The Society of Rheology 92nd Annual Meeting
Cross Insurance Center, Bangor, Maine

Meeting Schedule

Monday, October 11, 2021

	B5	*B7*	*MAB*	*MCD*	*B6*	*B1*	*VR*
8:30			M. J. Solomon (PL1) - *B567*				
9:20			Coffee Break				
9:50	SM1	AR1			SC1	GG1	OP1
10:15	SM2	AR2		AB2	SC2	GG2	OP1
10:40	SM3	AR3		AB3	SC3	GG3	OP1
11:05	SM4	AR4		AB4	SC4	GG4	OP1
11:30				AB5	SC5		OP1
11:55			Monday Boxed Lunch / Student-Industry Forum				
1:30		AR6	FE6	AB6	SC6	GG6	
1:55		AR7	FE7	AB7	SC7	GG7	
2:20		AR8	FE8	AB8	SC8	GG8	
2:45		AR9			SC9	GG9	
3:10			Coffee Break				
3:45	SM10	AR10	FE10	IN1	SC10	MC1	
4:10	SM11	AR11	FE11	IN2	SC11	MC2	
4:35	SM12	AR12	FE12	IN3	SC12	MC3	
5:00	SM13	AR13		IN4	SC13	MC4	
5:25		AR14		IN5	SC14	MC5	
5:50				End			

Tuesday, October 12, 2021

	B5	*B7*	*MAB*	*MCD*	*B6*	*B1*	*VR*
8:30			J. Vermant (PL2) - *B567*				
9:20			Coffee Break				
9:50		AR15	FE15		SC15	GG10	OP2
10:15		AR16	FE16	AB11	SC16	GG11	OP2
10:40	SM17	AR17	FE17	AB12	SC17	GG12	OP2
11:05	SM18	AR18	FE18	AB13	SC18	GG13	OP2
11:30	SM19	AR19		AB14	SC19	GG14	OP2
11:55			Lunch Break / Society Business Meeting				
1:30	SM20	AR20		AB15	SC20	GG15	
1:55	SM21	AR21		AB16	SC21	GG16	
2:20	SM22	AR22	FE22		SC22	GG17	
2:45	SM23	AR23	FE23		SC23		
3:10			Coffee Break				
3:45	SM24	AR24	FE24	IN6	MC6	RI1	
4:10	SM25	AR25	FE25	IN7	MC7	RI2	
4:35	SM26	AR26	FE26	IN8	MC8	RI3	
5:00	SM27	AR27	FE27	IN9	MC9		
5:25				End			
6:00				Awards Reception			
7:00				Awards Banquet			

Wednesday, October 13, 2021

	B5	*B7*	*MAB*	*MCD*	*B6*	*B1*	*VR*
8:30			P. M. Vlahovska (PL3) - *B567*				
9:20			Coffee Break				
9:50	SM29		AM1	IN11	SC24	GG19	OP3
10:15	SM30	AB20	AM2	IN12	SC25	GG20	OP3
10:40	SM31	AB21	AM3	IN13	SC26	GG21	OP3
11:05	SM32	AB22	AM4	IN14	SC27	GG22	OP3
11:30	SM33	AB23		IN15	SC28	GG23	OP3
11:55			Lunch Break				
1:30	SM34	AB24	AM6	IN16	RI6	GG24	
1:55	SM35	AB25	AM7	IN17	RI7	GG25	
2:20	SM36	AB26	AM8	IN18	RI8	GG26	
2:45	SM37	AB27	AM9	IN19	RI9	GG27	
3:10			Coffee Break				
3:45	SM38	AR29	AM10	IN20	SC29		
4:10	SM39	AR30	AM11	IN21	SC30		
4:35	SM40	AR31	AM12	IN22	SC31		
5:00	SM41	AR32	AM13	IN23	SC32		
5:25		AR33	AM14	IN24	SC33		
5:50				End			
6:30				Poster Session & Reception			
6:30				Gallery of Rheology Contest			

Thursday, October 14, 2021

	B5	*B7*	*B2*	*B3*	*B6*	*B1*
8:30			Q. Chen (MP1) - *B567*			
9:10			Transition Remarks - *B567*			
9:20			Coffee Break			
9:50			Gather.Town Networking for In-Person & Virtual Attendees			
11:55			End of Meeting			

Session and Room Codes

AB = Active and Biological Materials
AM = Additive Manufacturing and Composites
AR = Applied Rheology and Rheology Methods
FE = Foams, Emulsions, Surfactants, and Micelles
GG = Arrested Systems: Gels and Glasses
GR = Gallery of Rheology Contest
IN = Flow-induced Instabilities and Non-Newtonian Fluids
MC = Micro- and Nanofluidics and Confined Flows
MP = Metzner Presentation
OP = Online Program
PL = Plenary Lectures
PO = Poster Session
RI = Rheology and Mobility at Interfaces
SC = Suspensions, Colloids, and Granular Materials
SM = Polymers Solutions, Melts, and Blends
VP = Pre-recorded Flash Presentations

B1 = Ballroom 1
B1234 = Ballroom 1-2-3-4
B2 = Ballroom 2
B5 = Ballroom 5
B567 = Ballroom 5-6-7
B6 = Ballroom 6
B7 = Ballroom 7
B3 = Ballroom 3
MAB = Meeting Room A-B
MCD = Meeting Room C-D
VR = Virtual

Monday, October 11

Morning

8:30 **PL1.** Manipulating the rheology of colloidal gels with embedded active matter. *M. J. Solomon* Ballroom 5-6-7

9:20 COFFEE BREAK

	Ballroom 5 **Polymers Solutions, Melts and Blends**	*Ballroom 7* **Applied Rheology and Rheology Methods**	*Meeting Room A-B*	*Meeting Room C-D* **Active and Biological Materials**	*Ballroom 6* **Suspensions, Colloids & Granular Materials**	*Ballroom 1* **Arrested Systems: Gels and Glasses**	*Virtual* **Online Program**
9:50	**SM1.** Pressure drop measurements of Newtonian and non-Newtonian fluids in a hyperbolic channel. *D. F. James, C. Roos and A. Tripathi*	**AR1.** The dynamics of parallel-plate and cone–plate flows. *D. C. Venerus and A. U. Oza*			**SC1.** Linear viscoelastic properties of adhesive soft particle glasses. *A. Shahmohammadi and R. T. Bonnecaze*	**GG1.** Time–connectivity superposition and the gel/glass duality of weak colloidal gels. *B. Keshavarz, D. Gomes Rodrigues, J.-B. Champenois, M. Frith, J. Ilavsky, M. Geri, T. Divoux, G. H. McKinley and A. Poulesquen*	**OP1.** Online discussion: Session 1. *A. M. Grillet and M.-C. Heuzey*
10:15	**SM2.** Rouse model with fluctuating internal friction. *R. Kailasham, R. Chakrabarti and J. R. Prakash*	**AR2.** Probing 3D molecular orientation and alignment of flowing fluids by small-angle scattering. *P. H. Gilbert, J. Rooks, P. Butler and Y. Liu*		**AB2.** Excess entropy scaling in active matter systems. *S. A. Ghaffarizadeh and G. J. Wang*	**SC2.** Rheology of colloids bridged by telechelic polymers: Dynamics of transitions between loops and bridges. *A. Travitz and R. G. Larson*	**GG2.** State behavior and kinetics of alkali-activated aluminosilicate gels. *J. N. Mills and N. J. Wagner*	**OP1** *continues*
10:40	**SM3.** A thermodynamically consistent model of polymer disentanglement under flow. *D. E. Benjamin and P. D. Olmsted*	**AR3.** A rheometer for high-solids, heterogeneous soils. *B. A. Appleby, M. Ishaq, J. Rostami and J. R. Samaniuk*		**AB3.** A front-back flow asymmetry controls locomotion dynamics in viscoelastic fluids. *S. Wu, K. Shoele and H. Mohammadigoushki*	**SC3.** Responsive yielding in soft capsule suspensions. *R. Poling-Skutvik, A. Dhand, D. Keane and C. Osuji*	**GG3.** Gel and glassy states in macro- and nano-emulsions in the presence of micellar depletion attraction. *N. Sanatkaran, M. Zhou and R. Foudazi*	**OP1** *continues*
11:05	**SM4.** Revisiting nonlinear flow behavior of rouse chain: Roles of FENE, friction-reduction, and Brownian force intensity variation. *H. Watanabe, Y. Matsumiya and T. Sato*	**AR4.** Advancing towards thermal nonequilibrium rheometry. *R. McKenzie*		**AB4.** Self-propulsion of a freely suspended swimmer by a swirling tail in a viscoelastic fluid. *J. P. Binagia, L. Kroo, M. Prakash and E. Shaqfeh*	**SC4.** Rheological properties of phase transitions in polydisperse and monodisperse colloidal rod systems. *S. He, D. R. Pascucci, M. Caggioni, S. Lindberg and K. M. Schultz*	**GG4.** Multi-staged progression of the viscoelastic moduli during gelation of Aiyu pectin. *Y.-L. Chen, F.-W. Wang, M. Geri, Y.-R. Chen, J.-R. Huang and G. H. McKinley*	**OP1** *continues*
11:30				**AB5.** Life in a tight spot: How bacteria swim, disperse, and grow in complex spaces. *T. Bhattacharjee, D. B. Amchin, R. Alert, J. A. Ott and S. S. Datta*	**SC5.** High shear capillary rheology and flow birefringence of rod-like viruses. *S. Kuei, P. Salipante, R. Murphy, K. Weigandt and S. Hudson*		**OP1** *continues*

11:55 MONDAY BOXED LUNCH / STUDENT-INDUSTRY FORUM (Virtual, 12:15 to 1:15 pm)

Afternoon

	Ballroom 5	*Ballroom 7* **Applied Rheology and Rheology Methods**	*Meeting Room A-B* **Foams, Emulsions, Surfactants & Micelles**	*Meeting Room C-D* **Active and Biological Materials**	*Ballroom 6* **Suspensions, Colloids & Granular Materials**	*Ballroom 1* **Arrested Systems: Gels and Glasses**	*Virtual*
1:30		**AR6.** In-vitro cell-on-cell dry eye model incorporating normal stress control. *P. Baumli, C. Liu, M. Braunreuther and G. G. Fuller*	**FE6.** Mixing dynamics of bilgewater emulsions in Taylor Couette flows. *V. Panwar and C. Dutcher*	**AB6.** The colloidal nature of complex fluids leads to enhanced motility of flagellated bacteria. *S. Kamdar, S. Shin, L. F. Francis, X. Xu and X. Cheng*	**SC6.** Effect of geometric frustration on the linear viscoelasticity of dense colloidal suspensions. *S. Pradeep, A. Wessel and L. C. Hsiao*	**GG6.** Colloidal vitrification is a spontaneous non-equilibrium transition driven by osmotic pressure. *R. N. Zia and J. Wang*	
1:55		**AR7.** Gaborheometry: Applications of the Gabor transform to time-resolved oscillatory rheometry. *J. D. John Rathinaraj and G. H. McKinley*	**FE7.** Mesoscale simulation approach for dynamics and assembly of deformable objects. *T. Bello, S. Lee and P. T. Underhill*	**AB7.** Opto-rheology of biologically derived active gels. *D. L. Blair, C. Dessi and D. A. Gagnon*	**SC7.** Contact mechanics between colloidal particles. *F. M. Eric*	**GG7.** Bijels: 2D glasses or 3D gels? *H. Ching and A. Mohraz*	

2:20		**AR8.** High throughput microrheology: A path to rapid phase diagram and formulation mapping. *Y. Luo, M. Gu, Y. He, C. Edwards, M. E. Helgeson and M. Valentine*	**FE8.** Toward a biological toolkit: Systematic characterization of double emulsions for screening applications. *S. G. Calhoun, K. K. Brower, G. Kim, V. Chandran Suja, R. Radzyminski, M. Khariton, P. M. Fordyce and G. G. Fuller*	**AB8.** Effects of collagen on viscoelasticity of Pseudomonas aeruginosa biofilms grown in mouse wound beds. *G. F. Christopher and M. Ur Rahman*	**SC8.** Coupling between attractions and repulsions in flow of colloidal suspensions. *S. Virk and P. T. Underhill*	**GG8.** Relaxation processes in partially arrested soft matter. *H. Winter*
2:45		**AR9.** In-situ microrheology of drying paint. *M. C. Roffin, C. L. Wirth, S. V. Barancyk, R. M. Rock, A. Surface and J. F. Gilchrist*			**SC9.** Network physics analysis of short-range attractive. *M. Nabizadeh, N. Farzaneh, R. Babak and S. Jamali*	**GG9.** Microscopic origins of non-exponential stress relaxations in arrested soft materials. *J. Song, Q. Zhang, F. de Quesada, M. H. Rizvi, J. Ilavsky, J. B. Tracy, S. Narayanan, R. L. Leheny, E. Del Gado, N. Holten-Andersen and G. H. McKinley*
3:10				COFFEE BREAK		
	Polymers Solutions, Melts and Blends			**Flow Induced Instabilities & Non-Newtonian Fluids**		**Micro- and Nanofluidics & Confined Flows**
3:45	**SM10.** Dynamic dilution in bidipserse ring polymer melts. *T. C. O'Connor, J. Smrek and G. S. Grest*	**AR10.** Practical rheological investigation of industrial soft solids. *D. J. Moonay*	**FE10.** Drainage via stratification in foam films made with polymer-surfactant complexes. *C. Xu, C. Martinez and V. Sharma*	**IN1.** How much of the transient rheological behavior of geological shear zones can be explained using granular physics alone? *B. Ferdowsi, B. M. Alessio and A. M. Rubin*	**SC10.** Relationships among structure, memory, and flow in sheared disordered materials. *L. Galloway, E. Teich, M. Ma, C. Kammer, I. Graham, N. Keim, C. Reina, D. Jerolmack, A. Yodh and P. Arratia*	**MC1.** Let's set the (error) bar high: Quantifying uncertainties in MD simulations of transport under nanoscale confinement. *Y. Li and G. J. Wang*
4:10	**SM11.** Entanglement kinetics during interrupted orthogonal shear flow. *P. D. Olmsted, M. G. Cuhna and M. O. Robbins*	**AR11.** Three-dimensional technique for measuring sag in drying coatings. *M. W. Issa, H. Yu, M. C. Roffin, J. F. Gilchrist, S. V. Barancyk, R. M. Rock and C. L. Wirth*	**FE11.** The impact of viscous stress and Marangoni stress on the micro-scale droplet film drainage time. *Y. Chen and C. Dutcher*	**IN2.** Computational models and experimental studies of mold filling in thin channels with yield stress fluids. *R. R. Rao, J. T. McConnell, A. M. Grillet, W. Ortiz, B. Dey, P. Newell and C. C. Roberts*	**SC11.** Shear induced geometry and jamming in sphere packings. *V. H A and S. Sastry*	**MC2.** Diffusion into dead-end pores of non-uniform cross-section. *F. Bernardi, J. P. Remeis, E. Abele, G. Lee, A. W. Taylor and D. M. Harris*
4:35	**SM12.** Diffusion of thin nanorods in polymer melts. *J. Wang, T. C. O'Connor, G. S. Grest, Y. Zheng, M. Rubinstein and T. Ge*	**AR12.** Active probe rheology simulations: General formalism and applications. *P. Nourian, R. Islam, D. Sundaravadivelu Devarajan and R. Khare*	**FE12.** Drainage kinetics of sodium caseinate foam films. *L. Hassan, C. Xu, M. Boehm, S. Baier and V. Sharma*	**IN3.** Microphase separation and flow-induced crystallization in entangled polymeric solutions in extensional flows. *B. J. Edwards, M. H. Nafar Sefiddashti and B. Khomami*	**SC12.** Irreversible aggregation in sheared non-Brownian suspensions of clathrate hydrates. *M. Geri and G. H. McKinley*	**MC3.** Flow rate–pressure drop relation for complex fluids in narrow geometries. *E. Boyko and H. Stone*
5:00	**SM13.** Exploring the origins of the distinct relaxation times measured in shear and extensional rheometry for concentrated polymer solutions. *J. Du, H. Ohtani, K. Ellwood and G. H. McKinley*	**AR13.** Volatile dripping-onto-substrate (vDoS) extensional rheometry of polymeric fluids. *B. P. Robertson and M. A. Calabrese*		**IN4.** An experimental study on vortex-induced vibrations of a cylinder in shear thinning flow. *P. R. Boersma, J. P. Rothstein and Y. Modarres-Sadeghi*	**SC13.** Going with the flow: Multiscale dynamics of colloidal deposition, erosion, and interactions with immiscible fluids. *J. Schneider, N. Bizmark, R. D. Priestley and S. S. Datta*	**MC4.** High-pressure microfluidics identifies homogeneous bubble nucleation in polymer foams. *A. S. Ylitalo, H. Chao, T. C. Fitzgibbons, W. Zhou, S. Mantha, E. Di Maio, R. C. Flagan, Z.-G. Wang and J. A. Kornfield*
5:25		**AR14.** Macromolecular engineering of rheology and pinching dynamics of formulations. *C. Martinez Narvaez, L. Jimenez, J. Dinic and V. Sharma*		**IN5.** Numerical study of vortex-induced vibrations of a cylinder in shear-thinning and shear-thickening power-law fluids. *U. N. Patel, J. P. Rothstein and Y. Modarres-Sadeghi*	**SC14.** Virtual mass of an oscillating sphere. *N. Snow and X. Yin*	**MC5.** Growth and coalescence of nanoscopic mesas in stratifying, ultrathin freestanding films. *C. Xu, S. Yilixiati, Y. Zhang and V. Sharma*
5:50				END		

Tuesday, October 12

Morning

8:30 **PL2.** Do interfaces matter in rheology? *J. Vermant* (Bingham Lecture) Ballroom 5-6-7

9:20 COFFEE BREAK

	Ballroom 5 **Polymers Solutions, Melts and Blends**	***Ballroom 7*** **Applied Rheology and Rheology Methods**	***Meeting Room A-B*** **Foams, Emulsions, Surfactants & Micelles**	***Meeting Room C-D*** **Active and Biological Materials**	***Ballroom 6*** **Suspensions, Colloids & Granular Materials**	***Ballroom 1*** **Arrested Systems: Gels and Glasses**	***Virtual*** **Online Program**
9:50		**AR15.** Rheology of aluminum copper alloys in the solidification region. *L. Ravi Narayan and R. J. Hebert*	**FE15.** Factors governing rod formation and growth in polymer micelles. *P. J. McCauley, S. Kumar and M. A. Calabrese*		**SC15.** Two-step relaxation of shear-thickening dense suspensions. *A. Griese, J. H. Cho, I. Peters and I. Bischofberger*	**GG10.** Crazing reveals entanglement network in glassy ring polymers. *J. Wang and T. Ge*	**OP2.** Online discussion: Session 2. *A. M. Grillet and M.-C. Heuzey*
10:15		**AR16.** The kitchen pot thickens, drop by drop. *K. Suresh, L. Hassan, C. Martínez Narváez, M. Boehm, S. Baier and V. Sharma*	**FE16.** In situ rheodielectric investigation of alignment of lyotropic liquid crystal mesophases under large amplitude oscillatory shear. *A. Bandegi and R. Foudazi*	**AB11.** Rheological characterization of covalent adaptable thioester networks. *S. Desai, B. Carberry, K. Anseth and K. M. Schultz*	**SC16.** Scaling of the viscosity in discontinuously shear-thickening suspensions. *B. Chakraborty and J. F. Morris*	**GG11.** Microscopic interactions and emerging elasticity in model soft particulate gels. *M. Bantawa, W. A. Fontaine-Seiler, P. D. Olmsted and E. Del Gado*	**OP2** *continues*
10:40	**SM17.** Probing nonequilibrium dynamics of entangled polymers using orthogonal superposition rheometry. *J. Zhang, A. Jurzyk, M. E. Helgeson and L. G. Leal*	**AR17.** Fingerprints of thixotropy, anti-thixotropy, and viscoelasticity: A comparison of protocols. *Y. Wang and R. H. Ewoldt*	**FE17.** Magneto-rheology and field-induced ordering in polymer solutions via a mechanism alternate to phase alignment. *K. Suresh, G. V. Kresge and M. A. Calabrese*	**AB12.** Blood thixotropy and rheological hysteresis under shear. *E. Javadi and S. Jamali*	**SC17.** A first-principles approach toward characterizing the rheology of starch granules during granule swelling. *V. Narsimhan, G. P. Desam, J. Li, N. L. Dehghani and G. Narsimhan*	**GG12.** Elasticity in gels of discoidal colloids. *M. Ganesan, P.-K. Kao and M. J. Solomon*	**OP2** *continues*
11:05	**SM18.** Flow-induced crystallization of a polyethylene liquid above the melting temperature and its nonequilibrium phase diagram. *M. H. Nafar Sefiddashti, B. J. Edwards and B. Khomami*	**AR18.** Using hydrogel autofluorescence to determine elastic modulus in spatially nonuniform hydrogels. *J. A. McGlynn and K. M. Schultz*	**FE18.** Why can we measure interfacial rheology for some polymers at the A/W interface and not for others? *D. Ashkenazi, S. Alexandris, D. Vlassopoulos and M. Gottlieb*	**AB13.** Effects of sustained low-dosage aspirin consumption on the thixotropic behavior, microstructure and rheology of human blood. *M. J. Armstrong, T. Corrigan, E. Milner, D. Bailey, A. Pincot and T. Brown*	**SC18.** Understanding granular clogging of porous media and continuum flow in rapid underground tunneling. *B. A. Appleby and J. R. Samaniuk*	**GG13.** Colloidal bond kinetics govern the rheology of weakly attractive gels. *M. Nabizadeh and S. Jamali*	**OP2** *continues*
11:30	**SM19.** A thermodynamically inspired method for quantifying phase transitions in polymeric liquids with application to flow-induced crystallization of a polyethylene melt. *B. J. Edwards, M. H. Nafar Sefiddashti and B. Khomami*	**AR19.** Rheology empowered failure analysis of insulating glass unit performance enables a more accurate prediction of sustainability and resiliency to a changing climate. *C. White, M. Dimitriou and H. Nejad*		**AB14.** Effect of excipient addition on the extensional flow of protein solutions. *K. T. Lauser, A. Rueter, I. Jones and M. A. Calabrese*	**SC19.** Rheo-small angle neutron scattering measurements of shear-thickening colloidal suspensions with varying interparticle friction. *Y.-F. Lee, B. C. Scott and W. J. Norman*	**GG14.** Tuning viscoelastic behavior of vitrimers via crosslinker and backbone control. *L. E. Porath and C. M. Evans*	**OP2** *continues*

11:55 LUNCH BREAK / SOCIETY BUSINESS MEETING (Ballroom 2-3, 12:00-1:30 pm)

Afternoon

	Ballroom 5 **Polymers Solutions, Melts and Blends**	***Ballroom 7*** **Applied Rheology and Rheology Methods**	***Meeting Room A-B*** **Foams, Emulsions, Surfactants & Micelles**	***Meeting Room C-D*** **Active and Biological Materials**	***Ballroom 6*** **Suspensions, Colloids & Granular Materials**	***Ballroom 1*** **Arrested Systems: Gels and Glasses**	***Virtual***
1:30	**SM20.** Polypropylene ionomers: Extensional strain-hardening and extensional-flow-induced crystallization. *C. R. López-Barrón and T.-P. Lin*	**AR20.** Materials that alter the interfacial liquid film in soft tribology. *L. C. Hsiao, Y. Peng, C. M. Serfass and E. E. Schmidt*		**AB15.** Rheological study of epithelial cell layer by air-liquid interface induced delamination. *C. Liu and G. G. Fuller*	**SC20.** Shear thickening: A transition from unconstrained to the constrained state. *A. Singh, J. J. de Pablo and H. M. Jaeger*	**GG15.** Hierarchical nature of linear viscoelastic response in colloidal gels. *M. Bantawa, B. Keshavarz, M. Geri, M. Bouzid, T. Divoux, E. Del Gado and G. H. McKinley*	

1:55	**SM21.** Short-chain branching and rheology of crystallizing LLDPEs. *M. Andreev, G. C. Rutledge, A. Kotula, J. Moore and J. den Doelder*	**AR21.** Defluidization of cohesive particles on an air-bearing rheometer for estimation of particle-level cohesion. *A. Shetty, I. Mishra and C. Hrenya*		**AB16.** A dilatational rheology perspective on acute respiratory distress syndrome. *C. Ciutara, S. Barman and J. Zasadzinski*	**SC21.** Unifying disparate non-Newtonian regimes in suspensions: One model to unify them all. *R. V. More and A. M. Ardekani*	**GG16.** Intersection of percolation, phase separation and glassy behavior sets minimal conditions for gelation of colloidal systems. *B. K. Ryu, S. Fenton, T. Nguyen, P. Padmanabhan, M. E. Helgeson and R. N. Zia*
2:20	**SM22.** Rheology during crystallization of mixed polyolefins. *D. E. Huang, A. Kotula, C. R. Snyder and K. D. Migler*	**AR22.** A new rapid DSR separation method for polymer modified asphalt. *Y. Cui*	**FE22.** Tuning the thermoresponsive assembly and gelation of ABA/BAB triblock polymers for targeted antibiotic delivery to treat middle ear infections. *J. M. White and M. A. Calabrese*		**SC22.** Shear-induced transition from disorder to coexisting ordered states in dense colloidal suspensions. *A. Goyal, E. Del Gado, S. Jones and N. Martys*	**GG17.** Bond forming dynamics of a model colloidal suspension with depletion interaction. *Q. Li and E. M. Furst*
2:45	**SM23.** Attraction and indifference in the flow and crystallization of poly(L-lactide) with tungsten disulfide inorganic nanotubes (PLLA/WS2NT). *L. Rocher, A. S. Ylitalo, T. Di Luccio, R. Miscioscia, G. De Filippo, G. Pandolfi, F. Villani, A. Zak, G. H. Menary, A. B. Lennon and J. A. Kornfield*	**AR23.** RhIGNets: Rheology-informed graph neural networks for learning hidden rheology of complex fluids. *M. Mahmoudabadbozchelou and S. Jamali*	**FE23.** Constitutive modeling of dilute wormlike micelle solutions: Shear-induced structure, transient dynamics, and inhomogeneous flows. *R. J. Hommel and M. D. Graham*		**SC23.** Modeling the flow of aggregating suspensions using a multiscale tensor approach. *S. Jariwala, M. J. Armstrong, N. J. Wagner and A. N. Beris*	
3:10			COFFEE BREAK			
				Flow Induced Instabilities & Non-Newtonian Fluids	**Micro- and Nanofluidics & Confined Flows**	**Rheology and Mobility at Interfaces**
3:45	**SM24.** Effect of flow on the rheology-crystallinity relationship in crystallizing polyethylenes. *A. Kotula*	**AR24.** Rheology and texture of dairy and alternative cheeses using fractional calculus. *F. De Vito, S. D. Dieng and J. B. Hirsch*	**FE24.** Medium amplitude parallel superposition (MAPS) rheology of a wormlike micellar solution. *K. R. Lennon, G. H. McKinley and J. W. Swan*	**IN6.** Transiently linked FENE dumbbells under shear flow. *L. E. Quintero F., P. L. Cook and L. Zhou*	**MC6.** Capillary flow of chiral liquid crystals. *S. Norouzi, M. Esmaeili, K. George, J. A. Martinez-Gonzalez, N. Taheri-Qazvini, R. Zhang and M. Sadati*	**RI1.** Shear and dilation rheology of complex fluid interfaces. *Y. S. Tein, C. Majkrzak, B. Maranville, J. Vermant, B. Thompson and N. J. Wagner*
4:10	**SM25.** Shear-induced nematic phase in entangled rod-like PEEK melts. *D. Parisi, J. Seo, R. P. Schaake, A. M. Rhoades and R. H. Colby*	**AR25.** Pseudo-linear large-amplitude oscillatory shear stress (LAOStress): A delicious gift from Afuega'l Pitu Spanish cheese. *N. Ramlawi, L. Piñeiro-Lago, I. Franco, C. A. Tovar, L. Campo-Deaño and R. H. Ewoldt*	**FE25.** Rheology of wormlike micellar gels formed by long-chained zwitterionic surfactants. *R. R. Gupta, R. Mitishita, G. J. Elfring and I. Frigaard*	**IN7.** Unification of the rheological physics of yield stress fluids. *K. M. Kamani, G. J. Donley and S. A. Rogers*	**MC7.** Rheological analysis of complex fluids at the point-of-need via capillary filling dynamics. *J. C. Contreras-Naranjo and V. M. Ugaz*	**RI2.** Influence of interfacial viscosity on the stability of droplet shapes during sedimentation. *N. Singh and V. Narsimhan*
4:35	**SM26.** Relating the entanglement of semiflexible polymer melts to their local inter- and intra-chain structure. *R. S. Hoy, J. D. Dietz and M. Kröger*	**AR26.** Liquid sheet breakup and droplet evaporation in agricultural sprays. *I. Makhnenko, E. Alonzi, F. Steven, C. Christine and C. Dutcher*	**FE26.** Measuring the structure and rheology of wormlike micelles at high shear rates with capillary rheoSANS. *K. Weigandt, R. Murphy, P. Salipante and S. Hudson*	**IN8.** The specific sequence of physical processes that causes the loss modulus overshoot in yield stress fluids. *G. J. Donley, K. M. Kamani, P. K. Singh, A. Shetty and S. A. Rogers*	**MC8.** Experimental and theoretical studies of cross-stream migration of non-spherical particles in a quadratic flow of viscoelastic fluid. *C.-W. Tai, S. Wang and V. Narsimhan*	**RI3.** High throughput assessment of shear surface viscosity of bilayer membranes. *H. A. Faizi, R. Dimova and P. M. Vlahovska*
5:00	**SM27.** Predicting the plateau modulus from molecular parameters of conjugated polymers. *A. M. Fenton, E. D. Gomez and R. H. Colby*	**AR27.** The effects of pH and ionic strength on the extensional relaxation time of agricultural sprays. *M. Xu, A. Riseman and J. Frostad*	**FE27.** Developing a scattering model for semiflexible chains in flow to assess flow-enhanced scission of wormlike micelles. *J. Zhang, G. S. Smith, P. T. Corona, L. G. Leal and M. E. Helgeson*	**IN9.** Reynolds "stress" realizability and Cauchy stress objectivity. *C. A. Petty and A. Benard*	**MC9.** Controlling alginate gelation dynamics in confined flows. *B. T. Smith and S. M. Hashmi*	
5:25			END			
6:00			AWARDS RECEPTION Ballroom Pre Function, Tent, until 7 pm			
7:00			AWARDS BANQUET Ballroom 1-2-3			

Wednesday, October 13

Morning

8:30 **PL3.** Electrified droplets: Instabilities, interactions, and rheology. *P. M. Vlahovska* Ballroom 5-6-7

9:20 COFFEE BREAK

	Ballroom 5 **Polymers Solutions, Melts and Blends**	*Ballroom 7* **Active and Biological Materials**	*Meeting Room A-B* **Additive Manufacturing and Composites**	*Meeting Room C-D* **Flow Induced Instabilities & Non-Newtonian Fluids**	*Ballroom 6* **Suspensions, Colloids & Granular Materials**	*Ballroom 1* **Arrested Systems: Gels and Glasses**	*Virtual* **Online Program**
9:50	**SM29.** Spinnability and centrifugal force spinning of fibers of poly(ethylene oxide) solutions. *J. Merchiers, C. Slykas, C. Martínez Narváez, N. Reddy and V. Sharma*		**AM1.** Rheology and formulation in material extrusion additive manufacturing of high solids suspensions. *A. Marnot and B. K. Brettmann*	**IN11.** Linear versus branched: Flow of a wormlike micellar fluid past a falling sphere. *S. Wu and H. Mohammadigoushki*	**SC24.** Spherically confined Brownian suspensions: Influence of locally heterogenous structure on diffusion and rheology. *A. M. Sunol and R. N. Zia*	**GG19.** Dynamics of polymer gels near surfaces. *S. Morozova, S. Dhakal, D. Estrin, E. Hitimana and H. Chen*	**OP3.** Online discussion: Session 3. *A. M. Grillet and M.-C. Heuzey*
10:15	**SM30.** Extensional rheology and pinching dynamics of polysaccharide food thickener. *K. Suresh, M. Boehm, S. Baier and V. Sharma*	**AB20.** Giant vesicle dynamics in large amplitude oscillatory extension. *C. Lin, D. Kumar, C. Ritcher, S. Wang, C. M. Schroeder and V. Narsimhan*	**AM2.** Flow-induced stretch, alignment, and relaxation of semi-crystalline polymers in material extrusion additive manufacturing. *J. E. Seppala, A. Kotula, Z. Wang, O. Agarwal, T. Nguyen and K. J. Hemker*	**IN12.** Effects of micellar entanglement density on kinetics of shear banding flow formation in wormlike micelles. *P. Rassolov, L. Zhou, P. L. Cook and H. Mohammadigoushki*	**SC25.** Effect of confinement, flow rate and particle rigidity on the microstructure of semi-dense and dense suspensions. *B. Erika, K. Shaghayegh, O. Fellipe, A. Boromand, M. F. Naccache and J. Maia*	**GG20.** Under pressure: Hydrogel swelling in a granular medium. *J.-F. Louf and S. S. Datta*	**OP3** *continues*
10:40	**SM31.** Rheological investigation of magnetically induced disorder/order transition in block copolymer micelles. *G. V. Kresge, K. Suresh and M. A. Calabrese*	**AB21.** Mechanical characterization of alginate hydrogel beads. *M. M. Uddin, A. Pore and S. Vanapalli*	**AM3.** 3D printing of a Diels-Alder covalent adaptable network with microparticle reinforcement. *D. J. Bischoff and M. E. Mackay*	**IN13.** Flow-induced concentration non-uniformity and shear banding in entangled polymer solutions. *M. C. Burroughs, A. Shetty, L. G. Leal and M. E. Helgeson*	**SC26.** Predicting particle wall penetration in multicomponent systems using Machine Learning. *B. Erika, K. Shaghayegh, A. Boromand, M. F. Naccache and J. Maia*	**GG21.** Modeling temperature-dependent rheological aging in bentonite suspensions. *J. D. J. Rathinaraj, K. R. Lennon, M. Gonzalez, A. Santra, J. W. Swan and G. H. McKinley*	**OP3** *continues*
11:05	**SM32.** Magneto-rheology and field-dependent phase separation of aqueous solutions of nanorods and thermo-responsive polymers. *C. A. Neal, M. C. Quan, V. Leon and M. A. Calabrese*	**AB22.** Correlation of dynamic scaffold rheology with molecular release during material degradation. *N. Wu and K. M. Schultz*	**AM4.** High strength, high toughness parts via dual material fused filament fabrication. *B. Koker, J. H. Park, R. Ruckdashel, H. Abajorga, R. Dunn, E. Wetzel and D. Kazmer*	**IN14.** The influence of polymer entanglement on air entrainment dynamics under droplet impacts. *Z. He and M. Y. Pack*	**SC27.** Thixotropic spectra and Ashby-style charts for thixotropy. *S. Sen and R. H. Ewoldt*	**GG22.** Local mechanism governing the global reinforcement of filler-hydrogel composites. *I. Dellatolas, M. Bantawa, B. Damerau, T. Divoux, E. Del Gado and I. Bischofberger*	**OP3** *continues*
11:30	**SM33.** Microscopic dynamics and rheology of vitrimers. *A. Perego, D. Lazarenko, M. Cloitre and F. Khabaz*	**AB23.** Metal-coordination crosslink dynamics: A bio-inspired toolbox for engineering hydrogel mechanics. *N. Holten-Andersen*		**IN15.** Instabilities and turbulence in planar jets of dilute polymer solutions. *S. Yamanidouzisorkhabi, Y. Raj, T. A. Zaki, G. H. McKinley and I. Bischofberger*	**SC28.** Rheology of sheared suspensions of conductive particles in an electric field. *S. Mirfendereski and J. S. Park*	**GG23.** New insights into the rheological aging of a model thermoreversible colloidal gel with short-range interactions. *K. Suman and N. J. Wagner*	**OP3** *continues*

11:55 LUNCH BREAK

Afternoon

	Ballroom 5 **Polymers Solutions, Melts and Blends**	*Ballroom 7* **Active and Biological Materials**	*Meeting Room A-B* **Additive Manufacturing and Composites**	*Meeting Room C-D* **Flow Induced Instabilities & Non-Newtonian Fluids**	*Ballroom 6* **Rheology and Mobility at Interfaces**	*Ballroom 1* **Arrested Systems: Gels and Glasses**	*Virtual*
1:30	**SM34.** Unentangled vitrimer melts: Generalized Rouse theory illuminates interplay of cross-link exchange and backbone relaxations on linear viscoelasticity. *R. G. Ricarte and S. Shanbhag*	**AB24.** Polymer nanoparticle hydrogels: Physical hydrogels with extreme extensibility. *A. K. Grosskopf, M. Joseph, E. A. Appel and Y. Anthony*	**AM6.** Multi-material fused filament fabrication via core-shell die design. *A. Naqi and M. E. Mackay*	**IN16.** Route to elastoinertial turbulence via Tollmien-Schlichting instability. *A. Shekar, R. M. McMullen, B. J. McKeon and M. D. Graham*	**RI6.** Nonlinear interfacial rheology and adsorption behavior of clinical lung surfactant. *S. Barman, C. Ciutara and J. Zasadzinski*	**GG24.** Cellulose nanocrystals for gelation and percolation-induced reinforcement of a photocurable poly(vinyl alcohol) derivative. *R. D. Corder, P. Adhikari, M. C. Burroughs, O. J. Rojas and S. A. Khan*	

1:55	**SM35.** Determination of the number-average molecular weight of polyelectrolytes. *A. Han, S. Uppala, B. J. Dixon, L. A. Madsen and R. H. Colby*	**AB25.** Non-affine deformation of semiflexible polymer networks. *S. Chen, T. Markovich and F. C. MacKintosh*	**AM7.** Suppression of filament defects in embedded 3D printing. *L. M. Friedrich and J. E. Seppala*	**IN17.** Axisymmetric numerical simulations of viscoelastic jets. *K. Zinelis, T. Abadie, G. H. McKinley and O. K. Matar*	**RI7.** Interfacial tensions and film drainage times with surfactant stabilized emulsions: Towards improved liquid-liquid separation. *R. B. Bachnak, D. B. Moravec, B. G. Hauser, D. J. Andrew and C. Dutcher*	**GG25.** Investigation of the yielding transition in concentrated colloidal systems via rheo-XPCS. *G. J. Donley, J. Park, M. A. Wade, S. Narayanan, R. L. Leheny, J. L. Harden and S. A. Rogers*
2:20	**SM36.** Influence of small ions on composition and viscoelasticity of polyelectrolyte complexes. *S. Srivastava, V. Syed, D. Iyer and A. Holkar*	**AB26.** Mechanical response of phantom tissues to compressive loading. *B. Carroll, J. Adekiigbe and A. E. Patteson*	**AM8.** Can the power law model predict behavior of colloidal dispersions for 3D printing applications? *N. Hoque and G. F. Christopher*	**IN18.** Torsional fracture of viscoelastic liquid bridges. *F. van Berlo, S. T. Chan, H. A. Faizi, A. Matsumoto, S. Haward, P. D. Anderson and A. Chen*	**RI8.** Coronavirus rotational diffusivity. *M. Kanso, A. J. Giacomin, J. A. Hanna and J. H. Piette*	**GG26.** Transient yielding of soft particle glasses. *B. Di Dio, F. Khabaz, R. T. Bonnecaze and M. Cloitre*
2:45	**SM37.** Polyelectrolytes dynamics and rheology, in a pinch. *L. Jimenez, C. Martínez Narváez, J. Dinic and V. Sharma*	**AB27.** Strain-induced critical slowing of stress relaxation in elastic networks. *J. L. Shivers, A. Sharma and F. C. MacKintosh*	**AM9.** Methods of microencapsulation of responsive microparticle suspensions. *S. Wilson-Whitford, J. Gao, M. C. Roffin, T. Kaewpetch and J. F. Gilchrist*	**IN19.** Secondary or adverse effects in the use of polymer additives for turbulent drag reduction. *E. A. Davis and J. S. Park*	**RI9.** Artificial tap water and interfacial rheology of tea varieties. *C. E. Giacomin, R. Y. Chen and P. Fischer*	**GG27.** Accelerated yielding of binary colloidal gels. *J. H. Cho and I. Bischofberger*
3:10	COFFEE BREAK					
		Applied Rheology and Rheology Methods			**Suspensions, Colloids & Granular Materials**	
3:45	**SM38.** Dynamic signatures of gelation in associative polymer solutions. *A. Santra, G. H. McKinley and J. R. Prakash*	**AR29.** Connecting structural thixotropic models with non-equilibrium thermodynamic principles for human blood. *M. J. Armstrong, A. Pincot, S. Jariwala, J. Horner, A. N. Beris and N. J. Wagner*	**AM10.** 3D-printing of chiral inks within jammed microgels. *M. Esmaeili, K. George, N. Taheri-Qazvini and M. Sadati*	**IN20.** Reverse transition routes from inertial to elasticity-dominated turbulence in viscoelastic Taylor-Couette flow. *J. Song, N. Liu and B. Khomami*	**SC29.** Shear-induced grain boundary dynamics in magnetically actuated colloidal crystals. *D. Lobmeyer and S. L. Biswal*	
4:10	**SM39.** Understanding solvation of cellulose in ionic liquids by time dissolution evolution (TiDE) rheometry. *C. E. Owens, P. Sanchez, J. Du, A. J. Hart and G. H. McKinley*	**AR30.** Method to compute time-for-flight in a viscoelastic material by linear network model. *N. V. Salvi and J. Tan*	**AM11.** Robust networks of interfacial localized graphene in cocontinuous polymer blends. *Y. Kou, X. Cheng and C. W. Macosko*	**IN21.** Interfacial flows and instabilities of elastic fluids. *F. Albreiki, V. Sharma, A. Kubinski, A. Rasmussen and D. Jelena*	**SC30.** Periodic deformation of semiflexible colloidal filaments in eccentric time-varying magnetic fields. *A. S. Spatafora Salazar, L. H. P. Cunha and S. L. Biswal*	
4:35	**SM40.** Associating polymer features of native cellulose in ionic liquid solutions. *D. Parisi, J. Bostwick, N. W. Utomo, R. Wattana, B. Nazari and R. H. Colby*	**AR31.** Determination of the most probable molecular weight distribution function for given dynamic moduli and other linear viscoelastic data using the maximum entropy method. *D. W. Mead*	**AM12.** Rheological optimization of high solids loading for additive manufacturing. *K. J. Donovan, T. W. Walker and L. J. Groven*	**IN22.** Influence of polymer diffusivity in nanoconfinement on the onset of viscous fingering. *T. Kaewpetch, S. Wilson-Whitford, C. Heil, A. Jayaraman and J. F. Gilchrist*	**SC31.** Dynamics of interacting paramagnetic particles with finite magnetic relaxation time in rotating fields. *L. Hildebrand Pires da Cunha, F. C. MacKintosh and S. L. Biswal*	
5:00	**SM41.** Retaining structural color in a diblock bottlebrush copolymer solution. *M. A. Wade, Y. Kamble, D. Walsh, D. Guironnet and S. A. Rogers*	**AR32.** Validation of the three component model using a newly formulated yield stress model fluid and analytical solution for laminar pipe flow. *M. Caggioni, E. Tozzi, J. B. Hipp and W. H. Hartt*	**AM13.** Viscosity and storage modulus recovery of direct ink write polymer inks. *E. S. Elton, L. Perez Perez, T. S. Wilson and J. M. Lenhardt*	**IN23.** Elastic turbulence generates anomalous flow resistance in porous media. *C. A. Browne and S. S. Datta*	**SC32.** The dynamics in and rheology of dilute suspensions of semi-flexible, 2-D colloids. *J. W. Swan and K. Silmore*	
5:25		**AR33.** Spiral mold flow processability characterization of polyethylene. *M. Q. Ansari, K. A. Koppi, D. Ramirez, E. Marchbanks, J. Kohn, D. Kababik and R. Schneider*	**AM14.** Inorganic micro-particle transfer from liquid carrier system by dipping. *S. N. Shovon, M. I. Khalil, A. I. Alam and B. Khoda*	**IN24.** Transient dynamics of viscoelastic turbulent flows subject to a sudden injection of polymer additives. *A. Martinez Ibarra and J. S. Park*	**SC33.** Phase behavior and effective aspect ratio of polydisperse carbon nanotube solutions. *I. R. Siqueira, M. Duran-Chaves and M. Pasquali*	
5:50	END					
6:30	POSTER SESSION & RECEPTION Ballroom 1-2-3-4, Pre Function, Tent, until 8:30 pm					
6:30	GALLERY OF RHEOLOGY CONTEST Ballroom Pre Function; Online voting 10 am - 8 pm ET					

Thursday, October 14

Morning

8:30	**MP1.** Dynamics of physically and chemically reversible polymers. *Q. Chen* (Metzner Award Presentation)	Ballroom 5-6-7
9:10	TRANSITION REMARKS	Ballroom 5-6-7
9:20	COFFEE BREAK	
9:50	GATHER.TOWN NETWORKING FOR IN-PERSON AND VIRTUAL ATTENDEES	Virtual
11:55	END OF MEETING	

Pre-Recorded Flash Presentations

Asynchronous Viewing through Meeting Web App

VP1. Re-entrant melting in interpenetrating and interconnected grafted nano cylinders from amphiphilic star block copolymers. *E. Moghimi, I. Chubak, L. Cipelletti, K. Mortensen, C. Likos and D. Vlassopoulos*

VP2. Microscopic dynamics and shear rheology of unentangled polymer nanocomposite melts: Simulation and theoretical description. *E. N. Skountzos, K. S. Karadima and V. G. Mavrantzas*

VP3. Mechanical degradation of polyacrylamide solutions in nanoparticle suspensions. *A. Mora, J. Avendano, A. Hutin and M. S. Carvalho*

VP4. Nonmonotonic variation of terminal relaxation in star-linear blends. *S. Shanbhag*

VP5. Can short, unentangled polymers be effective (self)compatibilizers in polymer blends? *A. Bharati, R. Cardinaels and P. Moldenaers*

VP6. Use of tailored blend morphologies to obtain electrically conductive composites. *D. Strugova, E. David and N. Demarquette*

VP7. Investigation of compatibilization of PE/PP blend by graphene. *S. M. N. Sultana, E. Helal, G. Gutierrez, N. Moghimian, E. David and N. Demarquette*

VP8. Die shape optimization for extrudate swell using feedback control. *M. Spanjaards, M. A. Hulsen and P. D. Anderson*

VP9. Capillary extrusion of entangled polymer melts at high stress. *S. Cheng, Z. Xu and R. Sun*

VP10. Sculpting hydrogels using additive advective processing. *A. V. Bayles, T. Pleij, M. Hofmann and J. Vermant*

VP11. Extrudate instabilities in fused filament fabrication additive manufacturing. *Z. Swain and M. E. Mackay*

VP12. Molecular view on mechanical reinforcement in polymer nanocomposites: New insights from small-angle neutron scattering. *R. Sun, M. Melton, N. Safaie, R. Ferrier, S. Cheng, Y. Liu, X. Zuo and Y. Wang*

VP13. Reprocessable, soft, 3D printable elastomers. *L. Cai*

VP14. Probing in-cage particle dynamics in hard sphere glasses with high frequency rheometry. *T. Athanasiou, B. Mei, K. Schweizer and G. Petekidis*

VP15. Thixotropy, non-monotonic stress relaxation, and the second law of thermodynamics. *Y. M. Joshi*

VP16. Cellulose nano-crystalline (CNC) hydrogels as yield stress fluids (YSFs): Effect of temperature, ultrasonication and concentration. *B. Zakani and D. Grecov*

VP17. Elastic storage during flow of yield stress materials. *M. Marchand, M. Caggioni and V. Trappe*

VP18. Linear viscoelasticity of associating star polymer networks. *D. M. Robe, G. H. McKinley and J. R. Prakash*

VP19. Simulation of rhamnolipids. *J. Antony and E. Mani*

VP20. Uses of large amplitude oscillatory shear in food products. *H. S. Joyner*

VP21. An application of lubrication theory for the flow of liquid crystals in a slider bearing. *S. LI and G. Dana*

VP22. The impact of multiple fluids on the purely-elastic instabilities that arise in a microfluidic flow focusing device. *G. Houston and M. Oliveira*

VP23. Characterizing the linear viscoelastic behavior of bimodal polyethylene using their continuous relaxation spectra. *S. Kwakye-Nimo, Y. Yu, Y. Inn and P. Wood-Adams*

VP24. Molecular origin of rheological and mechanical properties of well-defined polystyrene POM-POM model systems. *V. Hirschberg, M.-C. Röppert, L. Faust, K. Masood and M. Wilhelm*

VP25. The role of hydrodynamics in flowing semidilute solutions of ring/linear polymer blends. *C. E. Sing and C. D. Young*

VP26. Rheology of semiflexible polymers in shear flow via Brownian dynamics and quasi-two-parameter theory. *I. M. Pincus, R. Alison and J. R. Prakash*

VP27. A two-species model for the rheology of associative polymer solutions from nonequilibrium thermodynamics. *P. S. Stephanou, I. C. Tsimouri and V. G. Mavrantzas*

VP28. Charge screening effects on the rheology of polymerized ionic liquid solutions in the semidilute unentangled regime. *A. Matsumoto, R. Yoshizawa, O. Urakawa, T. Inoue and A. Q. Shen*

VP30. Melt rupture and wall slip of metallocene-catalyzed bimodal molecular weight distribution polyethylene under simple shear. *M. Sattari, Y. Inn and P. Wood-Adams*

VP31. Unravelling the transient network topology of hydrophobically associating multiblock copolymers and their resulting elasticity and relaxation times. *A.-S. Huysecom, W. Thielemans, R. Cardinaels and P. Moldenaers*

VP32. Photopolymerization of methacrylate: From conversion via rheology to mechanical properties. *R. Anastasio, W. Peerbooms, N. Steensma, R. Cardinaels and L. van Breemen*

VP33. Understanding the morphology and self-stratification in multiphase polymer colloidal films. *P. K. Singh, M. L. Pacholski, J. Gu, G. Singhal, Y. Go, C. Leal, P. V. Braun, K. Patankar, R. Drumright, S. A. Rogers and C. M. Schroeder*

VP34. Protocol-agnostic material functions and more accurate flow diagnostics based on recoverable strain measurements. *P. K. Singh, J. C. Lee, K. Patankar and S. A. Rogers*

VP35. On simultaneous fitting of nonlinear and linear rheology data: Preventing a false sense of certainty. *P. K. Singh and R. H. Ewoldt*

VP36. Impact of various environmental chemical conditions on the rheological behaviour of a system of mixed clay gels using response surface methodology. *C. Boulet, A. Brown, C. Formstone and D. Aarts*

VP37. Relating photovoltaic module stresses to encapsulant thermomechanics. *C. C. Roberts, A. M. Maes, A. McMaster, M. R. Phillips, R. D. Charles and J. Y. Hartley*

VP38. Extensional rheology and pinching dynamics of associative polysaccharide solutions. *X. Lu, C. Martíne, J. Dinic, C. Wang, H. Sun, B. Rearick and V. Sharma*

VP39. Calculation method for the relaxation time spectra of viscoelastic fluids using dynamic moduli. *L. E. Hamel Ascanio and S. D. Rosales-Anzola*

VP40. The rheology of methane and carbon dioxide hydrates at extreme high pressures. *A. Guerra and A. D. Rey*

VP41. Interplay of inertia and stress diffusion in shear flows of viscoelastic fluids. *S. Sharma, Y. M. Joshi and V. Shankar*

VP42. Effect of MW, concentration and anionicity on the linear and non-linear viscoelastic properties of high performance EOR polymers. *M. S. Azad*

VP43. The effect of rheological properties on pyroelectrodynamic jets. *D. Tammaro, R. Rega, S. Itri, V. Tkachenko, V. Vespini, S. Coppola, P. Ferraro, G. D'Avino, S. Grilli and P. L. Maffettone*

VP44. Koopman with control for constitutive law identification. *E. J. Southern and E. E. Keaveny*

VP45. Development of a lab simulation process to evaluate melt fracture of underwater pelletized polymer. *Y. Jin, D. Reuschle, T. Gambrel, J. den Doelder, J. Van Leeuwen and A. Imthurn*

VP46. Advances in rheo-optical methods. *J. Laeuger*

VP47. Non-linear transient stretching and relaxation of highly deformed vesicles reveals a deflation-dependent bending modulus. *C. M. Schroeder and D. Kumar*

VP48. Saliva rheology and its effect on aerosol generation during sneezing. *M. Rodriguez Hakim, L. Räz and J. Vermant*

VP49. Spinning a yarn of the molecular rheology of natural silk spinning: Sticky reptation in extensional flow. *C. Schaefer and T. C. McLeish*

VP50. Rheology and direct write printing of chitosan - graphene oxide nanocomposite hydrogels for differentiation of neuroblastoma cells. *P. Thareja*

VP51. Diffusion of proteins in the continuous phase of block polymer liquid crystals. *C. S. Valentine and L. M. Walker*

VP52. Millifluidic bulge test reveals local and bulk mechanical properties of engineered biofilms. *P. K. Chittur, H. Liu, D. A. Tirrell and J. A. Kornfield*

VP53. Mechanical pre-metastatic lung terraforming by breast cancer-derived extracellular vesicles. *D. Weihs, T. Barenholz-Cohen, Y. Merkher, D. Shechter, J. Haj, D. Kirchmeier and Y. Shaked*

VP54. Determining the yield stress of a biopolymer-bound soil composite for extrusion-based 3D printing applications. *A. O. Biggerstaff, G. G. Fuller, M. D. Lepech and D. J. Loftus*

VP55. Physical aging in chocolate subsequent to thermal and mechanical rejuvenation. *T. Bhattacharyya and Y. M. Joshi*

VP56. Drying-induced stratification in complex mixes of dairy proteins. *L. Lanotte, M. Yu, C. Le Floch-Fouéré, F. Boissel, L. Pauchard, A. Saint-Jalmes and R. Jeantet*

VP57. Application of high pressure shear rheology to assess CO_2 gas bubble nucleating proficiency of native starch particles and dispersed proteins. *J. I. Zink and E. J. Windhab*

VP58. Propagating high stress fronts responsible for shear thickening in a cornstarch suspension. *V. Rathee, J. Miller, D. L. Blair and J. S. Urbach*

VP59. Extensional stress-relaxation measurements on wheat flour dough – The key to finalizing the Fractional K-BKZ framework? *Y. Meeus, M. Meerts, D. Szilvási, G. H. McKinley, R. Cardinaels and P. Moldenaers*

VP60. Colloidal gelation in foam: Probing the impact of elastic continuous phases on foam mechanics. *A. Mikhailovskaya, V. Trappe and A. Salonen*

VP61. Delayed elastic and ageing creep response of foams. *F. A. Lavergne, P. Sollich and V. Trappe*

VP62. An essential factor of perfluoroalkyl surfactant attributing to efficacy in firefighting foams. *A. Banerjee and Y. Liu*

VP63. Simulating foam and bubble suspensions using an extended Stokesian dynamics approach with bubble interaction. *E. J. Rosenbaum, M. Massoudi and K. Dayal*

VP64. Controlling the morphology of polymeric foams: An experimental and numerical investigation. *D. Tammaro, M. M. Villone, G. D'Avino and P. L. Maffettone*

VP65. Nanometric sized ions as foam Stabilizers. *P. Bauduin, M. Hohenschutz, O. Diat, P. Schmid, L. Girard, C. Dewhurst and I. Grillo*

VP66. Foam coarsening under steady shear: Interplay between bubble rearrangement and film thinning dynamics. *A. Saint-Jalmes and C. Trégouet*

VP67. Evaporation and atomization of ultra-stable emulsion droplets. *P. Rastogi, B. Krishan, D. C. K. Rao, S. Basu, N. S. Kaisare and B. M. Gurappa*

VP68. Microstructure and interfacial rheology of ellipsoids at interfaces - Role of surface modification. *H. Kumar and B. M. Gurappa*

VP69. Structure-rheology relationship of β-lactoglobulin's quaternary structure through interfacial rheology. *S. Ramamirtham, C. P. Whitby, D. Zare, M. Weeks and M. A. Williams*

VP70. Effect of aromatic and non-aromatic solvents in the interfacial viscoelasticity of Brazilian asphaltenes. *I. F. Soares, E. Marín, J. Limberger and M. F. Naccache*

VP71. Drag on a spherical particle at the air-liquid interface: Interplay between compressibility, Marangoni flow and surface viscosities. *M. Pourali, M. Kröger, J. Vermant, P. D. Anderson and N. O. Jaensson*

VP72. Super resolution microscopy to study rheological transitions during egg-white cooking. *J. C. Bonilla and M. P. Clausen*

VP73. Colloid-polymer mixtures revisited: Assessing the role of macromolecular depletant. *E. Moghimi, K. Parvin, D. Parisi and D. Vlassopoulos*

VP74. Evaporative shape transformations in polymeric sessile droplets. *J. R. Belanger*

VP75. Influence of surface roughness on the yielding of thermo-reversible colloidal gels. *F. J. Müller and J. Vermant*

VP76. Assessing rheological properties of highly-filled polymers for material extrusion additive manufacturing of metallic parts. *S. Ancé, J. Soulestin, V. Demers and N. Demarquette*

VP77. Active particles in external fields. *V. A. Shaik and G. J. Elfring*

VP78. On the inverse quenching technique applied to gelatin solutions. *P. R. Avallone, R. Pasquino, S. Costanzo, A. Sarrica, M. Delmonte, F. Greco and N. Grizzuti*

VP79. Nonlinear shear rheometry of unentangled polymers. *S. Costanzo, K. Peponaki, S. Alexandris, D. Parisi, N. Grizzuti and D. Vlassopoulos*

VP80. Determination of the molecular weight distribution of ultra-high molecular weight polyethylene from solution rheology. *V. Ianniello, S. Costanzo, R. Pasquino, G. Ianniruberto, T. Tervoort and N. Grizzuti*

VP81. Frequency dependence and critical transition can be induced by a negligible Van der Waals force in non-Brownian Newtonian suspensions. *Z. Ge, R. Martone, L. Brandt and M. Minale*

VP82. Mechanical and structural analysis of channel networks in bacterial biofilms. *S. Geisel, E. Secchi and J. Vermant*

VP83. Entrance flow of unfoamed and foamed Herschel-Bulkley fluids. *K. S. Mishra, L. Grob, L. Kohler, S. Zimmermann, S. Gstöhl, P. Fischer and E. J. Windhab*

VP84. Interfacial rheology of phospholipid monolayers. *D. Renggli and J. Vermant*

VP85. Fast flows on linear and branched wormlike micelles. *M. Tonti, S. Costanzo, G. Ianniruberto, N. Grizzuti and R. Pasquino*

VP86. A numerical study of extensional flow-induced crystallization in filament stretching rheometry. *P. D. Anderson, F. van Berlo, G. Peters and R. Cardinaels*

VP87. Lubricant effect of graphene in polystyrene. *J. Genoyer, C. Dufour, E. Helal, G. Gutierrez, N. Moghimian, E. David and N. Demarquette*

VP88. Ultrasonic dispersion and time evolution of concentrated cellulose nanocrystal suspensions characterized by rheology. *M. Girard, F. Bertrand, J. R. Tavares and M.-C. Heuzey*

VP89. Rheological implications of pH induced particle-particle association in aqueous suspension of an anisotropic charged clay. *M. Shoaib and E. Bobicki*

VP90. Alteration of soft glassy dynamics in aqueous suspensions of an anisotropic charged swelling clay through pH changes. *M. Shoaib and E. Bobicki*

VP91. Yielding of model viscoplastic interfaces in shear and compression: Landmark observations and constitutive modelling. *A. Alicke, T. Tervoort and J. Vermant*

VP92. Droplet-based microfluidic tool to quantify viscosity of concentrating multicomponent protein solutions. *D. Yang and L. M. Walker*

VP93. Processing irreversibly adsorbed, solvent-responsive nanoparticles at the oil-water interface. *M. L. Davidson, J. Ma and L. M. Walker*

VP100. Effect of specific surface area on the rheology of graphene nanoplatelet-filled PEO composites. *H. Haridas and M. Kontopoulou*

VP101. Pickering interfacial photocatalysis of o-Xylene. *N. C. Maji, N. S. Kaisare and B. M. Gurappa*

VP102. Analytical modeling of interfacial diffusion for symmetric bilayer entangled polymer films. *A. Dousti and E. Behzadfar*

Poster Session

Wednesday, October 13 6:30 PM – 8:30 PM Ballroom 1, 2, 3 and 4

PO1. Helical locomotion in yield stress fluids. *F. Nazari and H. Mohammadigoushki*

PO2. Can micro-pillared surfaces affect the viscoelasticity and attachment strength of Pseudomonas aeruginosa biofilms? *B. Bhattarai and G. F. Christopher*

PO3. Rheological characterization of Candida albicans fungal biofilms. *J. K. Beckwith, M. Ganesan, J. S. VanEpps, A. Kumar and M. J. Solomon*

PO4. Surface layer and bulk viscoelasticity of human airway mucus. *S. Danielsen and M. Rubinstein*

PO5. Biomass microbeads as sustainable rheological modifiers for personal care consumer products. *B. P. Robertson and M. A. Calabrese*

PO6. Using bi-disperse microrheology to measure human mesenchymal stem cell remodeling of hydrogels on multiple length scales. *J. A. McGlynn and K. M. Schultz*

PO7. Earwax deters crawling insects and aids in self-cleaning. *D. S. Ancalle, C. L. Finn, N. Jiang, J. Walter, R. Zhang and D. L. Hu*

PO8. Rheological characterization of electrosprayed inulin-poly(vinyl) alcohol microparticle suspensions for therapeutic applications. *K. T. Saud, M. J. Solomon, J. Xu and J. J. Moon*

PO9. Tuning the extent of protein and biofilm deposition on surfaces with liquid layers. *C. K. Fong, M. Andersen, A. Flores-Mireles and C. Howell*

PO10. Immiscible liquid-coated materials for bioseparations. *J. Hardcastle, D. P. Regan, C. K. Fong, R. Shah, S.-H. Hung, A. Cihanoglu, J. D. Schiffman and C. Howell*

PO11. Fabrication of vascularized polymers with fugitive ink 3D printing. *B. Dixon and C. Howell*

PO12. No sagging, no cry. *C. Saengow, S. Aboutaleb, N. Haug, A. J. Wagoner Johnson and R. H. Ewoldt*

PO13. Coalescence of passively trapped droplets in a microfluidic device with and without confinement. *C. Panigrahi and C. Dutcher*

PO14. Simultaneous characterization of thermophoresis and fluid properties using multiple particle tracking microrheology. *M. C. Roffin, X. Cheng, K. M. Schultz and J. F. Gilchrist*

PO15. The rheology of methane and carbon dioxide hydrates at extreme high pressures. *G. Andre, A. D. Rey, M. Maric and P. Servio*

PO16. Use of thermal analysis and rheometry to study the properties of crude oil. *K. J. Whitcomb and Y. Adhia*

PO17. Exploring secondary flows while building high-fidelity tools for complex viscoelastic behavior in precision manufacturing. *L. T. Holmes and R. B. Secor*

PO18. Elastic instabilities in confined geometries. *M. Kumar and A. M. Ardekani*

PO19. Oreology: Fracture and flow of “milk’s favorite cookie”. *C. E. Owens, M. R. Fan, A. J. Hart and G. H. McKinley*

PO20. Shear banding and wall slip in polymer wormlike micelles. *P. J. McCauley, L. H. Pham, S. Kumar and M. A. Calabrese*

PO21. Shear banding in poloxamer wormlike micelles (WLMs) with slow dynamics. *C. Huang, P. J. McCauley and M. A. Calabrese*

PO22. Droplet-on-fiber: Rheological assessment. *A. L. Co, M. Mueth, B. Khoda and K. Tilbury*

PO23. Introducing the role of brittility to the soft materials. *K. M. Kamani and S. A. Rogers*

PO24. Measurement and prediction of oozing in PSAs. *S. Lalitha Sridhar, V. Pandey and Z. Zhao*

PO25. Characterizing rheological behavior of dispersions and paints using Orthogonal Superposition. *E. Akbari and S. Cotts*

PO26. Characterizing yield using Orthogonal Superposition under controlled shear stress. *S. Cotts*

PO27. Temperature controlled droplet-based extensional rheometry for characterizing thermoresponsive materials. *D. Y. Zhang and M. A. Calabrese*

PO28. Improving analysis methods for Dripping-onto-Substrate (DoS) extensional rheology measurements. *K. T. Lauser, M. A. Calabrese and D. Y. Zhang*

PO29. Tandem NIR/rheo cure monitoring of chemical conversion and rheology. *S. V. Barancyk and M. J. DiTucci*

PO30. High temperature dynamic mechanical analysis of glass and damascene steel in flexure mode up to 950 °C. *M. Walluch, D. Ehgartner, A. Shetty, C. Giehl and D. Schuetz*

PO31. Shear cessation in the pre-yielding and post-yielding of dense soft solids. *V. H A, D. Gavin, V. V. Vasisht and E. Del Gado*

PO32. On extrapolation of dynamic data to obtain the limiting steady-state compliance. *M. T. Shaw and R. A. Weiss*

PO33. Time-resolved microstructural changes and macroscopic sequence of physical processes in large amplitude oscillatory shear of model soft gels. *G. J. Donley, M. Bantawa and E. Del Gado*

PO34. Comparison of sequence of physical processes and Chebyshev decomposition methods to evaluate and interpret large amplitude oscillatory shear (LAOS) response of hard, soft and semolina flour dough. *M. Yildirim and J. Kokini*

PO35. How to make medium-amplitude oscillatory shear stress (MAOStress) measurements. *N. Ramlawi, T. Hossain, A. Shetty and R. H. Ewoldt*

PO36. Protorheology: Visual evidence and inference. *T. Hossain and R. H. Ewoldt*

PO37. Psychorheology through transient recovery rheology: Importance of timescales. *E. M. Burgeson, J. Martin and S. A. Rogers*

PO38. A complete rheological formalism built on the concept of recovery. *J. Shi and S. A. Rogers*

PO39. Automatic construction of rheological master curves. *K. R. Lennon, G. H. McKinley and J. W. Swan*

PO40. Kinetics of solvation using Time Dissolution Evolution (TiDE) rheometry. *C. E. Owens, J. Du, P. Sanchez, A. J. Hart and G. H. McKinley*

PO41. Quantifying thixotropy using step-rate tests and kinetic structure-based constitutive modeling. *S. Sen, X. Lu, C. Wang and R. H. Ewoldt*

PO42. Creeping flows of smooth and rough colloids. *Y. C. Saraswat and L. C. Hsiao*

PO43. Extensional rheology of colloid-polymer mixtures with depletion attractions. *D. D. Soetrisno, M. J. Gallegos, N. Park and J. C. Conrad*

PO44. Probing plastic rearrangements in colloidal gels during creep. *P. Lehéricey, L. Stricker, L. Isa and J. Vermant*

PO45. Time dependent rheological behavior of particulate suspensions: Portland cement vs silicon carbide. *B. Y. Onanuga, E. J. Garboczi, N. Moser and J. J. Biernacki*

PO46. Characterization of powders from non-cohesive to cohesive through rheological means. *J. P. Eickhoff*

PO48. Rheological signatures in colloidal gels of oppositely charged particles. *D. R. Khakal, A. P. Deshpande and B. G. Madivala*

PO49. Impact of silica nanorod concentration on the nonlinear rheology of aqueous poly(acrylamide)-nanoparticle suspensions. *C. A. Neal, V. Leon, M. C. Quan, N. Chibambo and M. A. Calabrese*

PO50. Rheological characterization of high-solids, drilling fluids by flow loop. *B. A. Appleby, J. Yu and J. R. Samaniuk*

PO51. Dynamic magnetochromatic response of concentrated suspensions of Janus particles. *J. Gao, S. Wilson-Whitford and J. F. Gilchrist*

PO52. Study of the depletant concentration on the rheology of concentrated nanoemulsion. *Z. Abbasian Chaleshtari, H. Salimi-kenari and R. Foudazi*

PO53. Drainage via stratification in micellar foam films. *X. Chenxian, Z. Yiran, K. I. Subinur, O. Chrystian and S. Vivek*

PO54. Normal stresses at the yielding point. *P. R. de Souza Mendes, T. N. Rochinha and P. R. Varges*

PO55. Poroelasticity of confined hydrogel films. *G. D. Degen and A. A. Pitenis*

PO56. Exploration of slide-ring gelation kinetics using rheology. *K. Dikshit and C. J. Bruns*

PO57. Modulating the rheology of collagen-based hydrogels using morphology-controlled tannic acid particles. *P. Sarker, O. J. Rojas and S. A. Khan*

PO58. Tuning rheological and structural transitions in ABA/BAB poloxamer hydrogels. *J. M. White and M. A. Calabrese*

PO59. Rheological properties of phase transitions in polydisperse and monodisperse colloidal rod systems. *S. He, D. R. Pascucci, M. Caggioni, S. Lindberg and K. M. Schultz*

PO60. Magneto-rheological studies on the role of hydration in anomalous magnetically-induced block copolymer ordering. *G. V. Kresge and M. A. Calabrese*

PO61. Role of glass fiber on the crystallization of poly(ether ether ketone). *J. D. Alexander, X. Zhang, J. Seo, R. P. Schaake, A. M. Rhoades and R. H. Colby*

PO64. Dynamics of entangled linear polymers at fast deformations: Influence of matrix viscoelasticity. *H. Taghipour, L. Hawke, D. Vlassopoulos and E. van Ruymbeke*

PO65. Interfacially compatibilized PI/PDMS blends with reduced octadecylamine-functionalized graphene oxide. *J. Nasrollah Gavgani, F. Goharpey and S. Velankar*

PO66. Relaxation dynamics of polyelectrolyte solutions. *A. Han and R. H. Colby*

PO67. Rheology of an associating polymer solution: Poly(vinyl alcohol) in water. *C. D. Ditillo, D. Parisi, S. Lindberg, M. W. Hamersky and R. H. Colby*

PO68. "Tying the knot", enhanced recycling trough ultra-fast entangling across ultra-high molecular weight polyethylene interfaces. *F. Christakopoulos, E. M. Troisi, N. Friederichs, J. Vermant and T. Tervoort*

PO69. Crosslinking poly(acrylamide-co-diallyldimethylammonium chloride) membrane with glutaraldehyde for fuel cell application. *U. Asogwa and M. W. Liberatore*

PO70. Extensional rheology, pinching dynamics, and processability of polymer solutions. *C. Martinez and V. Sharma*

Gallery of Rheology

Preview: Starts Monday 1:30 PM at Ballroom Pre Function and on Meeting Web App
Contest: Wednesday 6:30 PM – 8:30 PM (Online voting 10:00 AM – 8:00 PM ET) at Ballroom Pre Function

GR1. Axisymmetric numerical simulations of viscoelastic jet thinning and breakup. *K. Zinelis, T. Abadie, G. H. McKinley and O. K. Matar*

GR2. Starry starry spherulite. *K. D. Migler, D. E. Huang and A. Kotula*

GR3. Patterns of fluorescent quantum dots in polymerizing polymer beads passing through regular arrays of micro tubes under UV radiation. *B. Iurii, A. P. Udepurkar, S. Kuhn and C. Clasen*

GR4. NanoAmazon: Tropical rainforest of Brazilian asphaltenes. *I. F. Soares, E. M. Castaño and M. F. Naccache*

GR5. Rolling around a spinning top. *B. Keshavarz and M. Geri*

GR6. Reawakening. *A. S. Ylitalo and J. A. Kornfield*

GR7. Emerging patterns in polymers. *T. Bello and P. T. Underhill*

GR8. Rheological petals. *F. Albreiki, A. Kubinski and V. Sharma*

GR9. Transition to turbulence in planar jets: Small amounts of polymer destabilize the flow. *S. Yamanidouzisorkhabi, Y. Raj, G. H. McKinley and I. Bischofberger*

GR10. Interfacial rheology and thin liquid films. *A. Alicke and J. Vermant*

GR11. Binary colloidal gel network. *J. H. Cho and I. Bischofberger*

GR12. Thread of life: Death and rebirth of a cotton thread. *C. E. Owens, J. Du, A. J. Hart and G. H. McKinley*

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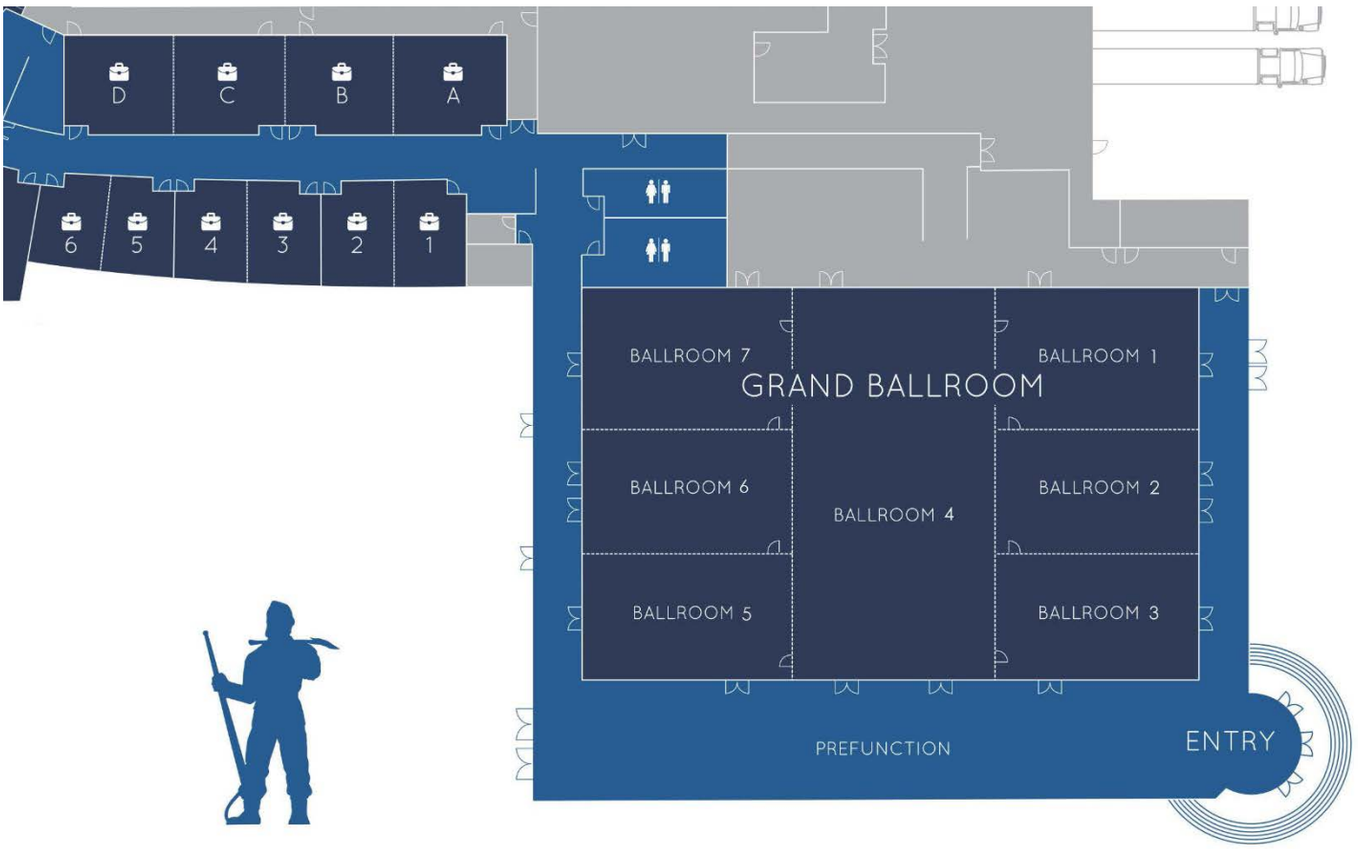

Social Program and Special Events

Sunday, October 10

Rheology Research Symposium (continued from Saturday, October 9)

Welcoming Reception
6:00 PM – 8:00 PM — Ballroom 2-3, Pre Function, Tent
Sponsored by TA Instruments

Monday, October 11

Monday Boxed Lunch
11:55 AM – 1:30 PM — Ballroom 2-3, Pre Function, Tent

Student-Industry Forum
12:15 PM – 1:15 PM — Virtual

Gallery of Rheology Preview
1:30 PM – Wed 4:00 PM — Ballroom Pre Function
Asynchronous Viewing — Meeting Web App

Student Trivia Night
7:00 PM – 8:30 PM — Sea Dog Brewing Co.

Tuesday, October 12

Society Business Meeting
12:00 PM – 1:30 PM — Ballroom 2 and 3

Awards Reception
6:00 PM – 7:00 PM — Ballroom Pre Function, Tent

Awards Banquet
7:00 PM — Ballroom 1, 2 and 3

Wednesday, October 13

Poster Session and Reception
6:30 PM – 8:30 PM — Ballroom 1-2-3-4, Pre Function, Tent
Reception sponsored by Anton-Paar USA

Gallery of Rheology Contest
6:30 PM – 8:30 PM — Ballroom Pre Function
Online voting 10 AM – 8 PM ET

The Society of Rheology gratefully acknowledges the generous support of Anton-Paar USA, TA Instruments and Department of Chemical & Biomedical Engineering, University of Maine.