

RIO DE JANEIRO BRAZIL
JULY 14 – 16, 2010

The BCR 2010 was held at Marina Palace Hotel, in Rio de Janeiro, RJ, Brazil, and had the support of Brazilian Society of Rheology, and the Brazilian Society of Engineering and Mechanical Sciences (ABCM), through its Committee of Rheology and Non-Newtonian Fluids. It has been co-organized by Pontificia Universidade Católica do Rio de Janeiro (PUC-RJ) and Universidade Federal Fluminense (UFF).

This V Brazilian Conference on Rheology had the importance of being the starting point of the activities of the Brazilian Society of Rheology, with the support of the International Committee on Rheology, through the presence of Prof. Gerald Fuller (President). The Society was launched after the evident success of the previous Rheology meetings, and the identification of the increase of participating areas and researchers, consolidating the aggregation of the rheology community in Brazil. All inscribed participants were automatically associated to the society. Besides being an entity to aggregate the scientific community of Rheology and Non-Newtonian Fluid Mechanics, the Brazilian Society of Rheology intends to strengthen the interaction between the Brazilian and the International scientific community.

This V Brazilian Conference on Rheology covered contributions to several topics, such as: rheology of polymeric systems; emulsions; viscoplastic, thixotropic, viscoelastic and pseudoplastic materials; liquid-liquid displacement; rheological charac-

terization; rheology of mud, clay, asphalt, concrete and food products; free boundary problems; drilling operation simulations; stabilized numerical methods; drag reduction. The BCR 2010 presented six invited lecturers, two per day, and included forty-two papers selected for oral presentation, from national and some foreign research groups. Following the well succeeded experience of the previous BCR's, the non-existing parallel sessions format was planned to facilitate the interaction among the people from experimental, numerical and theoretical areas, comprising work presentations, communications and discussions. The opening of the first session was made by a keynote lecture given by M. Pasquali on "Carbon nanotubes fluids: simple or complex?" followed by some technical sessions until lunchtime. The keynote lecture after lunch was given by J. Maia on "A study on the flow, failure and rupture mechanisms of branched polyethylene in controlled-stress uniaxial extensional flow". In the second day, R. R. Huilgol opened the morning session with a keynote lecture on "Operator-splitting schemes for compressible viscoplastic flows", followed by technical sessions. Starting the afternoon session, G. Fuller gave a keynote lecture on "Rinse and Repeat: Turning liquids into soft adhesives" followed by technical sessions. In the last day, K. R. Rajagopal opened the activities with a keynote lecture about "New perspectives in the modeling of non-Newtonian fluids". Because of health problems, this lecture was

Figure 1 (left):
The banner of BCR 2010.

Figure 2:
Launch of the Brazilian Society of Rheology (SBR) and first meeting (from the left to the right): Profs. J. Karam, M. F. Naccache, P. R. Souza Mendes (SBR President), S. L. Frey, G. Fuller (ICR President), M. L. M. Costa, R. L. Thompson and V. Callado.



given by videoconference. The lecture was followed by technical sessions and lunch. F. Pinho opened the last afternoon activities with a keynote lecture on "Microfluidic flows of viscoelastic fluids".

Beside the auditorium where the technical session took place, there was an exhibition room with rheology equipments from the company sponsors: dpUNION, Altmann, Polimate and Reoterm. An acknowledge to the Brazilian and Rio de Janeiro government agencies CNPq, CAPES and FAPERJ is also very fair. The next Brazilian Rheology meeting will occur in 2013, and every two years from there.

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Characterization of Nano- and Microdispersions

BERLIN, GERMANY

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Starting few years ago LUM GmbH (Berlin, Germany) has been continuously performing application days in collaboration with the companies Thermo Fisher Scientific, Karlsruhe, Germany and Anasysta, Oberhausen, Germany. Based on the previous success of LUM's cross company seminars from the beginning of the century, this tradition has been renewed due to the constant demand from customers and interested parties from all branches of industry to get a comprehensive insight into the fascinating world of dispersion and particle characterization. The last application day "Characterization of nano- and microdispersions" was held in Berlin-Adlershof on June 8th 2010, in the neighbourhood of the LUM headquarters. Participants came from companies producing and developing different products, including cosmetics, ink & paint, food & beverage, carbon nanotubes and building materials. All had in common they were keenly interested in gaining knowledge about the different ways of particle and dispersion characterization.

Theoretical presentations in combination with relevant application data from real-life tasks were followed by practical instrument demonstrations allowing the participants to understand and deepen the theory and get a better understanding how different analytical methods can

solve tasks in Research & Development as well as in quality control applications. The main benefit of the application day is always a closer look from more than one side, i.e. using more than one analytical method to solve an analytical task concerning dispersion properties and behaviour. The brief general introduction into colloidal science and dispersion properties was held by Dr. A. Uhl (LUM) to set a frame for the topics to handle during the application day. Since the term of stability of a dispersion can be understood in many different ways, he introduced several stability concepts and terms and posed two application-centred questions, namely "Which properties or behaviour of a product should be stable?" and "For which period of time should they be stable?" Next was an in-depth look at destabilizing phenomena in dispersions, i. e. flocculation, sedimentation, creaming, coalescence, phase inversion and Ostwald-ripening.

Addressing the particular need of getting stability information faster than by visual observation of a real-time demixing, Uhl put the accelerated and direct stability analysis of dispersions into the focus of the following talk, where the concept of LUM's patented STEP-technology was explained in detail. This technology is applied first under normal gravitation in the LUMiReader®

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