

**BSR meeting of the Non-Newtonian Club**  
**Unilever Research and Development Port Sunlight**  
**23<sup>rd</sup> November 2007**

The last meeting of the Non-Newtonian Club was hosted by the Unilever Research and Development centre in Port Sunlight on the 23<sup>rd</sup> November 2007. This one-day event consisted of a series of lectures by recognised rheologists as well as post-graduate students, with a wide range of subjects and interests represented.

The diversity of subjects was evidenced by the four speakers from the University of Manchester, who, although all carried out their work in the department of Chemical Engineering, presented on very different topics.

Subrahmanyam Pasumarty, who finished his PhD work in that department and is currently working in Unilever Port Sunlight, gave insights on the microstructure of structured liquids and the use of rheology to follow their aging, while Mustafa Nasser, who is currently finishing his PhD studentship in Manchester presented on the use of shear and compression rheology to characterise kaolinite-polyacrylamide suspensions with different molecular weight and charge and the relevance to their performance in different industrial processes. Rui Zhou showed the work she did for her Master's degree on the rheological characterisation of silk based materials. Dr. Xue-Feng Yuan, lecturer, presented on quantitative characterisation of complex fluids in microscopic flow and the modelling of the behaviour of these flows under different timescales and different dimensions

Modelling plays an important role in many rheological studies, and works on that area were presented by Dr. David Heyes, from the University of Surrey, who uses simulation to model the behaviour of soft and ultrasoft sticky colloid particles, and by Dr. Rob Poole, from the University of Liverpool, who successfully modelled the asymmetric flow exhibited by fluids in a microfluidic cross-slot geometry.

Dr. Tom Dobbie from NEWI gave an insightful talk on how the choice of rheology to characterise fluids must be relevant to the application by showing results obtained from PDMS tamponade agents used in vitreoretinal surgery. Peter Olmsted, from the University of Leeds, presented some recent results on the phenomenon of shear banding in complex fluids and the effect of boundary conditions.

The recognition for the best presentation of a study by a student was awarded to Souad Assighaou for her work on droplet behaviour under large deformation with a particular emphasis on the 3-dimensions characterisation of the universal relaxation process of a droplet shape after a large strain jump. She carried out this work in the context of her PhD at the Université du Maine, Le Mans (France) before joining Unilever Research and Development in Port Sunlight.

This rich diversity of topics and methods provoked a lot of interesting questions and debates with the audience during and in between presentations, which is a sign that these meetings allow the dissemination of information relevant to rheologists of different backgrounds, both academic and industrial.