

CONGRESS ON RHEOLOGY POZNAN 2013

POZNAN UNIVERSITY OF TECHNOLOGY, POZNAN, POLAND
OCTOBER 13 – 15, 2013

The Polish Society of Engineering Rheology has, together with the Poznan University of Technology, organized the Congress on Rheology Poznan 2013 at the Poznan University of Technology (PUT), from October 13 to 15, 2013. The opening speech of three day conference was given by professor Tomasz Sterzyński, the chairman of the Polymer Processing Division at PUT. About 100 members (both foreign and Polish) attended this conference and presented their research. There were two plenary talks, eight lectures (30 minutes), 23 short communications (15 minutes) and 30 poster presentations.

The main purpose of the conference was to discuss various topics in the field of rheology: theoretical rheology, rheometry, rheology of molten polymers, rheology of food, rheology in medicine and pharmacy, microrheology and nanorheology, rheology in chemistry and construction, rheology in industry and teaching. We aimed moreover at establishing a strong cooperation between industry and universities. Therefore well-known companies with experience in the production of rheological equipment: Anton Paar, Rheotest, RHL Service (the representative of Thermo Electron), TA Instruments, Uni-Export Instruments Polska and ITA Limited Liability Company S.K.A., were invited to participate in the Congress on Rheology, Poznan 2013. These companies showed a comprehensive exhibition.

The first plenary talk was given by Manfred Wagner, professor in Polymer Engineering and Polymer Physics at the Technical University of Berlin and member of the International Committee on Rheology. His extraordinary lecture ‘Recent Advances in Modeling of Polymer Melt Rheology’, gave an overview of the most important modern models used for polymers. Marek Dziubiński, the chairman of the Polish Society of Engineering Rheology, presented the second plenary lecture: ‘Professor Zdzisław Kęmbłowski – the founder of

Polish technical rheology and rheometry school’. This was a great opportunity for young researchers to obtain more information about the history of Polish rheology. The first day ended with a get-together on the banks of the Warta river next to the Poznan University of Technology.

On the second day of the conference, several lectures on rheology in medicine, rheology of polymers, micro and nanorheology were presented. Piotr Kowal (Poznan University of Medical Sciences) gave a lecture on ‘Hemorheological studies in chosen clinical states’ followed by a lecture by Piotr Domagalski (Technical University of Lodz) ‘Microrheology – a novel challenge of rheological examinations’. After a short break the polymer rheology session started with a talk by Ryszard Steller (Wroclaw University of Technology) on ‘Novel description models of stable shear viscosity curves of non-Newtonian fluids’ followed by further inspiring communications focusing on polymers. During the next two sessions many more important topics were discussed. Josef Jůza (Institute of Macromolecular Chemistry AS CR of the Academy of Sciences of the Czech Republic) gave a lecture on ‘Flow-induced coalescence: arbitrarily mobile interface model and choice of its parameters’. Janusz Płocharski (Warsaw University of Technology) opened the fourth session with a lecture on ‘Electrorheological fluids with composite particles of core-shell type’.

It should be noted that each session was concluded with a short communication by the exhibitors of rheological apparatus. In this way the participants learned about the newest trends in rheology equipment. The second day ended with a poster session where 30 different posters were presented from various universities from all over Poland. The scientific committee selected the three best posters. The winning team consisted of



Figure 1: Congress participants (photo taken by Analityka)

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<http://www.appliedrheology.org>



Figure 2: Polymer session (photo taken by Analityka)

Barbara Lipowska, Jerzy Witek, Roksana Muzyka, and Zbigniew Robak (Institute of Ceramics and Building Materials, Gliwice) for the poster: 'Rheology of ceramic-carbon suspensions for making foam filters for metal alloy filtration'. Paweł Ptaszek, Jan Michalczyk, Daniel Żmudziński, Joanna Kruk, Anna Ptaszek, and Marta Liszka-Skoczylas formed the runner up team with the poster: 'Attempt at the application of rheological methods for tracing the course of enzymatic reactions'. The third place went finally to a team consisting of Monika Dobrzyńska-Mizera, Mateusz Barczewski and Beata Dudziec for the poster on 'Rheological properties of isotactic polypropylene modified with sorbitol derivatives and silsesquaxanes'.

The third day Tomasz Kiljański (University of Warmia and Mazury in Olsztyn) opened the fifth session with a lecture on 'Methods of measurements of viscoelastic properties'. Finally, the sixth session started with a communication on the 'Rheological properties and application of surfactants micellar solutions'. During all these sessions topics like: theoretical rheology, rheology in medicine, chemistry and construction were discussed.

The conference provided an international forum for scientific discoveries, professional networking, research collaborations, interdisciplinary education and dissemination of our most recent scientific results. The informal part of the Congress on Rheology, Poznan 2013 consisted of the banquet in the Park Hotel Restaurant on the shore of the Malta lake and dinners and coffee breaks at PUT. This allowed scientific discussions and to plan future collaborations between the participants from various universities and research institutions. All distinguished guests thanked the organizers for their hospitality and the inviting scientific atmosphere. The conference ended in a positive mood. The second edition of the Congress on Rheology will take place in two years in Opole, Poland.

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