



# The Society of Rheology 93<sup>rd</sup> Annual Meeting

## Sheraton Grand Chicago, Chicago, Illinois

### Meeting Schedule

#### Monday, October 10, 2022

	<i>S4</i>	<i>S3</i>	<i>S5</i>	<i>MAB</i>	<i>S2</i>	<i>MF</i>	<i>OT</i>
8:30			L. Korley (PL1) - <i>S4</i>				
9:20			Coffee Break				
9:50	SC1	SM1•	GG1•	SR1•	IR1•	AM1	MC1•
10:10	SC2	SM2	GG2	SR2	IR2	AM2	MC2
10:30	SC3	SM3	GG3	SR3	IR3	AM3	MC3
10:50	SC4	SM4	GG4	SR4	IR4	AM4	MC4
11:10	SC5	SM5	GG5	SR5	IR5	AM5	MC5
11:30	SC6	SM6	GG6	SR6	IR6	AM6	MC6
11:50		Lunch Break / Student-Industry Forum					
1:30	SC7	SM7	GG7	SR7	IR7	AM7•	MC7
1:50	SC8	SM8	GG8	SR8	IR8	AM8	MC8
2:10	SC9	SM9	GG9	SR9	IR9	AM9	MC9
2:30	SC10	SM10	GG10	SR10	IR10	AM10	MC10
2:50	SC11	SM11	GG11	SR11	IR11	AM11	MC11
3:10		Coffee Break					
3:45	SC12♦	SM12	GG12	BF1•	IR12	AM12	SF1
4:05	SC13♦	SM13	GG13	BF2	IR13	AM13	SF2
4:25	SC14♦	SM14	GG14	BF3	IR14	AM14	SF3
4:45	SC15♦	SM15	GG15	BF4	IR15	AM15	SF4
5:05	SC16♦	SM16	GG16	BF5	IR16	AM16	SF5
5:25	SC17♦	SM17	GG17	BF6	IR17	AM17	SF6
5:45	SC18♦						
6:05	SC19♦						
6:25			End				

#### Wednesday, October 12, 2022

	<i>S4</i>	<i>S3</i>	<i>S5</i>	<i>MAB</i>	<i>S2</i>	<i>MF</i>	<i>OT</i>
8:30			J. C. Conrad (PL3) - <i>S4</i>				
9:20			Coffee Break				
9:50	SC37	SM35	GG35•	BF24	IN7	RS18	AC1•
10:10	SC38	SM36	GG36	BF25	IN8	RS19	AC2
10:30	SC39	SM37	GG37	BF26	IN9	RS20	AC3
10:50	SC40	SM38	GG38	BF27	IN10	RS21	AC4
11:10	SC41	SM39	GG39	BF28	IN11	RS22	AC5
11:30	SC42	SM40	GG40		IN12		AC6
11:50		Lunch Break					
1:30	SC43	SM41	GG41	AD1•	IN13	RS24	AC7
1:50	SC44	SM42	GG42	AD2	IN14	RS25	AC8
2:10	SC45	SM43	GG43	AD3	IN15	RS26	AC9
2:30	SC46	SM44	GG44	AD4	IN16	RS27	AC10
2:50	SC47	SM45	GG45	AD5	IN17		
3:10		Coffee Break					
3:45	SC48	PF1•	GG46	AD6	IN18	RS29	AC12
4:05	SC49	PF2	GG47	AD7	IN19	RS30	AC13
4:25	SC50	PF3	GG48	AD8	IN20	RS31	AC14
4:45	SC51	PF4	GG49	AD9	IN21	RS32	AC15
5:05	SC52	PF5	GG50	AD10	IN22	RS33	AC16
5:25	SC53	PF6	GG51	AD11	IN23	RS34	
5:45		End					
6:30		Poster Session & Reception					
6:30		Gallery of Rheology Contest					

#### Tuesday, October 11, 2022

	<i>S4</i>	<i>S3</i>	<i>S5</i>	<i>MAB</i>	<i>S2</i>	<i>MF</i>	<i>OT</i>
8:30			W. Poon (PL2) - <i>S4</i>				
9:20			Coffee Break				
9:50	SC20	SM18	GG18•	BF7	IR18	RS1	SF7
10:10	SC21	SM19	GG19	BF8	IR19	RS2	SF8
10:30	SC22	SM20	GG20	BF9	IR20	RS3	SF9
10:50	SC23	SM21	GG21	BF10	IR21	RS4	SF10
11:10	SC24	SM22	GG22	BF11	IR22	RS5	SF11
11:30	SC25	SM23	GG23	BF12		RS6	SF12
11:50		Lunch Break / Society Business Meeting					
1:30	SC26	SM24	GG24	BF13	IR24	RS7	SF13•
1:50	SC27	SM25	GG25	BF14	IR25	RS8	SF14
2:10	SC28	SM26	GG26	BF15	IR26	RS9	SF15
2:30	SC29	SM27	GG27	BF16	IR27	RS10	SF16
2:50	SC30	SM28	GG28	BF17	IR28	RS11	SF17
3:10		Coffee Break					
3:45	SC31	SM29	GG29	BF18	IN1•	RS12	SF18
4:05	SC32	SM30	GG30	BF19	IN2	RS13	SF19
4:25	SC33	SM31	GG31	BF20	IN3	RS14	SF20
4:45	SC34	SM32	GG32	BF21	IN4	RS15	SF21
5:05	SC35	SM33	GG33	BF22	IN5	RS16	SF22
5:25	SC36	SM34	GG34	BF23	IN6		SF23
5:45		End					
7:00		Awards Reception					
8:00		Awards Banquet					

#### Thursday, October 13, 2022

	<i>S4</i>	<i>MF</i>	<i>S5</i>	<i>GC</i>	<i>S2</i>	<i>S3</i>	<i>OT</i>
8:00			S. A. Rogers (MP1) - <i>S4</i>				
8:40			Short Break				
8:45	SC54	PF7	GG52	AD12	IN24	SM46	AC18
9:05	SC55	PF8	GG53	AD13	IN25	SM47	AC19
9:25	SC56	PF9	GG54	AD14	IN26	SM48	AC20
9:45	SC57	PF10	GG55	AD15	IN27		AC21
10:05		Coffee Break					
10:35	SC58	PF11	GG56	AD16	IN28	SM50	AC22
10:55	SC59	PF12	GG57	AD17	IN29	SM51	AC23
11:15	SC60	PF13	GG58	AD18	IN30	SM52	AC24
11:35	SC61	PF14	GG59	AD19	IN31	SM53	AC25
11:55	SC62	PF15	GG60	AD20	IN32	SM54	AC26
12:15		End					

### Session and Room Codes

AC = Additive Manufacturing and Composites

AD = Rheology of Active Matter and Directed Systems

AM = AI and ML Based Rheological Characterization

BF = Biomaterials and Bio-fluid Dynamics

GG = Rheology of Gels, Glasses and Jammed Systems

GR = Gallery of Rheology Contest

IN = Flow-induced Instabilities in Non-Newtonian Fluids

IR = Interfacial Rheology

MC = Rheology of Soil, Mud and Construction Materials

MP = Metzner Presentation

PF = Applied Rheology for Pharmaceuticals, Food and Consumer Products

PL = Plenary Lectures

PO = Poster Session

RS = Techniques and Methods: Rheometry & Spectroscopy/Microscopy

SC = Suspensions and Colloids

SF = Surfactants, Foams and Emulsions

SM = Polymers Solutions, Melts and Blends

SR = Sustainable and Recyclable Polymers

GC = Gold Coast

MAB = Michigan AB

MF = Mayfair

OT = Ontario

RA = Riverwalk A

S1 = Sheraton 1

S2 = Sheraton 2

S3 = Sheraton 3

S4 = Sheraton 4

S5 = Sheraton 5

• Keynote

♦ James Swan Memorial Symposium

## Monday, October 10

### Morning

	<i>Sheraton 4</i> Suspensions and Colloids	<i>Sheraton 3</i> Polymers Solutions, Melts and Blends	<i>Sheraton 5</i> Gels, Glasses and Jammed Systems	<i>Michigan AB</i> Sustainable and Recyclable Polymers	<i>Sheraton 2</i> Interfacial Rheology	<i>Mayfair</i> AI and ML Based Rheol. Characterization	<i>Ontario</i> Soil, Mud and Construction Materials
8:30	<b>PL1.</b> Material innovations inspired by nature – Utilizing concepts of mechanics, transport, assembly, and sustainability. <i>L. Korley</i> Sheraton 4						
9:20	COFFEE BREAK Sheraton 1 & Sheraton Promenade						
9:50	<b>SC1.</b> Transient microstructure, rheology of shear-thickening colloidal suspensions by time-resolved flow-SANS and relation to nanotribology. <i>N. J. Wagner, K. Whitcomb and Y.-F. Lee</i>	<b>SM1•.</b> Sticky rheo-physics of natural silk spinning. <i>C. Schaefer</i>	<b>GG1•.</b> A unified state diagram for the yielding transition of soft colloids. <i>S. Aime, D. Truzzolillo, D. J. Pine, L. Ramos and L. Cipelletti</i>	<b>SR1•.</b> Rheological properties of recycled high density polyethylene in the solid state. <i>J. Zhang and D. Rodrigue</i>	<b>IR1•.</b> Structuring liquids. <i>T. P. Russell</i>	<b>AM1.</b> Data-driven rheological characterization of thermal interface materials. <i>P. P. Nagrani, R. V. Kulkarni, A. M. Marconnet and I. C. Christov</i>	<b>MC1•.</b> Leveraging rheology to support future infrastructure. <i>S. Kawashima</i>
10:10	<b>SC2.</b> Enhanced linear viscoelasticity of rough colloids. <i>L. Hsiao and S. Pradeep</i>	<b>SM2.</b> Molecular rheology and self-healing of amine functionalized polyolefins. <i>B. M. Yavitt, D. J. Gilmour, Z. Zhang, N. Kuanr, E. van Ruymbeke, L. Schafer and S. Hatzikiriakos</i>	<b>GG2.</b> Strain shift in a model yield stress fluid – Evidence for a continuous yielding transition. <i>J. Griebler, G. J. Donley, V. Wisniewski and S. A. Rogers</i>	<b>SR2.</b> Recycling of rubber thermosets enabled by a novel single component rubber adhesive. <i>B. Olsen, C. Troyano-Valls and S. Av-Ron</i>	<b>IR2.</b> Instability and rupture of surfactant-laden bilayer thin films. <i>S. Yang, C. S. Dutcher and S. Kumar</i>	<b>AM2.</b> From meta-modeling of complex fluids using physics-based machine learning to digital rheometer twins. <i>M. Mahmoudabadbozchelou, K. M. Kamani, S. A. Rogers and S. Jamali</i>	<b>MC2.</b> The origins of structuration in nanoclay-modified cement pastes. <i>A. Douba and S. Kawashima</i>
10:30	<b>SC3.</b> Emergence of piezoelectric response by friction in shear thickening dense suspension. <i>H. Kim, S. J. Rowan and H. M. Jaeger</i>	<b>SM3.</b> Nonlinear elongation flows in entangled associating ring and linear polymer melts. <i>G. Grest, J. C. Braccwell, R. Sivaraj, S. S. Mohottalalage, D. Perahia and T. O'Connor</i>	<b>GG3.</b> The role of brittility in the yielding of soft materials. <i>K. M. Kamani and S. A. Rogers</i>	<b>SR3.</b> Making sustainable PLA mechanically desirable by rheological means. <i>T. Smith, M. Razavi and S.-Q. Wang</i>	<b>IR3.</b> Leveraging interfacial rheology characterization for optimizing liquid-in-liquid 3D printing enabled by surfactant self-assembly. <i>H. Honaryar, S. Amirfattahi and Z. Niroobakhsh</i>	<b>AM3.</b> Modeling yielding and thixotropic response of complex fluids using physics informed neural networks. <i>J. D. Rathinaraj, K. R. Lennon, M. A. Gonzalez Cadena, A. Santra, J. W. Swan and G. H. McKinley</i>	<b>MC3.</b> Predicting the rheology of limestone calcined clay cements (LC3): Linking composition and hydration kinetics to yield stress through machine learning. <i>O. Canbek, Q. Xu, Y. Mei, N. R. Washburn and K. E. Kurtis</i>
10:50	<b>SC4.</b> Crossover scaling of shear-thickening in monodisperse and bidisperse suspensions. <i>B. Chakraborty, J. F. Morris, N. Malbranche and A. Santra</i>	<b>SM4.</b> Non-linear rheology of associative polymer gels with tunable interactions. <i>A. Chaub and M. Cloitre</i>	<b>GG4.</b> Evidence for chaotic behavior during the yielding of soft jammed matter. <i>D. C. Venerus, O. Machabeli, D. Bushiri and S. M. Arzideh</i>	<b>SR4.</b> Partial-melting rheology in HDPE-iPP blends. <i>D. E. Huang, A. Kotula and K. Migler</i>	<b>IR4.</b> mAb-surfactant stability and rheology at the air-water interface under controlled dilation and shear deformations. <i>N. J. Wagner and S. Tein</i>	<b>AM4.</b> Constitutive neural network model of complex fluids. <i>H. Jin, S. Yoon, F. C. Park and K. H. Ahn</i>	<b>MC4.</b> Kinetic modeling of the rheological extent of reaction in model geopolymer gels. <i>J. N. Mills and N. J. Wagner</i>
11:10	<b>SC5.</b> Discontinuous shear-thickening of highly-loaded polymer-ceramic suspensions. <i>R. D. Corder, R. D. Corder, A. Ardekani and K. A. Erk</i>	<b>SM5.</b> Brownian dynamics simulation of the gel transition of reversibly associating polymers. <i>D. M. Robe, A. Santra, A. Santra, G. H. McKinley and J. R. Prakash</i>	<b>GG5.</b> Transient yielding of attractive soft particle glasses. <i>B. F. Di Dio, F. Khabaz, R. T. Bonnecaze and M. Cloitre</i>	<b>SR5.</b> Rheological behavior of poly(lactic acid) filled with cellulose nanofibrils chemically modified by grafting polymer chains. <i>S. Shams Es-haghi, S. Shams Es-haghi, H. Senkum and W. M. Gramlich</i>	<b>IR5.</b> The role of interfacial rheology in viscous fingering. <i>J. Li and H. Manikantan</i>	<b>AM5.</b> Data-driven selection of thixotropic models via Rheology-informed Neural Networks (RhINNs). <i>M. Saadat, M. Mahmoudabadbozchelou and S. Jamali</i>	<b>MC5.</b> Understanding the rheology of kaolinite clay suspensions using Bayesian inference. <i>R. Ran, S. Pradeep, S. Kosgodagan Acharige, B. Blackwell, K. Christoph, D. J. Jerolmack and P. E. Arratia</i>

11:30	<b>SC6.</b> Shear-thickening starch granules allow hydrogels to absorb impact: A simple way to protect fragile objects like eggs and fruit. <i>S. Ganesh, S. N. Subraveti and S. R. Raghavan</i>	<b>SM6.</b> A generalized mechano-statistical transient network model to unravel the network topology, elasticity and relaxation dynamics of associative multiblock copolymer solutions. <i>A.-S. Huvsecom, W. Thielemans, R. Cardinaels and P. Moldenaers</i>	<b>GG6.</b> Activated dynamics theory of the transient and steady state shear rheology of ultra-dense glass-forming colloidal suspensions. <i>K. S. Schweizer and A. Ghosh</i>	<b>SR6.</b> Rheological characterization of polymers recovered from multilayer films using solvent extraction. <i>G. E. Tillinghast, J. P. Rothstein, H. H. Winter and G. W. Huber</i>	<b>IR6.</b> Non-equilibrium capillary self-assembly. <i>D. M. Harris and S. J. Thomson</i>	<b>AM6.</b> Machine-learned constitutive relations for simulating well-entangled polymer melts for their history-dependent flows. <i>S. Miyamoto, J. J. Molina and T. Taniguchi</i>	<b>MC6.</b> Effects of shear-thinning fluids in primary cementing of horizontal wells. <i>A. P. Renteria and I. A. Frigaard</i>
-------	--	--	--	--	--	---	---

11:50 LUNCH BREAK / STUDENT-INDUSTRY FORUM Sheraton 2, 12:00 to 1:15 pm

### Afternoon

	<i>Sheraton 4</i> <b>Suspensions and Colloids</b>	<i>Sheraton 3</i> <b>Polymers Solutions, Melts and Blends</b>	<i>Sheraton 5</i> <b>Gels, Glasses and Jammed Systems</b>	<i>Michigan AB</i> <b>Sustainable and Recyclable Polymers</b>	<i>Sheraton 2</i> <b>Interfacial Rheology</b>	<i>Mayfair</i> <b>AI and ML Based Rheol. Characterization</b>	<i>Ontario</i> <b>Soil, Mud and Construction Materials</b>
1:30	<b>SC7.</b> Relationships among structure, memory, and flow in sheared in dense colloidal systems. <i>P. E. Arratia, K. L. Galloway and D. J. Jerolmack</i>	<b>SM7.</b> Modeling correlated bond exchange and chain relaxation in associating polymer networks. <i>S. Liu and T. O'Connor</i>	<b>GG7.</b> Bijel rheology reveals a 2D colloidal glass wrapped in 3D. <i>H. Ching and A. Mohraz</i>	<b>SR7.</b> Design of multimodal relaxation in recyclable acrylate vitrimers with multiple dynamic bonds. <i>L. E. Porath, N. Ramlawi, R. H. Ewoldt and C. M. Evans</i>	<b>IR7.</b> Film drainage under spatiotemporally evolving surface stresses: A case study on beer foam. <i>E. Chatzigiannakis and J. Vermant</i>	<b>AM7•.</b> AI-enabled design of polymeric materials and their rheology from atomistic models. <i>J. J. de Pablo</i>	<b>MC7.</b> Gas migration in a column of fresh cement slurry. <i>E. Rosenbaum, N. A. Konan and M. Massoudi</i>
1:50	<b>SC8.</b> Modelling and simulation of shear jamming in dense suspensions. <i>R. N. Chacko, M. A. Galvani Cunha and D. A. King</i>	<b>SM8.</b> Extensional viscosity of associative polymers and their mixtures with spherical polymer micelles. <i>E. Pashkovski, R. Patterson, C. Kabb and D. Nickerson</i>	<b>GG8.</b> Gel polymer electrolytes rheological behavior: Yield stress and viscoelasticity. <i>D. Milian, D. Roux, F. Caton and N. El Kissi</i>	<b>SR8.</b> Effects of crosslinking density and salt addition on viscoelasticity and conductivity of vinylogous urethane (VU)-based ionic dynamic polymer network. <i>S. Jang, C. M. Schroeder and C. M. Evans</i>	<b>IR8.</b> Interfacial rheology of crowded phospholipid monolayers as an approach to measure membrane fluidity. <i>D. Renggli and J. Vermant</i>	<b>AM8.</b> Automated classification of shear induced relaxation dynamics from in situ rheology and x-ray photon correlation spectroscopy. <i>J. P. Horwath, H. He, Q. Zhang, M. Chu, E. Dufresne, S. Sankaranarayanan, S. Narayanan and M. Cherukara</i>	<b>MC8.</b> Polymer flocculation of an unconventional mud through the lens of rheology. <i>M. Sasar, M. Santagata and C. T. Johnston</i>
2:10	<b>SC9.</b> Structure and dynamics of force clusters and networks in shear thickening suspensions. <i>M. Nabizadeh, A. Singh and S. Jamali</i>	<b>SM9.</b> Relating dynamic covalent bond exchange to relaxation modulus in dynamic polymeric networks. <i>R. Tao, N. Dolinski, A. Kotula, J. Dennis, S. J. Rowan and A. Forster</i>	<b>GG9.</b> Dynamics of the stress distributions of jammed suspensions of soft particle glasses in startup and oscillatory shear flows. <i>M. Bantawa and R. T. Bonnecaze</i>	<b>SR9.</b> Viscoelastic properties of vitrimers with fast exchange reaction. <i>F. Khabaz, A. Perego and M. Cloitre</i>	<b>IR9.</b> Numerical investigation of the effect of interfacial viscosity on droplet breakup and relaxation in extensional flow. <i>N. Singh and V. Narsimhan</i>	<b>AM9.</b> Viscoelastic free surface flows: From models to experiments and somewhere in between. <i>D. Bolintineanu, M. Hamersky, W. H. Hartt, S. Lindberg, W. Ortiz and R. Rao</i>	<b>MC9.</b> On the role of water-soluble organic carbon on natural slurries' rheology. <i>C. Carotenuto, S. Moliterno, P. Marino, E. Damiano, E. Coppola, R. Greco and M. Minale</i>
2:30	<b>SC10.</b> Discontinuous shear thickening for bidisperse frictional suspensions. <i>A. Singh, A. K. Sharma, J. J. de Pablo and H. M. Jaeger</i>	<b>SM10.</b> Sulfonated polystyrene melts under nonlinear elongation flows. <i>D. Perahia, S. S. Mohottalalage, C. Kosgallana, S. Meedin, G. Grest and T. O'Connor</i>	<b>GG10.</b> Stress relaxation and yielding behavior of attractive colloidal gels of soft spherical nanoparticles and 2D nanosheets. <i>G. Rezyan, M. Esmaeili, M. Sadati and N. Taheri-Qazvini</i>	<b>SR10.</b> Linear and nonlinear viscoelastic properties of associating polymer-nanoparticle hybrids. <i>S. Patil, X.-H. Dong and S. Cheng</i>	<b>IR10.</b> Dilatational rheological properties of per- and polyfluoroalkyl substances (PFAS)-adsorbed air-water interfaces. <i>M. Zhou and R. Foudazi</i>	<b>AM10.</b> Uncertainty quantification for the flow of soft materials. <i>A. Rinkens, C. V. Verhoosel and N. O. Jaensson</i>	<b>MC10.</b> Rheological flow curves for model earth suspension mixtures. <i>S. Pradeep, P. E. Arratia, E. Meiburg and D. J. Jerolmack</i>

2:50	<b>SC11.</b> Rigidity percolation in shear thickening suspensions. <u>A. Goyal, N. Martys and E. Del Gado</u>	<b>SM11.</b> Dynamics and structure of metallo-supramolecular polymers based on telechelic precursors. <u>E. van Ruymbeke, Y. Li, K. Mortensen, S. Ghiassinejad and C.-A. Fustin</u>	<b>GG11.</b> Rheology of dense granular binary mixtures. <u>J. M. Monti, J. T. Clemmer, I. Srivastava, G. Grest and J. B. Lechman</u>	<b>SR11.</b> Linking shear and extensional behavior of biomass solutions to microbead properties. <u>B. P. Robertson and M. A. Calabrese</u>	<b>IR11.</b> Channel flow dynamics involving viscoplasticity and superhydrophobicity. <u>H. Rahmani and S. M. Taghavi</u>	<b>AM11.</b> Machine-learning-based measurement of the relaxation time of viscoelastic fluids via particle ordering. <u>M. De Micco, G. D'Avino and M. M. Villone</u>	<b>MC11.</b> Calibrating an index-type mixer to become a viscometer for high-solids, heterogeneous soil. <u>B. A. Appleby, M. Ishaq, I. Abdullayev, J. Rostami and J. R. Samaniuk</u>
3:10	COFFEE BREAK Sheraton 1 & Sheraton Promenade						
	<b>Biomaterials and Bio-fluid Dynamics</b>			<b>Surfactants, Foams and Emulsions</b>			
3:45	<b>SC12♦.</b> Plasmonic response of complex nanoparticle assemblies. <u>Z. M. Sherman, K. Kim, J. Kang, B. J. Roman, S. A. Valenzuela, M. N. Dominguez, S. L. Gibbs, E. V. Anslyn, D. J. Milliron and T. M. Truskett</u>	<b>SM12.</b> Unentangled polystyrene melts in fast shear flows. <u>G. Ianniruberto, G. Marrucci, S. Costanzo, N. Grizzuti, K. Peponaki, S. Alexandris and D. Vlassopoulos</u>	<b>GG12.</b> Yielding of jammed emulsions. <u>R. Foudazi and M. Zhou</u>	<b>BF1•.</b> Molecular design of hydrogels with multi-scale mechanics for biomaterials applications. <u>A. M. Rosales</u>	<b>IR12.</b> Combining microscopy with measurements of complex dilatational modulus in planar fluid-fluid interfaces. <u>J. R. Samaniuk and S. Kale</u>	<b>AM12.</b> Physical insights from machine learning tools. <u>M. Caggioni, J. Hipp, E. Tozzi, S. Lindberg and W. H. Hartt</u>	<b>SF1.</b> Experimental observation of a confined bubble moving in shear-thinning fluids. <u>J. Feng, S. Chun and Z. Yang</u>
4:05	<b>SC13♦.</b> Sticky and polarizable nanoparticles: Processing conditions to achieve anisotropic structure. <u>K. M. Reed, J. W. Swan and P. S. Doyle</u>	<b>SM13.</b> Examination of non-universalities in entangled polymer melts and solutions during the startup of steady shear flow. <u>D. Becerra, A. Córdoba and J. D. Schieber</u>	<b>GG13.</b> No yield stress for yield-stress fluids. <u>G. Pagani, M. Hofmann, L. E. Govaert, T. A. Tervoort and J. Vermant</u>	<b>BF2.</b> 3D printing of salt induced k-carrageenan gels for tissue engineering applications. <u>P. Thareja</u>	<b>IR13.</b> A novel and non-invasive method for shear interfacial rheology measurements. <u>D. C. Venerus</u>	<b>AM13.</b> Data-driven generation of modulus and phase angle master curves. <u>R. Haji and B. Asadi</u>	<b>SF2.</b> The stability and coalescence of water in oil emulsions: Temperature and salinity effects. <u>R. B. Bachnak, D. B. Moravec, B. G. Hauser, A. J. Dallas and C. S. Dutcher</u>
4:25	<b>SC14♦.</b> Modeling rough colloidal gels using Stokesian dynamics simulations. <u>M. V. Majji and J. W. Swan</u>	<b>SM14.</b> A scheme with distributed drag to accurately predict properties of a single polymer chain in flow fields. <u>P. Kumar and I. Saha Dalal</u>	<b>GG14.</b> The effect of thixotropy on the yield transition in cellulose nanocrystal gels. <u>E. Nikoumanesh and R. Poling-Skutvik</u>	<b>BF3.</b> Structure and mechanics of calcium-responsive protein hydrogels. <u>M. P. Chang, A. P. Gudinias, W. Huang and D. J. Mai</u>	<b>IR14.</b> Interfacial tribology of hydrophilic and hydrophobic surface-modified PDMS. <u>E. E. Schmidt, I. M. Miller and L. Hsiao</u>	<b>AM14.</b> Machine learning active-nematic hydrodynamics. <u>M. Han, J. Colen, R. Zhang, S. A. Redford, L. M. Lemma, Z. Dogic, M. Gardel, V. Vitelli and J. J. de Pablo</u>	<b>SF3.</b> Triblock copolymers as effective additives to control the linear and nonlinear rheology of emulsion suspensions. <u>R. Poling-Skutvik and D. Keane</u>
4:45	<b>SC15♦.</b> The short and long time dynamics of concentrated electrolytes: a non-equilibrium Brownian Dynamics study*. <u>E. Krucker-Velasquez and J. W. Swan</u>	<b>SM15.</b> Flow-induced configuration microphase separation and crystallization of entangled polyethylene under uniaxial extensional flows. <u>M. H. Nafar Sefiddashti, B. J. Edwards and B. Khomami</u>	<b>GG15.</b> On the nature of the flow curves of thixotropic materials. <u>T. Bhattacharyya, A. R. Jacob, G. Petekidis and Y. M. Joshi</u>	<b>BF4.</b> Measuring human mesenchymal stem cells-mediated degradation in response to cytokines presented locally and, in the environment, using multiple particle tracking microrheology. <u>T. C. O'Shea and K. M. Schultz</u>	<b>IR15.</b> From liquid monolayers to buckled elastic sheets: Polymers at the water/air interface. <u>M. Gottlieb and D. Ashkenazi</u>	<b>AM15.</b> Data-driven constitutive modeling in fluidic four-roll mill flows via small-angle X-ray scattering. <u>C. D. Young, P. T. Corona, A. Datta, M. E. Helgeson and M. D. Graham</u>	<b>SF4.</b> Entrapment of asphaltene-stabilized emulsions. <u>S. L. Biswal</u>

- 5:05 **SC16♦**. Pull up a seat to the error bar, or: On the quality of various statistical estimators for colloidal diffusion. *G. J. Wang, Y. Li and K. S. Silmore*
- 5:25 **SC17♦**. Modeling unsteady motion of a spherical particle in a viscoelastic fluid. *M. A. Joens and J. W. Swan*
- 5:45 **SC18♦**. Thixotropy as a dynamic regularizer for elasto-visco-plasticity. *J. W. Swan and N. J. Matteucci*
- 6:05 **SC19♦**. Learning physically-informed differential viscoelastic constitutive equations from data. *K. R. Lennon, G. H. McKinley and J. W. Swan*
- 6:25
- SM16**. Rheo-dielectrics and diffusion of type-A Rouse chain under fast shear flow: Method of evaluation of non-equilibrium parameters for FENE, friction-reduction, and Brownian force intensity variation. *H. Watanabe, Y. Matsumiya and T. Sato*
- SM17**. Unusual early onset of nonlinearity in entangled DNA solutions. *S. Banik and G. B. McKenna*
- GG16**. Thixotropic constitutive modeling of shear banding by boundary-induced modulus gradient in lamellar gel networks. *F. Wang and R. Larson*
- GG17**. Yield-stress fluids with tunable extensibility. *S. Sen, R. R. Fernandes and R. H. Ewoldt*
- BF5**. Tuning the rheology of collagen-based hydrogels using tannic acid particles. *P. Sarker, D. M. Nalband, D. O. Freytes, O. J. Rojas and S. A. Khan*
- BF6**. “Rapid-Seal Wound Gel”: The rheological basis for a product that stops bleeding. *S. R. Raghavan and M. B. Dowling*
- IR16**. Droplet evaporation on soft solid substrates. *V. Charitatos and S. Kumar*
- IR17**. A physics-based analytical model for the transition between passing to tumbling trajectories of a pair of viscous drops in a viscoelastic matrix in free shear. *K. Sarkar and A. Tarafdar*
- AM16**. Rapid temperature-dependent rheological measurements of non-Newtonian solutions using a machine-learning aided microfluidic rheometer. *F. Del Giudice and C. M. Barnes*
- AM17**. Rheology of human blood and the connection to physiology: A data-driven approach. *S. M. Farrington, N. J. Wagner and A. N. Beris*
- SF5**. Rheology of concentrated nanoemulsions at different contents of a polymer depletant. *Z. Abbasian Chaleshtari and R. Foudazi*
- SF6**. Stable membraneless complex coacervate microemulsions. *S. Srivastava*
- END

## Tuesday, October 11

### Morning

8:30	<b>PL2.</b> From Renaissance cosmetics to modern hand sanitisers: Rheology in the apothecary's workshop. <i>W. Poon</i> (Bingham Lecture) Sheraton 4						
9:20	COFFEE BREAK Sheraton 1 & Sheraton Promenade						
	<b>Sheraton 4</b> <b>Suspensions and Colloids</b>	<b>Sheraton 3</b> <b>Polymers Solutions, Melts and Blends</b>	<b>Sheraton 5</b> <b>Gels, Glasses and Jammed Systems</b>	<b>Michigan AB</b> <b>Biomaterials and Bio-fluid Dynamics</b>	<b>Sheraton 2</b> <b>Interfacial Rheology</b>	<b>Mayfair</b> <b>Rheometry &amp; Spectroscopy/Microscopy</b>	<b>Ontario</b> <b>Surfactants, Foams and Emulsions</b>
9:50	<b>SC20.</b> Viscoelastic creep and recovery in dense suspensions of rough colloids. <i>Y. C. Saraswat and L. Hsiao</i>	<b>SM18.</b> Nature of steady-state fast flow in entangled polymer melts: Chain stretching, viscosity scaling, and shear-induced disentanglement. <i>Z. Xu, R. Sun, W. Lu, S. Patil, J. Mays, K. S. Schweizer and S. Cheng</i>	<b>GG18•.</b> Designing stress-adaptive dense suspension. <i>J. M. Heinrich</i>	<b>BF7.</b> Droplet-based microfluidic tool to quantify viscosity of concentrating protein solutions and formulations. <i>D. Yang and L. M. Walker</i>	<b>IR18.</b> Elastoviscoplastic behaviour of model particle-laden interfaces. <i>A. Alicke, L. Stricker, T. A. Tervoort and J. Vermant</i>	<b>RS1.</b> Combined torsional-axial measurements in a single rheometer for determination of viscoelastic Poisson's ratio. <i>J. A. Rodríguez Agudo, J. Haerberle, G. Arnold, A. Shetty and C. Giehl</i>	<b>SF7.</b> Studying coalescence at different lengthscales: From films to droplets. <i>E. Chatziannakis, Y. Chen, R. B. Bachmak, C. S. Dutcher and J. Vermant</i>
10:10	<b>SC21.</b> A thermodynamically consistent, microscopically-based model of aggregating particle suspension rheology. <i>S. Jariwala, N. J. Wagner and A. N. Beris</i>	<b>SM19.</b> Stochastic kinetic theory applied to nonequilibrium polymer simulations. <i>S. Zhu and P. T. Underhill</i>	<b>GG19.</b> Tuning the rheological properties of dynamic covalent hydrogels through crosslinking bond exchange kinetics. <i>A. D. Crowell, T. M. FitzSimons, E. V. Anslyn and A. M. Rosales</i>	<b>BF8.</b> Polysorbate identity and content dictates the extensional flow properties of protein-excipient solutions. <i>K. T. Lauser, A. Rueter and M. A. Calabrese</i>	<b>IR19.</b> Emulsion stabilization caused by particle laden lubricating oils. <i>N. Trifkovic, G. G. Fuller and S. Calhoun</i>	<b>RS2.</b> On the measurement of normal stress differences: Are we making any progress?. <i>A. Thanasis and D. Vlassopoulos</i>	<b>SF8.</b> Shear-enhanced coalescence in oil-water emulsions. <i>A. Mashayekhi, C. Vazquez and J. M. Frostad</i>
10:30	<b>SC22.</b> Pinching dynamics of dense colloidal suspensions with depletion attractions. <i>D. D. Soetrisno, M. J. Gallegos, C. Martinez-Narvaez, V. Sharma and J. C. Conrad</i>	<b>SM20.</b> Nonlinear shear rheology of unentangled polystyrene solutions. <i>S. Costanzo, V. Ianniello, R. Pasquino, N. Grizzuti, G. Ianniruberto and G. Marrucci</i>	<b>GG20.</b> Yielding of capillary suspensions using simultaneous confocal imaging and rheological measurements. <i>J. Allard and E. Koos</i>	<b>BF9.</b> Magnetic stress rheometer for abscess fluid characterization. <i>A. Shih and G. G. Fuller</i>	<b>IR20.</b> Tuning the rheology and microstructure of particle-laden fluid interfaces with Janus particles. <i>Y. Qiao, N. Keim and X. Cheng</i>	<b>RS3.</b> Shear and pressure alter wax appearance in mineral oil + paraffin wax mixtures. <i>S. Helsper and M. W. Liberatore</i>	<b>SF9.</b> Rheology and texture of animal and plant-based mayo emulsions. <i>N. Nikolova, L. Hassan, C. Martinez, M. W. Boehm, S. K. Baier and V. Sharma</i>
10:50	<b>SC23.</b> Cage formation and dynamics in repulsive and attractive glasses probed by high frequency rheology. <i>T. Athanasiou, G. Petekidis, B. Mei and K. S. Schweizer</i>	<b>SM21.</b> Entanglement kinetics in the discrete slip-link model. <i>B. E. Dolata and J. E. Seppala</i>	<b>GG21.</b> Influence of surface topography on the yielding of thermo-reversible colloidal gels. <i>F. J. Müller, L. Isa and J. Vermant</i>	<b>BF10.</b> Effect of ionic content in the linear and nonlinear microrheology of hyaluronic acid. <i>L. Martin-Alarcon, S. L. Bryant and M. Trifkovic</i>	<b>IR21.</b> Can particle bidispersity lead to easier stabilization of Pickering emulsions?. <i>A. Abutalebi and G. F. Christopher</i>	<b>RS4.</b> "Infinite" gap Couette rheometry: A simple method to measure yield strength. <i>P. R. de Souza Mendes and P. R. Varges</i>	<b>SF10.</b> Dense suspensions: A constitutive model for droplet breakup in unsteady flows. <i>J. D. Peterson, V. Michael and I. Bagkeris</i>
11:10	<b>SC24.</b> Orthogonal superposition to distinguish thixotropy, anti-thixotropy, and viscoelasticity. <i>Y. Wang and R. H. Ewoldt</i>	<b>SM22.</b> Molecular dynamics simulation of entangled melts at high rates: Identifying entanglement lockup mechanism leading to true strain hardening. <i>Y. Zheng, M. Tsige and S.-Q. Wang</i>	<b>GG22.</b> Effect of DC electric field on the rheology of jammed suspensions. <i>A. Jain, J. R. Seth, V. A. Juvekar, G. Shankar and R. Bansal</i>	<b>BF11.</b> Conehead termites spit predators with large liquid lassos. <i>E. J. Challita, P. Sehgal and S. Bhamla</i>	<b>IR22.</b> Influence of interfacial rheological properties on the stability of Pickering foams. <i>N. Brown, E. Correia and S. Razavi</i>	<b>RS5.</b> Stress-controlled optimally windowed chirp rheometry ( $\sigma$ -OWCh) for the characterisation of materials undergoing a sol-gel transition. <i>R. E. Hudson, A. J. Holder, J. D. Rathinaraj, G. H. McKinley and D. J. Curtis</i>	<b>SF11.</b> Rheology of pickering emulsions stabilized via cellulose-derived nanoparticles. <i>M. Sohail, R. Husain, T. Pirzada and S. A. Khan</i>

11:30	<p><b>SC25.</b> Micromechanics of dense suspensions: Microscopic interactions to macroscopic rheology. <u>R. V. More</u> and <u>A. Ardekani</u></p>	<p><b>SM23.</b> Stretched Polymer Physics, Extensional Rheology and Free Surface Flows. <u>J. Dinic</u>, <u>C. Martinez</u>, <u>L. N. Jimenez</u>, <u>C. Slykas</u>, <u>A. Kubinski</u>, <u>F. Al-Breiki</u> and <u>V. Sharma</u></p>	<p><b>GG23.</b> Precipitated wax content and yield stress of model wax-oil mixtures determined by arrest of flow during cooling at fixed stress. <u>C. G. Harris</u>, <u>C. E. Rice</u>, <u>A. Shetty</u>, <u>L. Mahir</u> and <u>R. Larson</u></p>	<p><b>BF12.</b> Characterizing interactions between EPS components of <i>Pseudomonas Aeruginosa</i> biofilms and glycoside hydrolases. <u>B. Bhattarai</u> and <u>G. F. Christopher</u></p>	<p><b>RS6.</b> Experimentally decomposing MAOS responses into recoverable and unrecoverable components unifies physical interpretations of nonlinear material functions. <u>Y. H. Shim</u>, <u>P. K. Singh</u> and <u>S. A. Rogers</u></p>	<p><b>SF12.</b> Synthesis of novel core-shell microparticles with degradable shells for controlled-delivery applications. <u>W. R. Duffie</u> and <u>T. W. Walker</u></p>
-------	---	---	---	---	--	---

11:50 LUNCH BREAK / SOCIETY BUSINESS MEETING Sheraton 4, 12:00-1:30 pm

### Afternoon

	<i>Sheraton 4</i> Suspensions and Colloids	<i>Sheraton 3</i> Polymers Solutions, Melts and Blends	<i>Sheraton 5</i> Gels, Glasses and Jammed Systems	<i>Michigan AB</i> Biomaterials and Bio-fluid Dynamics	<i>Sheraton 2</i> Interfacial Rheology	<i>Mayfair</i> Rheometry & Spectroscopy/Microscopy	<i>Ontario</i> Surfactants, Foams and Emulsions
1:30	<p><b>SC26.</b> Characterising dense non-Brownian suspensions under inhomogeneous flow. <u>C. Ness</u></p>	<p><b>SM24.</b> Structural and rheological responses of an entangled polyethylene solution to uniaxial extensional flows via nonequilibrium molecular dynamics simulations. <u>M. H. Nafar Sefiddashti</u>, <u>B. J. Edwards</u> and <u>B. Khomami</u></p>	<p><b>GG24.</b> Time-resolved microstructural changes in large amplitude oscillatory shear (LAOS) of model multi-component soft particle gels. <u>G. J. Donley</u>, <u>G. J. Donley</u>, <u>M. Bantawa</u> and <u>E. Del Gado</u></p>	<p><b>BF13.</b> Weak overshoot of loss modulus in fungal biofilms in large oscillatory shear rheology studies. <u>N. M. Aiswarya</u>, <u>S. Tabraiz</u>, <u>H. Taneja</u>, <u>A. Ahmed</u> and <u>A. R. Narayanan</u></p>	<p><b>IR24.</b> Interfacial compressional rheology of saliva droplets in the context of aerosol evaporation. <u>M. Rodriguez-Hakim</u>, <u>M. C. Novaes Silva</u> and <u>J. Vermant</u></p>	<p><b>RS7.</b> Microstructural changes of concentrated Newtonian suspensions in the first oscillation cycles probed with linear and non-linear rheology. <u>M. Minale</u>, <u>R. Martone</u> and <u>C. Carotenuto</u></p>	<p><b>SF13•.</b> Drainage of protein foams. <u>L. Hassan</u>, <u>C. Xu</u>, <u>M. W. Boehm</u>, <u>S. K. Baier</u> and <u>V. Sharma</u></p>
1:50	<p><b>SC27.</b> Shear-induced gradient diffusivity of a red blood cell suspension: Effects of cell dynamics from tumbling to tank-treading. <u>M. R. Abhilash</u> and <u>K. Sarkar</u></p>	<p><b>SM25.</b> Spinnability and rheology of PEO solutions in water/acetonitrile mixtures via centrifugal force spinning. <u>C. Slykas</u>, <u>J. Merchiers</u>, <u>C. Martinez</u>, <u>L. Edano</u>, <u>B. Hasan</u>, <u>V. Trada</u>, <u>N. Reddy</u> and <u>V. Sharma</u></p>	<p><b>GG25.</b> Gel breakdown in a multicomponent attractive colloid. <u>A. Clarke</u></p>	<p><b>BF14.</b> In situ magnetic microrheology of airway mucus. <u>M. Braunreuther</u> and <u>G. G. Fuller</u></p>	<p><b>IR25.</b> Mechanistic insight into decrease in lung surfactant modulus as acute respiratory distress progresses. <u>C. O. Ciutara</u>, <u>S. Barman</u>, <u>S. V. Iasella</u> and <u>J. A. Zasadzinski</u></p>	<p><b>RS8.</b> Kramers-Kronig relations for nonlinear rheology. <u>S. Shanbhag</u> and <u>Y. M. Joshi</u></p>	<p><b>SF14.</b> Drainage via stratification in freestanding films made with polymer-surfactant complexes. <u>C. Xu</u>, <u>C. Martinez</u> and <u>V. Sharma</u></p>
2:10	<p><b>SC28.</b> Shear-induced migration of a suspension under quasi-planar confinement. <u>J. T. Antolik</u>, <u>A. Howard</u>, <u>F. Vereda</u>, <u>N. Ionkin</u>, <u>M. Maxey</u> and <u>D. M. Harris</u></p>	<p><b>SM26.</b> Effects of Deborah number and long chain branching on the elastic stress amplitude of butyl rubber in LAOS. <u>J. Bielby</u>, <u>S. Elliott</u> and <u>J. Bourque</u></p>	<p><b>GG26.</b> Leveraging the polymer glass transition to access thermally-switchable shear jamming suspensions. <u>C. Chen</u>, <u>M. van der Naald</u>, <u>A. Singh</u>, <u>N. Dolinski</u>, <u>G. L. Jackson</u>, <u>H. M. Jaeger</u>, <u>S. J. Rowan</u> and <u>J. J. de Pablo</u></p>	<p><b>BF15.</b> Association and adsorption of mucins to the air interface in human airway mucus. <u>S. Danielsen</u>, <u>R. C. Boucher</u> and <u>M. Rubinstein</u></p>	<p><b>IR26.</b> "Coronavirus pleomorphism". <u>M. Kanso</u>, <u>A. J. Giacomini</u>, <u>M. Naime</u>, <u>V. Chaurasia</u>, <u>K. Tontiwattanakul</u> and <u>E. Fried</u></p>	<p><b>RS9.</b> A critical evaluation and modification of the Padé-Laplace method for deconvolution of viscoelastic spectra. <u>S. Shams Es-haghi</u> and <u>D. J. Gardner</u></p>	<p><b>SF15.</b> A coupled computational fluid dynamics/population balance method to understand microstructure in foams and emulsions. <u>R. Rao</u>, <u>H. L. Cleaves</u>, <u>W. Ortiz</u>, <u>C. Roberts</u> and <u>C. Ahmad</u></p>
2:30	<p><b>SC29.</b> Particle redistribution in a horizontal couette. <u>M. Davoodi</u> and <u>A. Clarke</u></p>	<p><b>SM27.</b> "Tying the knot", ultra-fast entangling across ultra-high molecular weight polyethylene interfaces. <u>F. Christakopoulos</u>, <u>E. M. Troisi</u>, <u>N. Friederichs</u>, <u>J. Vermant</u> and <u>T. A. Tervoort</u></p>	<p><b>GG27.</b> Memory effects and strain hardening in glassy polymers: Comparison between experiments and simulations. <u>T. Merlette</u>, <u>F. Clement</u>, <u>P. Sotta</u>, <u>C. Crauste-Thibierge</u>, <u>J. Hem</u>, <u>S. Ciliberto</u> and <u>D. R. Long</u></p>	<p><b>BF16.</b> Compression/tensile moduli and adhesion between corneal and conjunctival cells: influence of mucins. <u>P. Baumli</u>, <u>C. Liu</u> and <u>G. G. Fuller</u></p>	<p><b>IR27.</b> Prediction for the bubble dissolution rate in a protein solution. <u>X. Zhong</u> and <u>A. Ardekani</u></p>	<p><b>RS10.</b> Environmentally-controlled dripping-onto-substrate (DoS) extensional rheometry of complex fluids. <u>K. T. Lauser</u>, <u>D. Y. Zhang</u>, <u>B. P. Robertson</u> and <u>M. A. Calabrese</u></p>	<p><b>SF16.</b> Particle stabilization in non-aqueous foams. <u>S. Calhoun</u>, <u>Z. Jan</u> and <u>G. G. Fuller</u></p>

- 2:50 **SC30.** Particle migration of suspensions over and through a porous structure using MRI. P. Mirbod and N. Shapley
- SM28.** Dilution rheology allows for the determination of the molecular weight distribution of ultra-high molecular weight polyolefins. V. Ianniello, S. Costanzo, R. Pasquino, G. Ianniruberto, T. A. Tervoort and N. Gizzuti
- GG28.** Strain-hardening of glassy polymers: Theory and simulations. T. Merlette, F. Clement, P. Sotta and D. R. Long
- BF17.** Effects of saliva elasticity and expiration velocity on aerosol formation upon sneezing. M. Rodriguez-Hakim, L. Rüz and J. Vermant
- IR28.** Shear viscosity effect on lipid membrane undulations and dynamic structure factor of liposomes. P. M. Vlahovska, H. A. Faizi and R. Granek
- RS11.** Understanding inkjet inks using extreme high frequency and extensional rheology. T. R. Tuladhar
- SF17.** Experimental investigation of fiber-foam rheology in advanced multiphase forming systems. C. Ahmad, C. Roberts, R. Rao, J. Miers, B. Halls, M. Usta, D. Ranjan and C. Aidun
- 3:10
- COFFEE BREAK Sheraton 1 & Sheraton Promenade
- Flow Induced Inst. & Non-Newton Fluids**
- 3:45 **SC31.** Particle-polymer interactions and macromolecular properties of viscoelastic matrix influence the rheology and pinching dynamics of particle suspensions. C. Martinez, C. Wang, H. Sun, D. Iyer, S. Srivastava and V. Sharma
- SM29.** Unexpected slow relaxation dynamics of pure ring polymers. C. M. Schroeder and M. Q. Tu
- GG29.** Vesicles as gelling agents: Close-packed lipid vesicles provide a “green” route to gel polar solvents like glycerol. N. Agrawal, F. Burni and S. R. Raghavan
- BF18.** Cell distributions and segregation during blood flow within straight and serpentine vascular geometries in sickle cell disease and iron deficiency anemia. X. Cheng, C. Caruso, W. A. Lam and M. D. Graham
- IN1.** Designing complex flows for the investigation of microparticle transport. A. Lindner
- RS12.** New metrics to quantify the brittle-like behavior of yield-stress fluids in extension. R. R. Fernandes, M. W. Boehm, S. K. Baier and R. H. Ewoldt
- SF18.** Magneto-rheology of magnetically-induced phase formation in block copolymer micelle solutions. G. Kresge and M. A. Calabrese
- 4:05 **SC32.** Particle shape effect on shear thickening and hysteresis behavior of the non-Brownian suspension. M. Mahmoudian, F. Goharpey, M. Behzadnasab and Z. Daneshfar
- SM30.** Molecular dynamics simulations of high molecular weight ring polymer melts. T. O'Connor, J. Smrek and G. Grest
- GG30.** Not too cold, not too crowded: Identifying minimal conditions for gelation and thermokinetic processing of colloidal solids. S. M. Fenton, P. Padmanabhan, B. K. Ryu, T. Nguyen, R. N. Zia and M. E. Helgeson
- BF19.** Numerical study of the competitive effects of inertial and elastic forces on cell deformation and cross-streamline migration in microfluidic flows. G. Esposito, M. A. Hulsen, G. D'Avino and M. M. Villone
- IN2.** Liquid fragmentation in secondary flows of Newtonian and viscoelastic fluids. B. Keshavarz
- RS13.** 3-Dimensional manipulation of colloidal particles and liquid droplets using automated flow control. M. Q. Tu, H. V. Nguyen, M. I. Jacobs and C. M. Schroeder
- SF19.** Wormlike micelles with unusual rheology: Double-crossover of  $G'$  and  $G''$  in dynamic rheometry. N. Agrawal and S. R. Raghavan
- 4:25 **SC33.** Impact dynamics of suspension droplets on liquid films. B. Yan and X. Tang
- SM31.** Microscopic theory for the center-of-mass dynamics of ring polymer liquids. B. Mei and K. S. Schweizer
- GG31.** Structural dynamics and kinetics of rheological aging of a model thermoreversible colloidal gel following a thermal quench. K. Suman and N. J. Wagner
- BF20.** Microfluidic single-cell shape analysis as a biomarker for pathophysiological red blood cell capillary flow. S. M. Recktenwald, G. Simionato, M. Lopes, L. Kaestner, S. Quint and C. Wagner
- IN3.** Confinement-induced migration of thermoresponsive gel clusters in cylindrical channel flow. L. Hsiao and K. Smith
- RS14.** Study of viscoelastic behavior at microscopic scales using time-dependent Capillary Micromechanics. K. J. Bakal and H. M. Wyss
- SF20.** A mesoscopic model for nonlinear rheology of entangled wormlike micellar solutions. T. Sato and R. Larson
- 4:45 **SC34.** Drop impact: Complex fluids under extreme stress. M. M. Driscoll, P. Shah and S. Arora
- SM32.** Rheological response of circular macromolecules. G. B. McKenna, D. Chen, J. A. Kornfield, K. Molnar, J. E. Puskas, H. Kim and C. A. Helffer
- GG32.** The unexpectedly slow gelation dynamics of cellulose nanocrystals. L. Morlet-Decamin, T. Divoux and S. Manneville
- BF21.** A physiology-based constitutive approach to hemorrheology. E. Javadi, M. Armstrong and S. Jamali
- IN4.** Symmetry breaking in the problem of bubble rising through viscoelastic materials. P. Moschopoulos, Y. Dimakopoulos and J. Tsamopoulos
- RS15.** Cavitation rheology of yield stress fluids. H. Mohammadi Goushki
- SF21.** Role of particle shape and surface chemistry on flow-induced microstructural changes in wormlike micellar solutions. M. Mekala, B. G. Madivala and A. Deshpande



5:05	<b>SC35.</b> Structural control of mesoscale droplets. <u>J. A. Díaz Amaya</u>	<b>SM33.</b> Super-stretchable elastomers from cross-linked ring polymers. <i>J. Wang, T. O'Connor, G. Grest and T. Ge</i>	<b>GG33.</b> Nonaffinity-induced critical slowing down in fibrous networks and dense suspensions. <u>J. L. Shivers</u> , <i>A. Sharma and F. C. MacKintosh</i>	<b>BF22.</b> Aggregation and break up of red blood cell aggregates in (complex) flow. <u>M. P. Lettinga</u> , <i>O. Korculanin, M. Babaki and A. Gholivand</i>	<b>IN5.</b> Orientational dynamics and flow instability in the extensional flow of nematic carbon nanotube dopes. <u>H. S. Lee</u>	<b>RS16.</b> Rimming flow for measuring the complex viscosity $\eta^*(\Omega)$ . <u>J. Sanders</u>	<b>SF22.</b> Rheological impacts of the pathways of residual fluorosurfactants in fluoropolymer processing. <u>C. C. White</u> , <i>B. Streifel, A. Wechsung and M. Timothy</i>
5:25	<b>SC36.</b> Colloidal physics in a drop. <i>M. Milani, L. Cipolletti and L. Ramos</i>	<b>SM34.</b> Rheology of linear polymer melts with end-on and side-on liquid crystal moieties in different phases: Effects of composition and thermodynamical state on relaxation dynamics. <u>D. Becerra and L. M. Hall</u>	<b>GG34.</b> Uncovering distinct contributions to the shear-stress of dense packings of soft spheres. <u>H. A. Vinutha</u> , <i>M. Marchand, V. Vasisht, M. Caggioni, V. Trappe and E. Del Gado</i>	<b>BF23.</b> Recent advances to the thixo-elasto-viscoplastic (TEVP) modeling of blood rheology. <i>M. Armstrong, A. Pincot, S. Jariwala, N. J. Wagner and A. N. Beris</i>	<b>IN6.</b> Chiral domains in a flowing achiral nematic liquid crystal. <i>Q. Zhang, R. Zhang and L. Bischofberger</i>		<b>SF23.</b> The benefits of a formalism built on recovery: theory, experiments, and modeling. <u>J. Shi and S. A. Rogers</u>

5:45  
7:00  
8:00

END

AWARDS RECEPTION Sheraton Promenade, until 8 pm  
AWARDS BANQUET Sheraton 4 and 5

## Wednesday, October 12

### Morning

8:30	PL3. Nanoparticle transport in complex media. <i>J. C. Conrad</i> Sheraton 4						
9:20	COFFEE BREAK Sheraton 1 & Sheraton Promenade						
	<b>Sheraton 4</b> <b>Suspensions and Colloids</b>	<b>Sheraton 3</b> <b>Polymers Solutions, Melts and Blends</b>	<b>Sheraton 5</b> <b>Gels, Glasses and Jammed Systems</b>	<b>Michigan AB</b> <b>Biomaterials and Bio-fluid Dynamics</b>	<b>Sheraton 2</b> <b>Flow Induced Inst. &amp; Non-Newtonian Fluids</b>	<b>Mayfair</b> <b>Rheometry &amp; Spectroscopy/Microscopy</b>	<b>Ontario</b> <b>Additive Manufacturing and Composites</b>
9:50	<b>SC37.</b> Brownian dynamics simulations of colloids bridged by telechelic polymers under shear. <i>E. Mani, G. Parthasarathy, S. Krishnamurthy and R. Larson</i>	<b>SM35.</b> Crystallization of copolymers with short-chain branching. <i>M. Andreev and G. C. Rutledge</i>	<b>GG35.</b> Jamming distance dictates colloidal shear thickening. <i>L. Hsiao and S. Pradeep</i>	<b>BF24.</b> Fluid structure interactions (FSI) between linearly elastic sheets and complex fluids in microfluidic devices at low Reynolds numbers and intermediate Weissenberg numbers. <i>A. Venkatesh, V. Anand and V. Narsimhan</i>	<b>IN7.</b> Optimized microfluidic device for homogeneous uniaxial and biaxial elongation of mobile fluids. <i>S. J. Haward, A. Q. Shen, S. Varchanis, K. Toda-Peters, M. A. Alves and F. Pimenta</i>	<b>RS18.</b> Transient effects and the accurate rheometric analysis of purely viscous liquids via capillary filling dynamics. <i>J. Contreras-Naranjo and V. Ugaz</i>	<b>AC1.</b> Additive manufacturing with cellulose nanocrystals; rheological considerations for “successful” printing. <i>M. J. Bortner</i>
10:10	<b>SC38.</b> Magneto-rheology of thermo-responsive polymer and anisotropic nanoparticle suspensions. <i>C. A. Neal, M. C. Quan, V. León, N. Chibambo and M. A. Calabrese</i>	<b>SM36.</b> Exploiting structure-process property relationships of branched polycarbonates for industrial applications. <i>M. Chellamuthu</i>	<b>GG36.</b> Dynamics of rigid networks in dense suspension flow. <i>M. van der Naald, A. Singh and H. Jaeger</i>	<b>BF25.</b> Helical locomotion in yield stress fluids. <i>F. Nazari and H. Mohammadigoushki</i>	<b>IN8.</b> Measuring stress and flow in asymmetric and fluctuating viscoelastic flows. <i>G. M. Pradillo, P. Salipante and S. D. Hudson</i>	<b>RS19.</b> Protorheology: The first thing to do. <i>M. T. Hossain and R. H. Ewoldt</i>	<b>AC2.</b> Programmable 3D printed Bouligand nanostructures. <i>M. Esmaeili, K. George, N. Nikfarjam, N. Taheri-Qazvini and M. Sadati</i>
10:30	<b>SC39.</b> Defining the structure and properties of colloidal rod systems during dynamic phase transitions. <i>S. He, D. Pascucci, M. Caggioni, S. Lindberg and K. M. Schultz</i>	<b>SM37.</b> Retaining structural color in a diblock bottlebrush copolymer solution by chemical and physical means. <i>M. A. Wade, J. Shi, Y. Kamble, D. Walsh, D. Guironnet and S. A. Rogers</i>	<b>GG37.</b> A gel with an in-built clock: Spontaneous dissolution of a molecular organogel after several days. <i>F. Burni and S. R. Raghavan</i>	<b>BF26.</b> Fluid–structure interactions in nematic liquid crystals. <i>T. Chandler and S. Spagnolie</i>	<b>IN9.</b> Inertio-elastic instabilities in free shear and wall-bounded flows. <i>S. Yamanidouzisorkhabi, Y. Raj, T. A. Zaki, G. H. McKinley and I. Bischofberger</i>	<b>RS20.</b> Local vs. nonlocal rheology models evaluated for granular matter under Taylor-Couette flow using Rheo-NMR. <i>D. A. Clarke, P. Galvosas and D. J. Holland</i>	<b>AC3.</b> Hydroxypropyl cellulose-based inks for printing solid photonic structures. <i>K. George, M. Esmaeili, N. Taheri-Qazvini and M. Sadati</i>
10:50	<b>SC40.</b> Settling dynamics of flexible Brownian filaments. <i>L. Hildebrand Pires da Cunha, S. L. Biswal and F. C. MacKintosh</i>	<b>SM38.</b> Polydisperse Rouse model for semidilute unentangled polyelectrolyte solutions. <i>A. Han and R. H. Colby</i>	<b>GG38.</b> Phase diagram and rheology of polymer-carbon black aqueous suspensions. <i>G. Legend, S. Manneville and T. Divoux</i>	<b>BF27.</b> Shear flow-controlled alignment in 3D neuronal matrices in vitro. <i>L. M. Dedroog, O. Deschaume, C. J. Garcia Abrego, E. Koos, Y. De Coene, A. Vananroye, W. Thielemans, C. Bartic and M. P. Lettinga</i>	<b>IN10.</b> Viscoelastic creasing: Free-surface instability of a viscoelastic liquid under compression. <i>X. Guan, L. Reddipalli, D. Butler, Q. Liu and S. Velankar</i>	<b>RS21.</b> Three-dimensional technique for probing flow kinematics of falling liquid films provides real time sag measurements. <i>M. W. Issa, H. Yu, M. C. Roffin, J. F. Gilchrist, S. V. Barancyk, R. Rock and C. L. Wirth</i>	<b>AC4.</b> Rheology and processing of UV-curable polymeric binders for additive manufacturing in space environments. <i>B. K. Bretmann and A. Marnot</i>
11:10	<b>SC41.</b> High shear capillary rheology and flow birefringence of rod-like viruses. <i>S. Kuei, P. Salipante, R. P. Murphy, W. M. Katie and S. D. Hudson</i>	<b>SM39.</b> Influence of multivalent ions on composition and viscoelasticity of polyelectrolyte complexes. <i>D. Iyer, V. Syed, H. Senbandith and S. Srivastava</i>	<b>GG39.</b> Identifying the glass transitions and material properties of polyelectrolyte complex materials. <i>I. A. Ramirez Marrero, R. Gutzler, N. Kaiser, B. von Vacano, R. Konradi and S. L. Perry</i>	<b>BF28.</b> Rheological characterization of neurospheres and the effects of oxidative stress. <i>Y.-H. Huang, R. V. Ghaemi, J. Cheon, V. G. Yadav and J. M. Frostad</i>	<b>IN11.</b> Effects of vertical confinement on the microfluidic entry flow of polymer solutions. <i>M. Raihan, R. Chitrao and X. Xuan</i>	<b>RS22.</b> Measuring friction between individual biomass particles under wet and dry conditions. <i>M. W. Liberatore, E. Akbari Fakhrebadi and J. Stickel</i>	<b>AC5.</b> Prediction of jetting behavior for 3D food and pharmaceutical printing. <i>E. Chadwick, M. Tan, M. Pardakhti, S.-Y. Chang, Q. Yang and A. W. Ma</i>

11:30	<b>SC42.</b> Alignment of colloidal rods in crowded environments. <u>V. Calabrese</u> , <u>S. Varchanis</u> , <u>S. J. Haward</u> and <u>A. Q. Shen</u>	<b>SM40.</b> Effect of dispersion media composition on the rheology of the short-sidechain perfluorosulfonic acid ionomer dispersions. <u>S. Khandavalli</u> , <u>J. H. Park</u> , <u>D. J. Myers</u> , <u>M. Ulsh</u> and <u>S. A. Mauger</u>	<b>GG40.</b> Structural ordering and particle dynamics in a dense silica colloid. <u>X.-M. Lin</u> , <u>H. He</u> , <u>J. Lee</u> , <u>Q. He</u> , <u>J. Dinic</u> , <u>W. Chen</u> , <u>Z. Jiang</u> and <u>S. Narayanan</u>	<b>IN12.</b> Discovery of maximum drag enhancement asymptote in turbulent flow of dilute polymeric solutions. <u>B. Khomami</u> , <u>N. Liu</u> and <u>Y. Zhu</u>	<b>AC6.</b> Rheology and direct-writing flow mechanisms of graphene-based polymer nanocomposites. <u>R. Tandel</u> , <u>C. Grover</u> , <u>C. B. Bernal</u> , <u>I. Sargin</u> , <u>S. Beckman</u> and <u>A. Gozen</u>
-------	---	--	---	---	--

11:50 LUNCH BREAK

### Afternoon

	<b>Sheraton 4 Suspensions and Colloids</b>	<b>Sheraton 3 Polymers Solutions, Melts and Blends</b>	<b>Sheraton 5 Gels, Glasses and Jammed Systems</b>	<b>Michigan AB Active Matter and Directed Systems</b>	<b>Sheraton 2 Flow Induced Inst. &amp; Non-Newt Fluids</b>	<b>Mayfair Rheometry &amp; Spectroscopy/Microscopy</b>	<b>Ontario Additive Manufacturing and Composites</b>
1:30	<b>SC43.</b> Experimental and theoretical studies of cross-stream migration of non-spherical particles in pressure-driven flows of viscoelastic fluid. <u>V. Narsimhan</u> , <u>C.-W. Tai</u> and <u>S. Wang</u>	<b>SM41.</b> Linear viscoelastic properties and electrical conductivity evolution of PP/PS/CNT composites during steady shear. <u>D. Strugova</u> , <u>E. David</u> and <u>N. R. Demarquette</u>	<b>GG41.</b> Tuning mechanical memory and aging in soft materials by oscillatory training. <u>P. Edera</u> , <u>B. F. Di Dio</u> , <u>S. Aime</u> and <u>M. Cloitre</u>	<b>AD1•.</b> Odd viscosity and odd elasticity. <u>V. Vitelli</u>	<b>IN13.</b> A Space-Time Galerkin/Least-Squares Method for the simulation of non-Newtonian fluid flows. <u>S. Varchanis</u> , <u>S. J. Haward</u> and <u>A. Q. Shen</u>	<b>RS24.</b> Automated, high-throughput microrheology for material formulation. <u>Y. Luo</u> , <u>A. V. Bayles</u> , <u>M. Gu</u> , <u>Y. He</u> , <u>R. Martineau</u> , <u>M. Gupta</u> , <u>T. Squires</u> , <u>M. T. Valentine</u> and <u>M. E. Helgeson</u>	<b>AC7.</b> Promoting inter-filament fusion in embedded 3D printing. <u>L. M. Friedrich</u> and <u>J. E. Seppala</u>
1:50	<b>SC44.</b> Isotropic-to-nematic phase transition in length-polydisperse carbon nanotube solutions. <u>I. R. Siqueira</u> , <u>C. J. Ginestra</u> and <u>M. Pasquali</u>	<b>SM42.</b> Temperature-controlled dripping-onto-substrate (DoS) rheometry of polymer micelle solutions. <u>D. Y. Zhang</u> and <u>M. A. Calabrese</u>	<b>GG42.</b> Residual stresses and shear-induced overaging in boehmite gels. <u>I. Sudreau</u> , <u>M. Auxois</u> , <u>M. Servel</u> , <u>E. Lécolier</u> , <u>S. Manneville</u> and <u>T. Divoux</u>	<b>AD2.</b> Thermocapillary motion of a solid Janus microcylinder near a liquid-gas interface. <u>A. Arslanova</u> , <u>G. Natale</u> , <u>N. Reddy</u> , <u>J. Fransaer</u> and <u>C. Clasen</u>	<b>IN14.</b> Lagrangian stretching reveals polymeric stress field. <u>M. Kumar</u> and <u>A. Ardekani</u>	<b>RS25.</b> Microtensometry and confocal microscopy: Relating monolayer structure to interfacial dilational modulus. <u>S. V. Iasella</u> , <u>C. O. Ciutara</u> , <u>S. Barman</u> and <u>J. A. Zasadzinski</u>	<b>AC8.</b> Embedded 3D printing: Rheology controlled minimum stable feature size. <u>M. T. Hossain</u> , <u>W. Eom</u> , <u>S. Tawfik</u> and <u>R. H. Ewoldt</u>
2:10	<b>SC45.</b> The effects of suspending fluid viscoelasticity on the tractions, deformation, and effective stress of capsules and red blood cells in a flowing suspension. <u>B. S. Neo</u> and <u>E. S. Shaqfeh</u>	<b>SM43.</b> The first-ever medium-amplitude oscillatory shear stress (MAOStress) measurement. <u>N. Ramlawi</u> , <u>M. T. Hossain</u> , <u>A. Shetty</u> and <u>R. H. Ewoldt</u>	<b>GG43.</b> Non-monotonic stress relaxation in a “simple” yield stress fluid. <u>C. E. Owens</u> and <u>G. H. McKinley</u>	<b>AD3.</b> Chaotic rheology of autophoretic colloids. <u>R. Kailasham</u> and <u>A. Khair</u>	<b>IN15.</b> Numerical study of laminar-turbulent transition in viscoelastic channel flows. <u>A. Martinez Ibarra</u> and <u>J. S. Park</u>	<b>RS26.</b> Meso-scale topology variation during stress relaxation of main-chain liquid crystal elastomers via digital image correlation. <u>A. Forster</u> , <u>J. Van Blitterswyk</u> and <u>T. D. Nguyen</u>	<b>AC9.</b> Manufacturing with instabilities. <u>P.-T. P. Brun</u> , <u>L. Cai</u> , <u>T. Jones</u> and <u>C. Ushay</u>
2:30	<b>SC46.</b> Designing multicomponent polymer colloids for self-stratifying films. <u>P. K. Singh</u> , <u>M. L. Pacholski</u> , <u>J. Gu</u> , <u>Y. K. Go</u> , <u>G. Singhal</u> , <u>C. Leal</u> , <u>P. V. Braun</u> , <u>K. A. Patankar</u> , <u>R. Drumright</u> , <u>S. A. Rogers</u> and <u>C. M. Schroeder</u>	<b>SM44.</b> Thermodynamic consistency of the “true” Maxwell model. <u>H. C. Öttinger</u> and <u>H. Struchtrup</u>	<b>GG44.</b> Memory in aging colloidal gels with time-varying attraction. <u>R. Leheny</u> , <u>Y. Chen</u> , <u>Q. Zhang</u> and <u>S. Ramakrishnan</u>	<b>AD4.</b> Active control of active matter. <u>S. A. Ghaffarizadeh</u> and <u>G. J. Wang</u>	<b>IN16.</b> Numerical description of 3D elastic instability in contraction flow domain and implication given by the result in the 2D and axisymmetric geometry. <u>Y. Kwon</u>	<b>RS27.</b> FSVPy: A python-based package for fluorescent streak velocimetry (FSV). <u>H. Lin</u> , <u>B. Blackwell</u> , <u>M. M. Driscoll</u> and <u>J. J. Richards</u>	<b>AC10.</b> 2-functionalities-in-1 : Embedded 3D printing of alginate into a SiO <sub>2</sub> -CaCl <sub>2</sub> gel bath. <u>F. J. Müller</u> , <u>Z. Ambra</u> , <u>L. Windlin</u> and <u>J. Vermant</u>

2:50	<b>SC47.</b> Flow and alignment of protein nanofibril suspensions. <i>T. P. Santos, V. Calabrese, M. W. Boehm, S. K. Baier, S. K. Baier and A. Q. Shen</i>	<b>SM45.</b> Nonequilibrium thermodynamics for soft matter made easy(er). <i>J. D. Schieber and A. Córdoba</i>	<b>GG45.</b> A generalized memory function based on recoverable strain and its relation to nanoscale structure. <i>K. M. Kamani, Y. H. Shim, J. Griebler, S. Narayanan, Q. Zhang and S. A. Rogers</i>	<b>AD5.</b> A swirling robotic swimmer propelled only by fluid normal stresses. <i>E. S. Shaqfeh, J. Binagia, L. Kroo, N. Eckman, N. B. Siong and M. Prakash</i>	<b>IN17.</b> Ketchup drip: Can you change the drop size? - Extensional gravity-rheometry of yield stress fluids. <i>P. Coussot and A. Geffrault</i>		
3:10		COFFEE BREAK Sheraton 1 & Sheraton Promenade					
	<b>Pharmaceuticals, Food and Consumer Prod.</b>						
3:45	<b>SC48.</b> Electro-hydrodynamic interactions of leaky dielectric drops. <i>J. I. Kach, L. M. Walker and A. Khair</i>	<b>PF1•.</b> Nonlinear rheological analyses of food products. <i>S. Mahammad</i>	<b>GG46.</b> Constitutive modelling of adhesive soft particle glass rheology. <i>M. Bantawa, A. Shahmohammadi and R. T. Bonnecaze</i>	<b>AD6.</b> Forced microrheology of active colloids. <i>J. F. Brady and Z. Peng</i>	<b>IN18.</b> The magic and mystery of plug cementing. <i>I. A. Frigaard</i>	<b>RS29.</b> Photon transport in diffusing wave spectroscopy microrheology. <i>E. M. Furst, Q. Li and N. Sbalbi</i>	<b>AC12.</b> Meshfree models for thermal viscoelastic flow and solidification. <i>E. T. Palermo, J. T. Clemmer and T. O'Connor</i>
4:05	<b>SC49.</b> Hydrodynamic coupling to the electrical response of fluid suspensions of non-Brownian conducting particles. <i>H. Lin, M. V. Majji, N. Cho, J. R. Zeeman, J. W. Swan and J. J. Richards</i>	<b>PF2.</b> Continuum modeling of cohesive powder flow. <i>S. Kamath, M. Gonzalez, C. Wassgren, B. Ketterhagen and S. Garner</i>	<b>GG47.</b> The hidden hierarchical nature of soft particulate gels. <i>B. Keshavarz, M. Bantawa, M. Geri, M. Bouzid, T. Divoux, G. H. McKinley and E. Del Gado</i>	<b>AD7.</b> Electric-field-induced active rheology control for concentrated suspensions of conductive particles. <i>S. Mirfendereski and J. S. Park</i>	<b>IN19.</b> On the role of viscoplasticity on horizontal miscible jet behaviour. <i>H. Hassanzadeh and S. M. Taghavi</i>	<b>RS30.</b> Polarized imaging: An essential tool for rheological investigations on complex fluids. <i>J. Laeuger</i>	<b>AC13.</b> Structuring multi-material 3D printing filaments using fluidic gates: A practical analogy to Boolean logic. <i>A. V. Bayles, T. Pleij, M. N. Murdock and J. Vermant</i>
4:25	<b>SC50.</b> Dielectric nanofluids for electrostatic machines. <i>D. J. Klingenberg, D. C. Ludois, J. Wang and K. J. Frankforter</i>	<b>PF3.</b> Toward an understanding of psychorheology through transient recovery rheology. <i>E. M. Burgeson, J. Martin, M. Jogan and S. A. Rogers</i>	<b>GG48.</b> Linker-templated structure tuning of mechanical and optical responses in plasmonic colloidal gels. <i>Z. M. Sherman, M. Singh, D. J. Milliron and T. M. Truskett</i>	<b>AD8.</b> Assembly of paramagnetic colloidal clusters in a back-and-forth rotating magnetic field. <i>A. S. Spatafora-Salazar, D. M. Lohmeyer and S. L. Biswal</i>	<b>IN20.</b> Diving into yield stress fluids. <i>M. Geri</i>	<b>RS31.</b> Simultaneous characterization of thermophoresis and fluid properties using multiple particle tracking microrheology. <i>M. C. Roffin, N. Hasanova, X. Cheng, K. M. Schultz and J. F. Gilchrist</i>	<b>AC14.</b> Rheology as a critical enabler of next-gen polymer processing: Multi-layered annular structures via co-extrusion. <i>J. Maia and E. Steinmetz</i>
4:45	<b>SC51.</b> Obtaining structural information of carbon black in carbon black/polymer suspensions with rheo-dielectric measurements. <i>Q. Liu and J. J. Richards</i>	<b>PF4.</b> Oreology & open-source rheometry. <i>C. E. Owens, M. R. Fan, M. Erni, A. J. Hart and G. H. McKinley</i>	<b>GG49.</b> Investigating the effect of interparticle interactions on the elastic properties of aspherical particle networks. <i>N. V. Kelkar and J. R. Seth</i>	<b>AD9.</b> A numerical study on the magnetization of dilute magnetic emulsions under small amplitude oscillatory shear. <i>R. F. Abdo, V. G. Abicalil, L. H. Cunha and T. F. Oliveira</i>	<b>IN21.</b> Numerical studies on flow of Bingham plastic fluid over a circular cylinder with different surface roughness: An effect on wake control. <i>P. Thakur and S. Gautam</i>	<b>RS32.</b> Perspectives on orientation and morphology from rheoSANS chords. <i>P. H. Gilbert, Y. Liu, P. Butler, J. Rooks and L. Porcar</i>	<b>AC15.</b> Rheological investigation of ABS grades on its FFF/FDM printability, wetting, and annealing. <i>J. Lee and J. Park</i>
5:05	<b>SC52.</b> Impact of surfactant chemistry on the structure and rheology of carbon black slurry used in all-ion flow batteries. <i>M. Das, K. Lee and C. L. Wirth</i>	<b>PF5.</b> Describing the shear and elongational rheology of wheat flour dough by the fractional Maxwell-KBKZ model. <i>Y. Meeus, M. Meerts, G. H. McKinley, R. Cardinaels and P. Moldenaers</i>	<b>GG50.</b> Understanding the temperature-dependent rheological and structural transitions in ABA/BAB polymer blends. <i>J. M. White and M. A. Calabrese</i>	<b>AD10.</b> Flowing sand uphill: Granular dynamics of magnetically-driven particle rotation. <i>J. F. Gilchrist, S. Wilson-Whitford, J. Gao and W. Buckley</i>	<b>IN22.</b> Breakup, coiling and buckling flow regimes in buoyant viscoplastic injections. <i>S. Akbari and S. M. Taghavi</i>	<b>RS33.</b> Analysis of non-Gaussian deformations from scattering of polymers in extreme shear flows. <i>A. Datta, X. Wang, P. T. Corona, B. P. van Ravensteijn, K. M. Weigandt, R. P. Murphy, P. T. Underhill and M. E. Helgeson</i>	<b>AC16.</b> Depositing polymer particles on metal targets using the cold spray additive manufacturing technique. <i>K. Sundara Rajan and J. P. Rothstein</i>

5:25 **SC53.** Microscopic dynamics in charged colloidal suspensions with rheological hysteresis. H. He, *Y. Fang, X.-M. Lin, Z. Jiang, M. Tirrell, S. Narayanan and W. Chen*

**PF6.** Visualizing and modeling bubble dynamics in wheat flour doughs and breads for evaluating flour quality. S. Chakrabarti-Bell and *J. Liu*

**GG51.** Low-frequency elastic plateau in linear viscoelasticity of polyelectrolyte coacervates. H. Li, *A. Shetty, Y. Liu and R. Larson*

**AD11.** Rheotaxis of active droplets. P. Dwivedi, *A. Shrivastava, D. Pillai and R. Mangal*

**IN23.** Micellar branching affects the evolution of shear banding flows of wormlike micellar solutions. *P. Rassolov and H. Mohammadigoushki*

**RS34.** Simultaneous capillary rheology and neutron scattering on wormlike micelles and rod-like particles. K. M. Weigandt, *R. P. Murphy, S. Kuei, P. Salipante and S. D. Hudson*

5:45

6:30

6:30

END

POSTER SESSION & RECEPTION Riverwalk A on the first floor, until 8:30 pm

GALLERY OF RHEOLOGY CONTEST Sheraton 1; Online voting 10 am - 8 pm

## Thursday, October 13

### Morning

8:00	MPI. Recovery rheology. <u>S. A. Rogers</u> (Metzner Award Presentation) Sheraton 4						
8:40	SHORT BREAK						
	<b>Sheraton 4</b>	<b>Mayfair</b>	<b>Sheraton 5</b>	<b>Gold Coast</b>	<b>Sheraton 2</b>	<b>Sheraton 3</b>	<b>Ontario</b>
	<b>Suspensions and Colloids</b>	<b>Pharmaceuticals, Food and Consumer Prod.</b>	<b>Gels, Glasses and Jammed Systems</b>	<b>Active Matter and Directed Systems</b>	<b>Flow Induced Inst. &amp; Non-Newtonian Fluids</b>	<b>Polymers Solutions, Melts and Blends</b>	<b>Additive Manufacturing and Composites</b>
8:45	<b>SC54.</b> Rheology & microstructure of aqueous MXene dispersions. <u>M. B. Woods, E. Jamshidi, F. Hamade, S. Z. Khalajabadi, M. Beidaghi and V. A. Davis</u>	<b>PF7.</b> Rheology of wheat dough and its effect on sheeting. <u>N. M. Albarakati, S. Agarwal, M. Padmanabhan and R. K. Gupta</u>	<b>GG52.</b> Rheological characterization of covalent adaptable thioester networks for delivery of human mesenchymal stem cells (hMSCs). <u>S. Desai, B. Carberry, K. Anseth and K. M. Schultz</u>	<b>AD12.</b> Dynamics of self-propelled nanorods in unentangled polymer melts. <u>S. Zhang, J. Wang and T. Ge</u>	<b>IN24.</b> Instabilities of dilute wormlike micelle solutions in circular and planar Couette flows. <u>R. J. Hommel and M. D. Graham</u>	<b>SM46.</b> Why the Cox–Merz rule and Gleissle mirror relation work: A quantitative analysis using the Wagner integral framework with a fractional Maxwell kernel. <u>G. H. McKinley, J. D. John Rathinaraj and B. Keshavarz</u>	<b>AC18.</b> Thermal draw process windows for semicrystalline and amorphous polymer composites. <u>J. J. Nash and E. D. Wetzel</u>
9:05	<b>SC55.</b> Rheology of kaolinite suspensions and mature fine oil tailings. <u>J. Piette and S. Hatzikiriakos</u>	<b>PF8.</b> Model gluten as near-critical gels. <u>A. Louhichi, M.-H. Morel, A. Banc and L. Ramos</u>	<b>GG53.</b> Role of divalent cation concentration in compression response of intermediate filament hydrogels. <u>B. Carroll, I. Elbalasy, J. Schnauss, J. A. Kas, J. M. Schwarz and A. E. Pateson</u>	<b>AD13.</b> Mapping the spatiotemporal nonlinear stresses in non-equilibrium complex fluids. <u>K. R. Peddireddy, R. McGorty and R. M. Anderson</u>	<b>IN25.</b> Evolution of shear banding instabilities in high elasticity polymeric wormlike micelles (WLMs). <u>P. J. McCauley, S. Kumar and M. A. Calabrese</u>	<b>SM47.</b> The end of reptation. <u>J. R. Dorgan and J. Szafranski</u>	<b>AC19.</b> Determining stable curing recipes for printed thermoset materials via rheo-Raman microscopy. <u>S. K. Romberg and A. Kotula</u>
9:25	<b>SC56.</b> Transient viscosification of self-assembling latex/TiO <sub>2</sub> raspberry particle dispersions. <u>J. K. Riley</u>	<b>PF9.</b> Frictional shear stress dissipation in slip-induced solid lubricant using triborheometry. <u>P. K. Jani, S. A. Khan and L. Hsiao</u>	<b>GG54.</b> Self-generating gels: Morphogenesis of growing bacterial communities in polymeric environments. <u>S. Gonzalez La Corte, T. Bhattacharjee, B. Royer, N. S. Wingreen and S. S. Datta</u>	<b>AD14.</b> The hydrodynamics of active matter in inhomogeneous environments. <u>V. A. Shaik, J. Gong and G. J. Elfring</u>	<b>IN26.</b> Shear-banding in multicomponent solutions with nonionic surfactants near the cloud point. <u>N. P. Alexander and N. J. Wagner</u>	<b>SM48.</b> Confinement and complex viscosity. <u>S. J. Coombs, A. J. Giacomin and R. Pasquino</u>	<b>AC20.</b> Rheological behavior and process monitoring of highly filled direct ink write pastes. <u>J. W. Kopatz, D. Reinholdt, A. Cazares, J. Leonard, A. S. Tappan, A. W. Cook and A. M. Grillet</u>
9:45	<b>SC57.</b> Viscoelasticity of nanocolloidal suspensions from probe rheology: Direct and indirect interactions. <u>D. Sundaravadivelu Devarajan and R. Khare</u>	<b>PF10.</b> Teaching students about yield stresses and elastoviscoplastic materials. <u>C. W. Macosko, R. H. Ewoldt and G. H. McKinley</u>	<b>GG55.</b> “Green” jellies: Replacing gelatin with k-carrageenan. <u>P. R. Avallone, S. Russo Spina, N. Grizzuti and R. Pasquino</u>	<b>AD15.</b> Roughening instability of growing 3D bacterial colonies. <u>A. Martinez-Calvo, T. Bhattacharjee, R. K. Bay, H. N. Luu, A. M. Hancock, N. S. Wingreen and S. S. Datta</u>	<b>IN27.</b> Flow-assisted chiral nematic assembly in cellulose nanocrystals-based inks. <u>M. Esmaili, K. George, N. Taheri-Qazvini and M. Sadati</u>	<b>AC21.</b> Rheology design principles for 3D concrete printing. <u>F. H. Marchesini, L. M. de Miranda, K. Lesage and G. De Schutter</u>	
10:05	COFFEE BREAK Sheraton 1 & Sheraton Promenade						
10:35	<b>SC58.</b> Going with the flow: Colloidal dynamics at moving immiscible fluid interfaces. <u>J. Schneider and S. S. Datta</u>	<b>PF11.</b> The ‘pot’ thickens drop by drop. <u>V. Sharma, L. N. Jimenez, C. Martinez, L. Hassan, N. Nikolova, C. Xu, K. Suresh, J. Dinic, M. W. Boehm and S. K. Baier</u>	<b>GG56.</b> Development of aqueous protein/polysaccharide mixture-based inks for 3D printing towards food applications. <u>C. Zhang, C.-S. Wang, M.-C. Heuzey and D. Therriault</u>	<b>AD16.</b> Characterizing the rheology of wholly-cellular bioinks for scaffold-free bioprinting. <u>M. He, M. He, J. Du and M. A. Sklyar-Scott</u>	<b>IN28.</b> Elastic turbulence in structurally-heterogeneous porous media: Linking pore-scale flow behavior to macroscopic flow resistance. <u>C. A. Browne and S. S. Datta</u>	<b>SM50.</b> Influence of rheology on hot-melt adhesives formulations from aminated polyolefins. <u>Z. Zhang, B. M. Yavitt, B. Kaur, D. J. Gilmour, L. Schafer and S. Hatzikiriakos</u>	<b>AC22.</b> Imparting extensibility to jammed colloidal inks for direct-ink-writing printability. <u>C. Saengow, A. J. Wagoner Johnson and R. H. Ewoldt</u>

- 10:55 **SC59.** Rotational dynamics in a back-and-forth rotating magnetic field. *D. M. Lobmeyer*, *A. S. Spatafora-Salazar, L. H. Cunha, K. Joshi and S. L. Biswal*
- 11:15 **SC60.** Sedimentation of spheroids in inelastic fluids with variable viscosity. *V. Anand and V. Narsimhan*
- 11:35 **SC61.** Numerical simulation of pair interactions between viscous drops in a viscoelastic matrix in free shear: Transition from passing to tumbling trajectories. *A. Tarafdar*, *A. R. Malipeddi and K. Sarkar*
- 11:55 **SC62.** Numerical simulations of non-Brownian suspensions in pressure-driven flows with frame-invariant sub-grid corrections. *M. Orsi*, *L. Lobry and F. Peters*
- 12:15
- PF12.** Quantitative measurements of flow dynamics in 3D hoppers. *M. Mehdizad, L. A. Fullard, P. Galvosas and D. J. Holland*
- PF13.** Continuous embedded droplet printing for improved pharmaceutical drug powder rheology. *A. Z. Nelson, J. Xie, D. Ng, S. A. Khan and P. S. Doyle*
- PF14.** Rheological investigations for gauging spinnability of formulations based on soy-protein isolates for imitating muscle fibers in whole cut muscle meat. *K. D. Joshi*, *E. Shabani, H. Zhou, D. J. McClements and J. Park*
- PF15.** Some practical rheological explorations of food and consumer products. *D. J. Moonay*
- GG57.** Printing colloidal gels induced by self-assembly. *Z. Niroobakhsh*, *H. Honaryar and S. Amirfattahi*
- GG58.** Network characteristics of heterogeneous reactive colloidal gels with varying interaction potentials. *D. Mangal, M. Nabizadeh, A. Goyal, E. Del Gado and S. Jamali*
- GG59.** Rheology of suspensions of hexagonal boron nitride (h-BN) nanoparticles in xanthan gum. *Y. C. Soares, H. Ribeiro, R. E. Andrade and M. F. Naccache*
- GG60.** Utilizing rheology to characterize CNT-PDMS gels in the roll coating process. *H. Perera*, *M. D. Islam, J. Ryu and S. A. Khan*
- AD17.** Multiscale rheology and dynamics of topologically-active DNA solutions and composites. *R. M. Robertson-Anderson*
- AD18.** Supracellular quantification of spatially varying mechanical heterogeneities in live cell monolayers. *A. G. Bermudez*, *Z. Gonzalez, B. Zhao, E. Salter, X. Liu, L. Ma, M. Khalid Jawed, C.-J. Hsieh and N. C. Lin*
- AD19.** Emergent dynamics and force generation in motor-free active contractile networks – Experiments (Part 1). *X. Lei*, *T. Chakraborty, J. E. Honts and S. Bhamla*
- AD20.** Emergent dynamics and force generation in motor-free active contractile networks – Modeling (Part 2). *T. Chakraborty*, *X. Lei, J. E. Honts and S. Bhamla*
- IN29.** Influence of geometric ordering on viscoelastic flow instabilities in 3D porous media. *E. Y. Chen*, *C. A. Browne, S. J. Haward, A. Q. Shen and S. S. Datta*
- IN30.** An experimental study of vortex-induced vibrations of a cylinder in non-Newtonian flows. *P. R. Boersma*, *J. P. Rothstein and Y. Modarres-Sadeghi*
- IN31.** Numerical study of self-excited oscillations of a cylinder in non-Newtonian flows. *U. N. Patel*, *J. P. Rothstein and Y. Modarres-Sadeghi*
- IN32.** Capillary forces drive plastic deformation and break-up of soft elastic solids. *C. S. O'Bryan*
- SM51.** Unexpected suppression of chain fracture kinetics in elongating polymer melts. *N. Chongvimansin and T. O'Connor*
- SM52.** Numerical simulation and experiments of yield stress fluids filling a thin mold. *J. T. McConnell*, *A. M. Grillet, W. Ortiz and R. Rao*
- SM53.** Role of polymer and particle properties on structural stability of co-continuous blend composites. *R. S. Shah*, *M. Trifkovic and S. L. Bryant*
- SM54.** A “semi-toy” molecular constitutive model for entangled monodisperse linear or symmetric star flexible polymers with entanglement dynamics and a configuration dependent friction coefficient. *D. W. Mead*
- AC23.** Relaxation dynamics of deformed polymer nanocomposites as revealed by small-angle scattering and rheology. *R. Sun, J. Yang, S. Patil, Y. Liu, X. Zuo, A. Lee, W. Yang, Y. Wang and S. Cheng*
- AC24.** Uniaxial extension of polymer nanocomposites with well-dispersed nanoparticles: Stress overshoot and strain hardening. *R. Sun* and *S. Cheng*
- AC25.** Rheological investigation of secondary polymer-induced particle aggregation for conductive PLA composite fabrication. *J. H. Kim, J. S. Hong and K. H. Ahn*
- AC26.** Development of acoustically milled polymer composites for cold spray applications. *S. Ozbek*, *K. J. Donovan, T. W. Walker and G. J. Lori*

END

## Poster Session

Wednesday, October 12 6:30 PM – 8:30 PM Riverwalk A on First Floor

- PO1.** Effect of salt concentration and flow rate on clogging dynamics in the single micro-pore. *D. Y. Kim, S. Y. Jung, Y. J. Lee, S. Kang and K. H. Ahn*
- PO2.** Spontaneous emulsions: Adjusting spontaneity and phase behavior by hydrophilic-lipophilic difference-guided surfactant, salt, and oil selection. *Y. Zheng, C. R. Davis, J. A. Howarter, E. A. Kendra and C. J. Martinez*
- PO3.** The nonlinear rheology of complex yield stress foods. *J. Griebler and S. A. Rogers*
- PO4.** Deformation index of hydro gel based on hyaluronic acid for optimal bio-implantability. *K. H. Lee*
- PO5.** Understanding the effects of flake size and salt addition on aqueous MXene (Ti3C2Tx) dispersions through rheological characterization. *M. B. Woods, F. Hamade, E. Jamshidi, S. Z. Khalajabadi, M. Beidaghi and V. A. Davis*
- PO6.** Early-stage rheological development and kinetics of geopolymers in exploration of sustainable alternatives to cement. *W. H. Hartt IV, J. N. Mills and N. J. Wagner*
- PO7.** Incorporating rheo-combinatorial techniques to overcome polymer processing challenges. *J. P. Eickhoff and J. Raia*
- PO8.** Effect of additives on the microstructure and flow behavior of concentrated surfactant solutions. *P. U. Kelkar, B. Nance, M. Kaboolian, K. G. Eisenman, R. D. Corder, R. D. Corder, S. Lindberg, P. Stenger and K. A. Erk*
- PO9.** Rheology and linear dichroism of dilute solutions of flexible and semiflexible polymers in shear flow. *I. Pincus, A. Rodger and J. R. Prakash*
- PO10.** Viscoelastic particle ordering in microfluidic devices: Fundamentals and applications. *F. Del Giudice*
- PO11.** The Soft Matter Kitchen: Improving the accessibility of rheology education and outreach through food materials. *J. A. L. Avendano, K. Saud and A. Z. Nelson*
- PO12.** Rheology of composite biopolymer networks under shear. *A. Gannavarapu, S. Arzash and F. C. MacKintosh*
- PO13.** Direct ink writing of cellulose nanofibrils-graphene hydrogels: Rheological and morphological study. *E. Erfanian, M. Kamkar, O. J. Rojas and U. Sundararaj*
- PO15.** Rheology of cellulose nanofibrils in the presence of polymers. *R. Wattana and C. O. Osuji*
- PO16.** Visualization and image processing of colloid roughness in dense suspensions. *R. A. Waheibi and L. Hsiao*
- PO17.** MUnCH: A calculator for propagating statistical and other sources of error in passive microrheology. *A. Córdoba and J. D. Schieber*
- PO18.** Specific salt effects on equilibrium and flow structure of wormlike micelles. *N. S. Alawami, W. S. Javen and K. M. Weigandt*
- PO19.** Flow of per- and polyfluoroalkyl substances (PFAS) foams. *M. Zhou and R. Foudazi*
- PO20.** Spontaneous self-propulsion and nonequilibrium shape fluctuations of a droplet enclosing active particles. *G. Kokot, H. A. Faizi, G. M. Pradillo, A. Snezhko and P. M. Vlahovska*
- PO21.** Bayesian credibility analysis of viscosity-temperature models relevant to Redox Flow Battery (RFB) working fluids. *S. Gupta and R. H. Ewoldt*
- PO22.** Flow of a colloidal solution in an orthogonal rheometer. *K. K. Yanamandra, C. C. Benjamin and R. R. Kumbakonam*
- PO23.** Viscoelastic and thixotropic characterization of 3D printable paraffin/photopolymer composites. *C. Cipriani and Y. Shu*
- PO24.** Dynamics of meniscus-bound particle clusters in extensional flow. *S. Chaudhary, J. Vaswani, S. Velankar and C. M. Schroeder*
- PO25.** Flow-induced crystallization of high density polyethylene. *A. Bhadu*
- PO26.** Experimental observation for a confined bubble moving in shear-thinning fluids. *S. Chun and J. Feng*
- PO27.** Design and fabrication of an optimized “6-arm cross-slot” device. *S. J. Haward, F. Pimenta, S. Varchanis, D. W. Carlson, K. Toda-Peters, M. A. Alves and A. Q. Shen*
- PO28.** Pressure-driven flows of non-Brownian suspensions: Numerical simulations with frame-invariant sub-grid corrections. *M. Orsi, L. Lobry and F. Peters*
- PO29.** Role of substrate spreading and dimensionless volume on Dripping-onto-Substrate measurements of low viscosity solutions. *K. T. Lauser, D. Y. Zhang, A. Rueter, B. P. Robertson, R. Luong and M. A. Calabrese*
- PO30.** Block copolymer worms under flow: Shear and stretch. *V. Calabrese, C. Gyorgy, S. J. Haward, T. J. Neal, S. P. Armes and A. Q. Shen*
- PO31.** Late-stage creep dynamics of colloidal gels prior to yield. *J. H. Cho and I. Bischofberger*
- PO32.** Stress-stress correlations reveal force chains in gels. *H. A. Vinutha, X. Mao, B. Chakraborty and E. Del Gado*
- PO33.** The use of rotational rheometry to estimate  $\Delta T_c$  for asphalt binders. *G. W. Kamykowski*
- PO34.** Effects of spreading and geometry on capillary-driven thinning of viscous fluids. *D. Y. Zhang, K. T. Lauser, R. Luong, B. P. Robertson and M. A. Calabrese*
- PO35.** Evolution of network structure and motion correlation in shear thickening dense suspensions. *A. Santra, B. Chakraborty and J. F. Morris*
- PO36.** AI-powered single-cell analysis to probe in-vitro capillary blood flow. *S. M. Recktenwald, G. Simionato, M. Lopes, L. Kaestner, S. Quint and C. Wagner*
- PO37.** Magneto-rheological characterization of magnetically-responsive polymer-nanoparticle suspensions. *C. A. Neal, M. C. Quan, N. Chibambo and M. A. Calabrese*
- PO38.** Rheological characterization of porcine and human subcutaneous-adipose tissue. *H. Mitra, E. N. Schipper, R. D. Corder, L. Solorio and A. Ardekani*
- PO39.** Rheology and microstructure of Candida albicans fungal biofilms. *C. Abriat, M. LaCascia, A. Kumar and M. Solomon*
- PO40.** Self-similar growth of nanoscopic mesas in stratifying micellar foam films. *C. Xu, Y. Zhang, S. I. Kemal and V. Sharma*
- PO41.** The effect of amylopectin/amylose ratio of starch on tunable shear-thickening characteristics of starch suspensions using (LAOS) measurements evaluated by sequence of physical processes and Fourier transform-Chebyshev decomposition methods. *M. Yildirim Erturk and J. L. Kokini*
- PO42.** Controlling the temperature-dependent gelation of injectable poloxamer hydrogels via reverse poloxamer addition. *J. M. White, F. S. Bates and M. A. Calabrese*
- PO43.** Diffusion tensor calculation for coarse-grained polymer models with fluctuating internal friction and hydrodynamic interactions. *R. Kailasham, R. Chakrabarti and J. R. Prakash*
- PO44.** Altering discontinuous shear thickening in colloidal slurries using nanoparticles. *S. Helsen, L. M. Sanford, E. Akbari Fakhraabadi and M. W. Liberatore*
- PO45.** Volumetric evolution of elastic turbulence in porous media. *D. W. Carlson, K. Toda-Peters, A. Q. Shen and S. J. Haward*
- PO46.** A single equation to determine engine oil contamination by diesel fuel from the measured viscosity or needle falling time by using the Portable Field Falling Needle Viscometer under in-service or field conditions. *N. A. Park, D. A. O'lear and K. S. Seo*
- PO47.** Evaporation-controlled dripping-onto-substrate (EC-DoS) extensional rheology for CNT/polymer composite coatings. *B. P. Robertson and M. A. Calabrese*
- PO48.** Interplay of shear banding and wall slip. *P. J. McCauley, M. A. Calabrese and S. Kumar*
- PO49.** Temporary pavement marking tape peel adhesion. *J. A. Gohl, H. Son, H. P. Grennan, D. P. Madigan, K. A. Erk and C. S. Davis*
- PO50.** Influence of surfactants, polymers and proteins on foam film drainage. *C. Xu, L. Hassan, C. Ochoa and V. Sharma*
- PO51.** Effect of extensional rheology on paint application. *Y. Kou, L. Fauset, R. Kralic, C. Wang and H. Sun*
- PO52.** High temperature DMA characterization of glass in extension and shear modes at temperatures up to 950°C. *M. Walluch, J. A. Rodríguez Agudo, D. Ehgartner, C. Giehl, A. Shetty and G. Arnold*
- PO53.** Determination of the key property of a fluid to characterize a nanostructured soot film. *R. Griffo, A. Parisi, G. De Falco, M. Sirignano, F. Di Natale, M. Minale and C. Carotenuto*
- PO54.** A user-friendly approach to powder rheology analysis. *T. T. Chen, S. Cotts and V. Jennifer*
- PO55.** Predicting extensional behaviors of colloidal dispersions through simple models. *M. N. Hoque and G. F. Christopher*
- PO56.** Onset of transient shear banding in viscoelastic shear start-up flows. *S. Sharma, V. Shankar and Y. M. Joshi*
- PO57.** Early-age rheological properties of sustainable geopolymer binders: Applications in additive manufacturing. *T. M. Egnaczyk and N. J. Wagner*
- PO58.** High frequency viscoelasticity of jammed microgel suspensions. *B. F. Di Dio, T. Athanasiou, D. Vlassopoulos and M. Cloitre*
- PO59.** Acoustic streaming flows induced by microbubbles in viscoelastic fluids: Experimental observation. *J. Park, B. Yao, V. K. Gupta, J. Zhang and C. Wang*
- PO60.** Upstream wall vortices in viscoelastic flow past a cylinder. *C. C. Hopkins, S. J. Haward and A. Q. Shen*
- PO61.** A microstructural analysis of shear thickening. *W. Buchholz, H. A. Vinutha, J. Urbach, D. Blair and E. Del Gado*
- PO62.** Yield stress and flow behavior of enzyme liquefied slurries from corn cobs and corn stover pellets. *D. M. Ramirez Gutierrez, A. J. Gonçalves da Cruz, C. A. Torres Cañizares, X. Chen, R. Gomes da Silva Cruz, L. Serra, R. D. Corder, N. Mosier, D. Thompson, J. Aston, J. Dooley, P. Sharma, J. R. M Almeida, K. A. Erk, E. Ximenes and M. R. Ladisch*
- PO63.** Role of co-solvent composition on the rheology and thermoreversibility of PNIPAM/silyl methacrylate copolymers. *J. D. Linn, D. Y. Zhang, F. A. Rodriguez and M. A. Calabrese*
- PO64.** 3D printing of thermoresponsive nanoemulsions for the diffusion of active ingredients. *R. E. Dowdy-Green and L. Hsiao*
- PO65.** Fluctuations in charged systems: Electrolytes and colloidal suspensions. *P. T. Underhill*
- PO66.** Rheological effects on the cross-slot flow instability. *A. Yokokoji, S. Varchanis, S. J. Haward and A. Q. Shen*
- PO67.** Anticipating edge fracture. *M. C. Marsh, R. C. Gergely and R. H. Ewoldt*
- PO68.** Buoyancy driven flow of deformable intrusions in elastoviscoplastic fluids. *G. Esposito, P. Moschopoulos, Y. Dimakopoulos and J. Tsamopoulos*
- PO69.** Bubble rise in elastoviscoplastic materials. *A. Spyridakis, P. Moschopoulos, S. Varchanis, Y. Dimakopoulos and J. Tsamopoulos*
- PO70.** Complex flow modelling using Lagrangian heterogeneous multiscale methods. *N. Moreno and M. Ellero*



- PO71.** Morphology evolution under a controlled flow of polystyrene/polypropylene nanocomposites based on graphene nanoplatelets. *H. Essadouky, D. Eric and N. R. Demarquette*
- PO72.** Falling needle viscometer for Newtonian and non-Newtonian viscosity measurements. *N. A. Park and Y. I. Cho*
- PO73.** Polymer rheology predictions from first principles using the slip-link model. *D. Becerra, A. Córdoba, M. Katzarova, M. Andreev, D. C. Venerus and J. D. Schieber*
- PO74.** A multiphase model of vascular smooth muscle cell exhibiting passive viscoelastic behavior and active contractile apparatus. *A. Marousis, Y. Dimakopoulos and J. Tsamopoulos*
- PO75.** Effect of fat on non-linear rheological behavior of processed cheese spreads using coupled amplitude-frequency sweeps, Fourier Transform-Chebyshev polynomials method, sequence of physical processes, and quantitative network analysis. *A. M. Le, M. Y. Erturk and J. L. Kokini*
- PO76.** Compression stiffening in synthetic composite hydrogels. *J. Song, S. Yesilata, M. Garcia and G. H. McKinley*
- PO77.** Viscosimetric parameters of acrylonitrile copolymers in DMSO and aqueous solvents of zinc and calcium chloride. *A. L. Alves, V. Calado and F. Souto*
- PO78.** Magnetic microrollers maneuvering in a colloidal suspension. *S.-Y. Chen and M. M. Driscoll*
- PO79.** Unification of two disparate branches of continuum mechanics: Polymeric stress and Lagrangian stretching. *M. Kumar and A. Ardekani*
- PO81.** Elastic characterization of dense colloidal suspensions via droplet impact. *B. C. Seper, P. Shah and M. M. Driscoll*
- PO82.** An enhanced dynamic Monte Carlo simulation for the prediction of rheological properties of branched chain polymer melts. *J. Szafranski and J. R. Dorgan*
- PO83.** Understanding DIW “printability” in terms of recovery rheology. *J. Shi, Y. Kamble, D. Guirounet and S. A. Rogers*
- PO84.** Air entrainment dynamics under shear-thinning droplets. *Z. He, H. Tran and M. Pack*
- PO85.** Investigating how microstructural rearrangements and matrix stiffness impact polymeric composite reinforcement using a stretcher-scope platform. *S. G. Li, A. Gee, A. G. Bermudez and N. C. Lin*
- PO86.** Viscosity as an indicator of small molecule drug binding with DNA. *C. Ochoa, S. Elliot and S. Baek*
- PO87.** Parametric optimization of structural thixotropic elasto-visco-plastic models for human blood. *A. M. Pincot, M. Armstrong and S. A. Rogers*
- PO88.** Control of rheological and drying properties of ceria-based suspension via pH variation. *S. H. Kim, G. W. Lee, B. Chun and H. W. Jung*
- PO89.** Numerical simulation of cage formation in a quasi-two-dimensional colloidal suspension. *J. Yun, B. Chun and H. W. Jung*
- PO90.** Effect of nano-additives on the microstructure and rheology of waxy oils. *P. Saxena, J. R. Seth, V. A. Juvekar, G. Shankar and R. Bansal*
- PO91.** Analysis of melt spinning process with KBKZ integral constitutive fluid model. *G. Park and H. W. Jung*
- PO92.** Reptation model informed machine learning for the characterization of polymers from rheological measurement. *J. Rahmannedhad Soume Saraei, A. Hussain, G. M. Choi and H. S. Lee*
- PO93.** The effect of polymer chain flexibility on the interfacial viscoelasticity at the air/water interface. *D. Ashkenazi, S. Alexandris, J. Vermant, D. Vlassopoulos and M. Gottlieb*
- PO94.** Investigating the structure of PEGylated nanoparticles with capillary RheoSANS. *K. M. Rehmann, R. P. Murphy and K. M. Weigandt*
- PO95.** Phase behavior and rheology of microgel-surfactant mixtures. *A. Chaub, S. Goujard, J.-M. Suau and M. Cloitre*
- PO96.** Flow-induced crystallization of high density polyethylene. *A. Bhadu, B. J. Jacob, A. M. Rhoades and R. H. Colby*
- PO97.** Master curves for FENE-P fluids in steady shear flow. *S. Yamanidouzisorkhabi, I. Bischofberger and G. H. McKinley*
- PO98.** Understanding the transient large amplitude oscillatory shear (LAOS) behavior of yield stress fluids (YSFs). *K. M. Kamani, G. J. Donley, R. Rao, A. M. Grillet, C. Roberts, A. Shetty and S. A. Rogers*
- PO99.** Investigation of alginate raft formed by sodium alginate suspension using a rheometer. *R. Palarapu, N. Gorantla, A. Lohade, V. Muley and M. Knarr*
- PO100.** Connecting microstructure, rheology, and tribology of nanoclay-based nanolubricants. *L. Martin-Alarcon, B. Soltannia, J. Uhryn, P. Egberts and M. Trifkovic*
- PO101.** Influence of graphene functionalization on the curing kinetics of epoxy matrix nanocomposites. *Z. S. Souza, Z. S. Souza, G. M. Fechine, E. David, N. R. Demarquette and M. A. Motta Sobrinho*
- PO102.** Flow behavior of chiral nematic liquid crystals using orthogonal superposition. *E. Akbari, M. Esmaeili and M. Sadati*
- PO103.** In-situ microrheology of drying paint. *M. C. Roffin, C. L. Wirth, S. V. Barancyk, R. Rock and J. F. Gilchrist*
- PO104.** Mechanics of elastomer films containing self-assembled smooth and rough colloids. *S. Yerabati Venkata, Y. C. Saraswat and L. Hsiao*
- PO105.** High-moisture extrusion: A small-scale approach to analyze the technological properties of plant proteins for the production of meat substitutes. *V. L. Pietsch and J. Nijman*
- PO106.** Cheese or vegan cheese - How to investigate the texture of food with a rheometer. *A. Hodapp, K. Oldoerp and J. Nijman*
- PO107.** Alternative paths to steady-state, recoverable compliance: Do they work?. *M. T. Shaw and R. A. Weiss*
- PO108.** Influence of a rotor surface asperity on the granular flow inside of a concentric-cylinder rheometer. *K. Henry, P. Mort and C. Wassgren*
- PO109.** Mist-control of polyalphaolefin (PAO) lubricants using long end-associative polymers. *R. C. Lhota, R. W. Learsch, J. Temme, V. Coburn and J. A. Kornfield*
- PO110.** Rheological behavior of nanostructured complex fluids with two-dimensional (2D) materials. *R. E. Andrade*
- PO111.** Continuum modeling of cohesive powder flow. *S. Kamath, M. Gonzalez, C. Wassgren, B. Ketterhagen and S. Garner*
- PO112.** High-shear-rate signatures of structural transitions of wormlike micelle solutions. *P. Salipante, M. Cromer and S. D. Hudson*
- PO113.** The effects of hemodynamics on the myogenic response of microvessels. *K. Giannokostas, A. Marousis, Y. Dimakopoulos and J. Tsamopoulos*
- PO114.** Tuning ordering transitions in BCP hydrogels via shear and magnetic fields. *G. Kresge, C. Mikal and M. A. Calabrese*
- PO115.** Yield surface of attractive colloidal gels under Poiseuille flow. *S. Bae, D. Mangal and S. Jamali*
- PO116.** Engineering flow mechanics in dense suspensions of surface-anisotropic colloids. *S. Pradeep and L. Hsiao*
- PO118.** Structure and dynamics of bimodal attractive colloidal gels. *R. Campbell and S. Jamali*
- PO119.** Rheo-microscopy of nanofluids: TiO<sub>2</sub> and SiO<sub>2</sub> in carboxypol solution as study cases. *E. P. Marin Castano and P. R. de Souza Mendes*
- PO120.** Super absorbent polymers for internally cured, high performance concrete: Rheopecticity and rheological properties. *A. N. Seshadri, E. E. O'Banion, C. J. Adams, R. D. Corder and K. A. Erk*
- PO121.** Yielding behavior of graphene oxide colloids in oscillatory shear. *Y. H. Shim and S. A. Rogers*
- PO122.** Dynamic mechanical analysis of fibers for the selection of EVA spacesuit outer-layer TMG materials. *N. Markiewicz and N. J. Wagner*
- PO123.** Towards a comprehensive understanding of DWS microrheology analysis. *Q. Li, K. Dennis, Y.-F. Lee, N. J. Wagner and E. M. Furst*
- PO124.** 3D print suspensions: Correlation among viscoplastic behavior, extrusion profile and print quality. *F. J. N. Lima, Y. K. Sakano, G. Perozzi Carpinelli Brasileiro and R. G. Pileggi*
- PO125.** Study of microstructure and magnetization of magnetic colloidal suspensions of interacting magnetic particles under a uniform magnetic field using Brownian dynamics simulations. *L. R. Pérez-Marcos, G. C. Vidal-Urquiza, R. A. DeLaCruz-Araujo, H. A. Diestra-Cruz, U. M. Córdoba-Figueroa and O. E. Rubio-Mercedes*
- PO126.** Inertial limits for creep tests: We can help you to avoid creep data. *R. R. Fernandes, M. W. Boehm, S. K. Baier and R. H. Ewoldt*
- PO127.** Designing complex fluids. *R. H. Ewoldt and C. Saengow*
- PO128.** Rod-climbing rheometer: Measuring the normal stresses. *R. V. More and G. H. McKinley*
- PO129.** Interrogating the mechanical properties of freely-suspended biofilms using the bulge test and OCT. *J. A. Kornfield, P. Chittur, H. Liu and D. A. Tirrell*
- PO130.** Orientation dynamics of colloidal rods in shear and extensional flows. *B. Chun and H. W. Jung*
- PO131.** Mode-switching of active droplets in macromolecular solutions. *P. Dwivedi, A. Shrivastava, D. Pillai and R. Mangal*
- PO132.** Ultrasonic evaluation of the rheology of bread dough as affected by its bubble size distribution. *M. G. Scanlon, J. H. Page, F. Koxsel, A. Strybulevych, V. Leroy, H. M. Elmehdi and K. Mehta*
- PO133.** Applications of coupled rheology–FTIR to polymer analyses. *S. Reynaud and D. Garcia*

## Gallery of Rheology

**Preview:** Starts Monday 1:30 PM at Sheraton 1

**Contest:** Wednesday 6:30 PM – 8:30 PM (Online voting 10:00 AM – 8:00 PM) at Sheraton 1

- GR1.** Stringing beads in polymer wormlike micelle solutions. *D. Y. Zhang and M. A. Calabrese*
- GR2.** Upside down. *B. Keshavarz and M. Geri*
- GR3.** Viscoelastic promotion of pore-scale commotion. *D. W. Carlson, K. Toda-Peters, A. Q. Shen and S. J. Haward*
- GR4.** Viscoelastic twister. *L. Morlet-Decamin*
- GR5.** Painting fireworks. *M. C. Roffin, C. L. Wirth, S. V. Barancyk, R. Rock and J. F. Gilchrist*
- GR6.** From mixing to fingering. *H. Hassanzadeh, S. Joshi and S. M. Taghavi*
- GR7.** Uniaxial compression of gellan gum microcapsule. *Y.-H. Huang and J. M. Frostad*
- GR8.** Water droplet breakup in light mineral oil. *A. Mashayekhi and J. M. Frostad*

**The Society of Rheology**  
*gratefully acknowledges*  
**the Support of the Meeting Sponsors**

**Platinum Meeting Sponsor**

**and**

**Supporter of the Rheology Research Symposium**



# Gold Meeting Sponsor

and

## Sponsor of Monday Morning Coffee Break



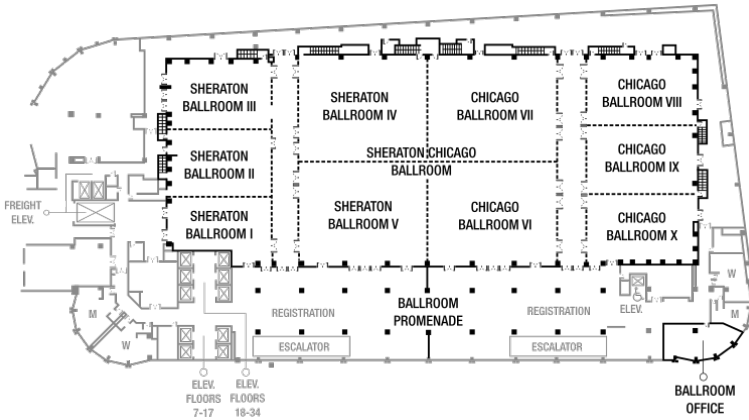
---

## Sponsor of the Student/Industry Forum

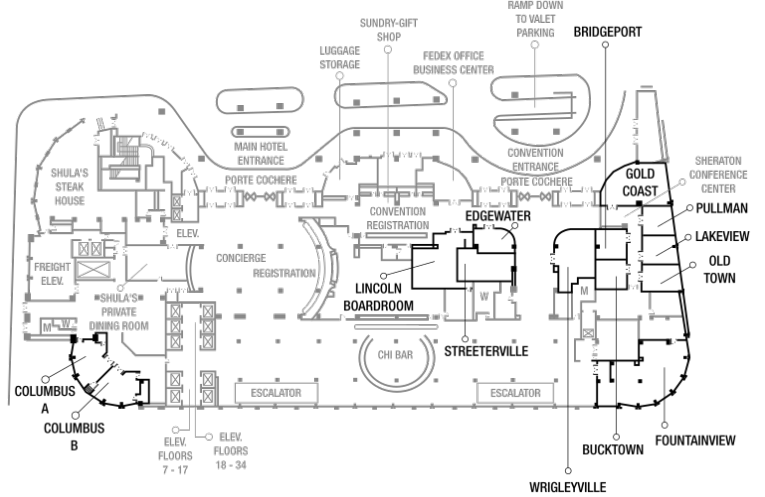


# Sheraton Grand Chicago Meeting Space

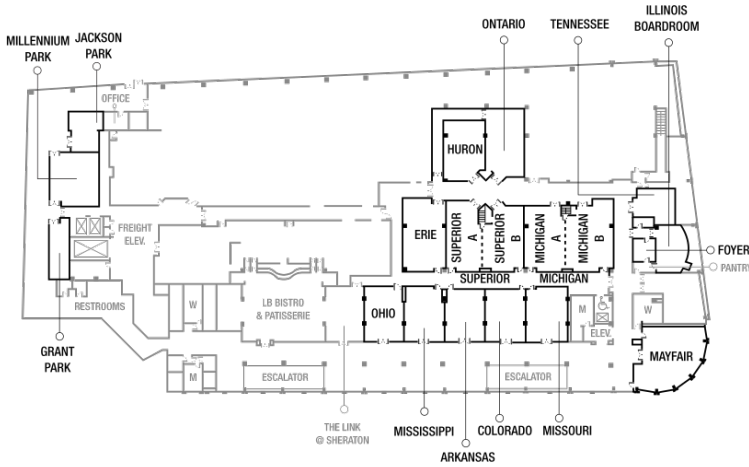
## Fourth Floor: Sheraton Ballrooms



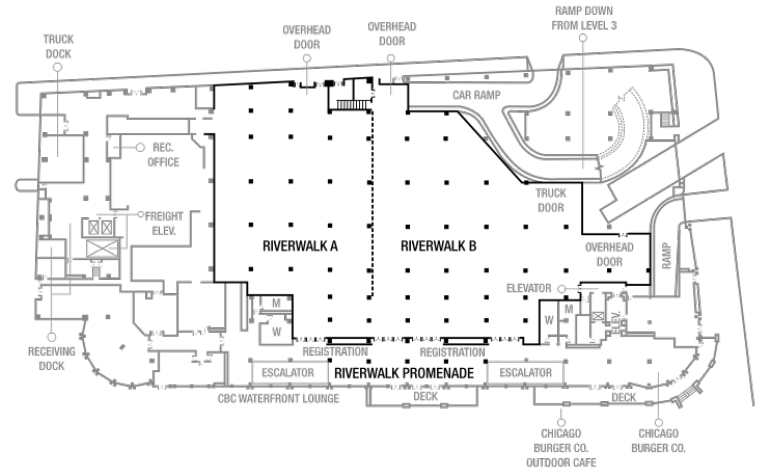
## Third Floor: Gold Coast, Chi East/Fountainview



## Second Floor: Mayfair, Michigan, Ontario



## First Floor: Riverwalk A



## Social Program and Special Events

**Sunday, October 9**

**Rheology Research Symposium** (continued from Saturday, October 8)

**Welcoming Reception**

6:00 PM – 8:00 PM

Chi East/Fountainview Areas

**Monday, October 10**

**Student-Industry Forum**

12:00 noon – 1:15 PM

Sheraton 2

**Gallery of Rheology Preview**

1:30 PM – Wed 4:00 PM

Sheraton 1

**Student Trivia Night**

6:30 PM – 9:30 PM

Northman Beer & Cider Garden

**Tuesday, October 11**

**Society Business Meeting**

12:00 PM – 1:30 PM

Sheraton 4

**Awards Reception**

7:00 PM – 8:00 PM

Sheraton Promenade

**Awards Banquet**

8:00 PM

Sheraton 4 and 5

**Wednesday, October 12**

**Poster Session and Reception**

6:30 PM – 8:30 PM

Riverwalk A on First Floor

**Gallery of Rheology Contest**

6:30 PM – 8:30 PM

Sheraton 1

Online voting 10 AM – 8 PM