



Tomas Bata University in Zlín
Faculty of Technology



NOVEL TRENDS IN RHEOLOGY VII PROGRAMME

July 26, 2017

Time	Event	Presentation Title
7:00-8:20	Registration	
8:20-8:30	Welcome	
(Chairman: Yong Woo Inn)		FLOW INSTABILITIES
8:30-9:00	Savvas George Hatzikiriakos <i>The University of British Columbia, Canada</i>	The Extrudate Swell of HDPE: Rheological Effects
9:00-9:30	José Pérez-González <i>Instituto Politécnico Nacional, Mexico</i>	Slip and Frictional Heating of Extruded Polyethylene Melts
9:30-10:00	Coffee break & Exhibition	
(Chairman: Savvas George Hatzikiriakos)		APPLIED RHEOLOGY
10:00-10:30	Olivier Catherine <i>Cloeren Incorporated, USA</i>	Polymer Melt Rheology and Flow Simulations Applied to Cast Film Extrusion Die Design: An Industrial Perspective
10:30-11:00	Christopher W. Macosko <i>University of Minnesota, USA</i>	Rheological Characterization and Thermal Modeling of Polyolefins for Process Design and Tailored Interfaces
11:00-11:30	Martin Zatloukal <i>Tomas Bata University in Zlin, Czech Republic</i>	Applied Rheology for Understanding Flow Instabilities in Polymer Processing
11:30-12:00	Yong Woo Inn <i>Chevron Phillips Chemical Company LP, USA</i>	Worm Melt Fracture and Fast Die Build-up at High Shear Rates in Extrusion Blow Molding of Large Drums
12:00-13:30	Lunch & Exhibition	
(Chairman: Helmut Münstedt)		ELONGATIONAL RHEOLOGY
13:30-14:00	Christopher W. Macosko <i>University of Minnesota, USA</i>	Long Chain Branching of PLA
14:00-14:30	Manfred Hermann Wagner <i>Berlin Institute of Technology (TU Berlin), Germany</i>	Shear and Elongational Rheology of Photo-oxidative Degraded HDPE and LLDPE
14:30-15:00	Coffee break & Exhibition	
(Chairman: Christopher W. Macosko)		NOVEL RHEOLOGICAL TECHNIQUES
15:00-15:30	Manfred Wilhelm <i>Karlsruhe Institute of Technology (KIT), Institute for Chemical Technology and Polymer Chemistry, Germany</i>	The Intrinsic Mechanical Nonlinearity $^3Q_0(\omega)$ of Linear Homopolymer Melts
15:30-16:00	Manfred Wilhelm <i>Karlsruhe Institute of Technology (KIT), Institute for Chemical Technology and Polymer Chemistry, Germany</i>	Shear Rheology and 1H TD-NMR Combined to Low-Field RheoNMR: Set-Up and Application to Quiescent and Flow-Induced Crystallization of Polymers
18:30	Conference dinner	

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Conference programme:

<http://noveltrends7.ft.utb.cz/programme.html>



July 27, 2017

(Chairman: José Pérez-González)		RHEOLOGY OF POLYMER BLENDS AND COMPOSITES
8:00-8:30	Ivan Fortelný <i>Institute of Macromolecular Chemistry ASCR, Czech Republic</i>	Droplet Size in Flow: Theoretical Model and Application to Polymer Blends
8:30-9:00	Zdeněk Starý <i>Institute of Macromolecular Chemistry ASCR, Czech Republic</i>	Rheological Properties of Conductive Polymer Composites around the Electrical Percolation Threshold
9:00-10:30	Coffee break & Poster section & Exhibition	
	Radek Pivokonsky <i>Institute of Hydrodynamics ASCR, Czech Republic</i>	An Examination of the Differential Constitutive Models under Large Amplitude Oscillatory Shear Flow
	Vít Průša <i>Charles University in Prague, Czech Republic</i>	Viscoelastic Rate Type Fluids with Temperature Dependent Material Parameters – Stability of the Rest State
	Jiri Drabek <i>Tomas Bata University in Zlin, Czech Republic</i>	Investigation of Flow Behavior for Linear Melt Blown Polypropylenes with Different Molecular Weights in Very Wide Shear Rate Range
	Tomas Barborik <i>Tomas Bata University in Zlin, Czech Republic</i>	Effect of Second to First Normal Stress Difference Ratio at the Die Exit on Neck-in Phenomenon in Polymeric Flat Film Production
	Jan Musil <i>Tomas Bata University in Zlin, Czech Republic</i>	Entry Flow Vortices in Polymer Melt Extrusion: A Review
	Pavol Alexy <i>Slovak University of Technology, Slovak Republic</i>	Rheological Properties of Polymer Melts with High Elasticity
	Jan Skočilas <i>Czech Technical University in Prague, Czech Republic</i>	Flow of Bovine Collagen in Rectangular Slit
	Milan Kracalik <i>Johannes Kepler University Linz, Austria</i>	Analysis of LDPE-ZnO-Clay Nanocomposites using Novel Cumulative Rheological Parameters
	Ana Vera Machado <i>University of Minho, Portugal</i>	Protein-Polymer Conjugates Hydrogels: Synthesis and Characterization
	Ayan Ray <i>Tomas Bata University in Zlin, Czech Republic</i>	The Dynamic Magnetoviscoelastic Properties of Biomineralized (Fe ₃ O ₄) PVP-CMC Hydrogel
	Probal Basu <i>Tomas Bata University in Zlin, Czech Republic</i>	Rheological Performance of Bacterial Cellulose based Nonmineralized and Mineralized Hydrogel Scaffolds
	Petr Saha <i>Tomas Bata University in Zlin, Czech Republic</i>	Viscoelastic Behavior of Mineralized (CaCO ₃) Chitin Based PVP–CMC Hydrogel Scaffolds
	Petra Peer <i>Institute of Hydrodynamics ASCR, Czech Republic</i>	Quality of Nanofibrous Mats in Relation to Rheological Characterization of PVB and PVB/Silica Solutions
Dušan Kimmer <i>SPUR a.s., Czech Republic</i>	Some Aspects of Applying Nanostructured Materials in Air Filtration, Water Filtration and Electrical Engineering	
Petr Filip <i>Institute of Hydrodynamics ASCR, Czech Republic</i>	On the Relation between Sensory Attributes and Rheological Characterization of Cosmetic Products	
(Chairman: Donggang Yao)		INTRODUCTION OF NOVEL RHEOLOGICAL TOOLS
10:30-11:00	Andre Braun <i>Anton Paar Germany GmbH, Germany</i>	Sophisticated Rheometric Tools for Polymer Characterization
11:00-11:30	Lukas Schwab <i>Waters GmbH, UB TA Instruments, Germany</i>	Large Amplitude Oscillatory Shear Measurements of Polymer Melts: Comparison of Different Geometries
11:30-12:00	Jan Philip Plog <i>Thermo Fisher Scientific, Germany</i>	Following Phase Transitions with Rheometry and Simultaneous Raman-Spectroscopy
12:00-13:30	Lunch & Exhibition	
(Chairman: Manfred Hermann Wagner)		CONSTITUTIVE EQUATIONS
13:30-14:00	Donggang Yao <i>School of Materials Science & Engineering, Georgia Institute of Technology, Atlanta, Georgia, USA</i>	Dynamics and Rheology of Finitely Extensible Polymer Coils: An Overview
14:00-14:30	Alan Jeffrey Giacomin <i>Queen's University, Canada</i>	Strain Sweeps from Oldroyd 8-Constant Framework
14:30-15:00	Refreshment & Exhibition	
(Chairman: Alan Jeffrey Giacomin)		FLOW MODELING
15:00-15:30	Olga Sousa Carneiro <i>University of Minho, Portugal</i>	Computer Aided Die Design: a New Open-Source Methodology
15:30-16:00	João Miguel Nóbrega <i>University of Minho, Portugal</i>	A Primer on Experimental and Computational Rheology with Fractional Viscoelastic Constitutive Models
16:00	End of the conference	
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