

2nd International Conference on Rheology

14 & 15 December 2021, Tehran, Iran

Conference Program

**Sunday & Monday
12 & 13 December 2021**



11:00-19:00

**Short
Courses**

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The poster features a light brown wood-grain background. A dark brown rectangular area in the center contains the words "Short" and "Courses" in a large, 3D, crumpled paper font. To the left of this area, the time "11:00-19:00" is written in a brown, italicized font. At the bottom center of the poster, the website "icor-isr.ir" is written in a brown, italicized font.

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Tuesday, 14 December, Hall A (Zoom Link) (Aparat Link)

8:30-9:00 *Opening Ceremony*

9:00-9:55 Plenary Presenter: Gerald G. Fuller
Stanford University, USA

The interfacial mechanics of ocular cell layers: friction, adhesion and delamination

9:55-10:05 Break

Chair Persons: B. Kaffashi, M.K. Razavi Aghjeh, N. Mohammadi

Keynote Lecture	Time	Title
	10:05-10:35	Multi-Scale modeling of complex fluids: surfactants, colloids, and polymers, and their applications R.G. Larson, University of Michigan, USA
	10:35-11:05	Tuning colloidal gels by shear: New routes to manipulate mechanical properties G. Petekidis, Forth- University of Crete, Greece
	11:05-11:35	The design and in-vivo validation of satiety controlling food-controlling human fat digestion with help from rheology P. Fischer, ETH Zurich, Switzerland

11:35-11:45 Break

Chair Persons: M. Karrabi, G.R. Pircheraghi, M. Salehi

Code	Time	Title
A-10-283-1	11:45-12:05	Colloid-polymer mixtures: Effects of polymer depletant topology P. Kiani Shojaie, E. Moghimi, D. Parisi, D. Vlassopoulos
A-10-270-2	12:05-12:25	Rheology and printability studies of crosslinked gelatin/tragacanth/lignin hydrogels H. Zehtab Minooei, B. Kaffashi
A-10-304-1	12:25-12:45	Shear thickening behavior and hysteresis in non-brownian suspension M.R. Mahmoudian, F. Goharpey, Z. Daneshfar, M. Behzadnasab

12:45-13:00 Break

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Tuesday, 14 December, Hall A (Zoom Link) (Aparat Link)

13:00-13:40		Poster Session (Link)
Chair Persons:		M.A. Razavi, F. Abbasi Sourki, I. Haririan
Code	Time	Title
A-10-328-1	13:40-14:00	Effects of cellulose nanowhiskers on rheological properties of polycaprolactone/poly(lactic acid) cellulose nanowhisiker composites G. Haghgoo, A. Babaei
A-10-303-1	14:00-14:20	Effect of fat content, iodine value and solid fat content (SFC) on the rheological properties of margarine M. Fallahasgari, D. Abolghasem, K. Nayebzadeh
A-10-294-1	14:20-14:40	Non-linear rheological responses and tribological behaviors of model reduced-fat O/W emulsion using high pressure-treated corn starch as a novel fat replacer A. Heydari, S.M.A. Razavi
14:40-15:00		Break
Chair Persons:		A. Haghtalab, R. Nofar, R. Rashedi
Keynote Lecture	Time	Title
	15:00-15:30	Interpenetrating and interconnected grafted nano cylinders from amphiphilic star block copolymers E. Moghimi, Forth- University of Crete, Greece
	15:30-16:00	Dynamics of self-assembled micellar solutions in uniaxial extensional flows H. Mohammadi, Florida State University, USA
	16:00-16:30	Rheology of lyotropic liquid crystals from self-assembly of amphiphilic block copolymers, water and oil R. Foudazi, University of Oklahoma, USA
	16:30-17:00	Gel structure of PVC plastisol used as automotive underbody coatings M. Pishvaei, Institute of Color Science and Technology, Iran
17:00-18:00		Poster Session (Link)

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Tuesday, 14 December, Hall B (Zoom Link) (Aparat Link)

Chair Persons: M. Davoodi, F. Sharif, S.R. Ghaffarian

Keynote Lecture	Time	Title
	10:05-10:35	Methane emissions and yield stress fluids I. Frigaard, University of British Columbia, Canada
	10:35-11:05	Molecular dynamics and its application in molecular rheology and tribology A. Jabbarzadeh, University of Sydney, Australia
	11:05-11:35	On the use of "viscous micropump" for transporting non-newtonian fluids in microfluidic systems K. Sadeghy, University of Tehran, Iran

11:35-11:45 Break

Chair Persons: M. Mehranpour, S.H. Hashemabadi, Y. Jahani,

Code	Time	Title
A-10-333-1	11:45-12:05	Peristaltic transport of solid particles suspended in a viscoelastic fluid: a numerical study M. Pourjafar, B. Taghiloo, M. Ahmadi, A.R. Heidary, K. Sadeghy
A-10-344-1	12:05-12:25	Investigating the effect of giesekus' mobility parameter on the secondary flows in microfluidic devices A. Kazemzadeh, M. Salami Hosseini, M. Mostafaiyan
A-10-346-1	12:25-12:45	CFD analysis of conical bearing hydrodynamic lubrication using magnetorheological fluids S.A.R. Vaziri, M. Norouzi, P. Akbarzadeh

12:45-13:00 Break

13:00-13:40 Poster Session (Link)

Chair Persons: F. Abbasi, N. Golshan Ebrahimi, k. Shams

Code	Time	Title
A-10-251-1	13:40-14:00	Non-Einstein rheological behavior in multiblock copolymer nanocomposites H.R. Heydarnezhad, N. Mohammadi, A. Alegria
A-10-335-1	14:00-14:20	Rheology provides insight into distinguishing between unimodal and bimodal molecular weight distribution HDPE A. Malmir, H. Nazockdast, F. Goharpey

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Tuesday, 14 December, Hall B (Zoom Link) (Aparat Link)

A-10-282-2	14:20-14:40	Experimental data and modeling of storage and loss moduli for SSBR/BR filled with hybrid filler M. Barghamadi, M. Karrabi, M.H.R. Ghoreishy, G. Naderi
14:40-15:00	Break	
Chair Persons: S. Jamali, M. Razzaghi, H.A. Khonakdar		
Keynote Lecture	Time	Title
	15:00-15:30	Application of numerical method in studying the rheological properties of multiphase fluids M. Salami Hosseini, Sahand University of Technology, Iran
	15:30-16:00	Cellular fluid dynamics E. Nazockdast, University of North Carolina, USA
	16:00-16:30	Buoyant injection of viscoplastic fluids S. Mohamad Taghavi, Laval University, Canada
16:30-17:30	Poster Session (Link)	

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Wednesday, 15 December, Hall A (Zoom Link) (Aparat Link)

9:00-9:55 Plenary Presenter: Dimitris Vlassopoulos
Forth - University of Crete, Greece
 The unusual rheology of ring polymers and their blends with linear chains

9:55-10:05 Break

Chair Persons: H. Nazockdast, H. Garmabi, F. Goharpey

Keynote Lecture	Time	Title
	10:05-10:35	CNC suspension rheology S. Hatzikiriakos, University of British Columbia, Canada
	10:35-11:05	Evaluating the effectiveness of rice bran oil for rejuvenating rheological properties of aged asphalt binders in recycled asphalt pavements M.Z. Alavi, University of Tehran, Iran
	11:05-11:35	Application of rheology in controlling competitive reactions during reactive extrusion Sh. Ahmadi, Iran Polymer and Petrochemical Institute, Iran
	11:35-12:05	Polymer tribology and its correlation to polymer rheology M. Razzaghi Kashani, Tarbiat Modares University, Iran

12:05-12:15 Break

Chair Persons: A.A. Yousefi, S. Mazinani, M. Kalaei

Code	Time	Title
A-10-254-1	12:15-12:35	Interplay between microstructure and nonlinear viscoelastic behavior of a unique thermo-responsive hydrogel S. Tarashi, H. Nazockdast, S. Shafaghsorkh
A-10-278-1	12:35-12:55	Interfacially reaction compatibilization of polyisoprene/polydimethyl siloxane immiscible blends J. Nasrollah Gavqani, F. Goharpey, S. Velankar

12:55-13:00 Break

13:00-13:40 Poster Session (Link)

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Wednesday, 15 December, Hall A(Zoom Link) (Aparat Link)

Chair Persons: M. Pishvaei, J. Khademzadeh, O. Moini Jazani

A-10-260-1	13:40-14:00	The influence of cellulose nanoparticles on rheology and morphology PCL/TPU scaffold with cellular structure H. Kordbacheh, A.A. Katbab, N. haghhipour
A-10-301-1	14:00-14:20	Rheological study of injectable biomimetic hydrogel based on carboxymethyl chitosan-g-poly(N-isopropylacryamide) S. Ahmadi, S. Bagheri-Khoulenjani, S. Rajabi, S. Arne Sande, B.O. Nyström
A-10-249-1	14:20-14:40	Investigation of effective parameters on the rheological behaviors of UHMWPE/HDPE blends Z. Yagoobi, A. Jalali-Arani, A. Sepahi, R. Rashedi

14:40-15:00 Break

Chair Persons: Sh. Ahmadi, R. Foudazi, M. Ebrahimi

Keynote Lecture	15:00-15:30	Rheology in modern pharmaceuticals I. Haririan, University of Tehran, Iran
	15:30-16:00	Capillarity and wetting in particulate suspensions S. Velankar, University of Pittsburg, USA
	16:00-16:30	Dispersion done (much) better: harnessing extensional flow in polymer blending and compounding J. Maia, Case Western University, USA
	16:30-17:00	Rheology as a tool to control the jet ability of inkjet inks A. Rezvani Moghaddam, Sahand University of Technology, Iran

17:00-18:00

Closing Ceremony

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Wednesday, 15 December, Hall B (Zoom Link) (Aparat Link)

Chair Persons: K. Sadeghy, A. Ramazani, M. Rafizadeh

Keynote Lecture	Time	Title
	10:05-10:35	Designing complex fluid rheology- microstructure and measurements P. Spicer, NSW Sydney, Australia
	10:35-11:05	Effect of matrix molecular weight on the dispersion behavior of cellulose nanocrystal R. Nofar, Istanbul Technical University, Turkey
	11:05-11:35	Application of OD and FSI in patient-specific modeling of blood flow in children with congenital heart disease A.G. Kuchumov, Perm National Research Polytechnic University, Russia
	11:35-12:05	Stabilization of purely elastic instabilities in cross-slot geometries M. Davoodi, Schlumberger Cambridge Research Center, UK

12:05-12:15 Break

Chair Persons: G. Hashemi Motlagh, M. Salami Hosseini, A. Babaei

Code	Time	Title
A-10-302-1	12:15-12:35	On the use of MHD mechanism for pumping viscoplastic fluids in microfluidic systems: a numerical study S. Kosar, B. Jalali, M. Pourjafar, K. Sadeghy
A-10-355-1	12:35-12:55	A Numerical study on the impact of a viscoelastic drop onto the same quiescent fluid film M.R. Rezaie, M. Norouzi, M.H. Kayhani, S.M. Taghavi

12:55-13:00 Break

13:00-13:40 Poster Session (Link)

Chair Persons: M.H.R. Ghoreishy , A.A. Katbab, V. Haddadi-Asl

A-10-284-1	13:40-14:00	Rheological properties and crystallization behavior of polyethylenes used in drip irrigation tapes S. Haghparast, G.R. Pircheraghi
A-10-258-1	14:00-14:20	Simulation of print speed effect on flow ability and stability of printed acrylonitrile butadiene styrene strand in fused deposition modeling method N. Mosleh, S. Dariushi, M. Esfandeh

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Wednesday, 15 December, Hall B (Zoom Link) (Aparat Link)

A-10-330-1	14:20-14:40	A molecular dynamic simulation study of the rheological behavior jamming in densely packed and shear thickening shape nanoparticles in polyethylene glycol M. Zojaji, A. Hydarinasab, S.H. Hashemabadi, M. Mehranpour
14:40-15:00	Break	
Chair Persons: M. Davoodi, H. Mohammadi, I. Ghasemi		
Keynote Lecture	15:00-15:30	Mathematical modeling and experimental investigations of rheological behavior of drilling fluids containing synthetic polymers, bentonite, and salt A. Ramezani, Sharif University of Technology, Iran
	15:30-16:00	Relationship between microstructural relaxation and macroscopic properties of vitrimers F. Khabaz, University of Akron, USA
	16:00-16:30	Slurries of complex fluids S. Hormozi, Cornell University, USA
	16:30-17:00	Colloidal gels: Rheology, thixotropy and microstructure S. Jamali, Northeastern University, USA