of processing on the filler aggregate structure in highly filled polymer nanocomposites
9h00-9h30	P. Coussot (IFSTARR): A variety of time-dependent solid-liquid transitions – Information from Magnetic Resonance Velocimetry
9h30-10h00	F. Toussaint (Lafarge Holcim): Rheology of highly optimized concretes
10h00-10h15	Coffee break
10h15-11h45	R. Valette (CEMEF, Mines ParisTech): Modeling of paste flows in complex geometries
10h45-11h15	T. Perie (CREE Saint-Gobain, Cavailon): Industrial challenges of Ceramic Injection Molding
11h15-11h45	F. Chinesta (GeM, Ecole Centrale de Nantes): Multi-scale modeling and advanced simulation of concentrated fibrous suspensions
11h45-12h15	G. Bacquet (Nexans): High filled polymer processing: the cost of your safety
12h15-12h45	P. Sonntag (Hutchinson): Industrial challenges in filled polymers for environmental friendly formulations
12h45-13h00	Open discussion and Conclusion
13h00-14h00	Lunch