



The Society of Rheology 73rd Annual Meeting - Bethesda, Maryland

Meeting Schedule

Monday, October 22, 2001					Tuesday, October 23, 2001					Wednesday, October 24, 2001					Thursday, October 25, 2001				
8:30	A. N. Beris (PL1)				8:30	M. Doi (PL2)				8:30	R. G. Larson (PL3)				8:05	SR5	SM22	TS14	LS10
9:20	Coffee				9:20	Coffee				9:20	Coffee				8:30	SR6	SM23	TS15	LS11
9:45	SS1	FI1	CF1	ML1	9:45	SS15	SB1	CF14	ML15	9:45	CA1	SM8	TS1	GP9	8:55	SR7	SM24	TS16	LS12
10:10	SS2	FI2	CF1	ML2	10:10	SS16	SB2	CF15	ML16	10:10	CA2	SM9	TS1	GP10	9:20	SR8	SM25	TS17	LS13
10:35	SS3	FI3	CF2	ML3	10:35	SS17	SB3	CF16	ML17	10:35	CA3	SM10	TS2	GP11	9:45	Coffee			
11:00	SS4	FI4	CF3	ML4	11:00	SS18	SB4	CF17	ML18	11:00	CA4	SM11	TS3	GP12	10:10	SR9	SM26	TS18	LS14
11:25	SS5	FI5	CF4	ML5	11:25	SS19	SB5	CF18	ML19	11:25	CA5	SM12	TS4	GP13	10:35	SR10	SM27	TS19	LS15
11:50	Society Luncheon				11:50	Lunch				11:50	Lunch				11:00	SR11	SM28	TS20	LS16
1:30	SS6	FI6	CF5	ML6	1:30	SS20	SM1	CF19	GP1	1:30	CA6	SM13	TS5	LS1	11:25	SR12	SM29	TS21	LS17
1:55	SS7	FI7	CF6	ML7	1:55	SS21	SM1	CF20	GP2	1:55	CA7	SM14	TS6	LS2	11:50	SR13	SM30	TS22	LS18
2:20	SS8	FI8	CF7	ML8	2:20	SS22	SM2	CF21	GP3	2:20	CA8	SM15	TS7	LS3	12:15	End			
2:45	SS9	FI9	CF8	ML9	2:45	SS23	SM3	CF22	GP4	2:45	CA9	SM16	TS8	LS4					
3:10	Coffee				3:10	Coffee				3:10	Coffee								
3:35	SS10	FI10	CF9	ML10	3:35	SS24	SM4	CF23	GP5	3:35	SR1	SM17	TS9	LS5					
4:00	SS11	FI11	CF10	ML11	4:00	SS25	SM5	CF24	GP6	4:00	SR1	SM18	TS10	LS6					
4:25	SS12	FI12	CF11	ML12	4:25	SS26	SM6	CF25	GP7	4:25	SR2	SM19	TS11	LS7					
4:50	SS13	FI13	CF12	ML13	4:50	SS27	SM7	CF26	GP8	4:50	SR3	SM20	TS12	LS8					
5:15	SS14	FI14	CF13	ML14	5:15	End				5:15	SR4	SM21	TS13	LS9					
5:40	End				5:30	Business Meeting				5:40	End								
					7:00	Awards Reception				6:00	Poster Session & Refreshments								
					8:00	Awards Banquet													

Session Codes

CA = Polymers With Complex Architecture
 CF = Quantifying Microstructure In Complex Fluids*
 FI = Flow Instabilities
 GP = General Papers
 LS = Probes of Local Rheology and Structure

ML = Molecular Level Modeling and Theory
 PL = Plenary Lectures
 SB = Phenomena Near Solid Boundaries
 SM = Viscoelasticity In Polymer Solutions and Melts*
 SR = Solid Rheology From Glasses To Gels*

SS = Simple Fluids To Suspensions
 TS = Two Phase Systems: Emulsions, Blends and Suspensions*

* Sessions intended to highlight the contributions of NIST/NBS to the field of rheology

Monday, October 22

Morning

8:30		PL1. Nonequilibrium thermodynamics applications in rheology. <u>A. N. Beris</u>	Crystal Ballroom
9:20			COFFEE
	Cabinet	Old Georgetown	Judiciary
	Simple Fluids To Suspensions	Flow Instabilities	Microstructure In Complex Fluids
9:45	SS1. Early Schowalter. <u>M. M. Denn</u>	FI1. Influence of fiber additives on the stability of Taylor-Couette flow. <u>V. Gupta</u> , <u>R. Sureshkumar</u> , <u>B. Khomami</u> and <u>J. Azaiez</u>	CF1. Structure and rheology of polymer blends under shear flow. <u>C. C. Han</u> , <u>A. I. Nakatani</u> , <u>E. K. Hobbie</u> and <u>H. S. Jeon</u>
10:10	SS2. Dynamic simulation of sheared suspensions of non-Brownian spheres. <u>A. Acrivos</u> , <u>G. Drazer</u> , <u>B. Khusid</u> , <u>J. Koplik</u> and <u>M. Marchioro</u>	FI2. Finite-amplitude waves in plane channel flow of viscoelastic fluids. <u>K. Atalik</u> and <u>R. Keunings</u>	CF1 continues
10:35	SS3. Large scale hydrodynamic simulations of Brownian suspensions. <u>J. L. Higdon</u> and <u>M. N. Viera</u>	FI3. Toward a structural understanding of turbulent drag reduction: Nonlinear coherent states in viscoelastic shear flows. <u>P. A. Stone</u> and <u>M. D. Graham</u>	CF2. Shear induced demixing of temperature sensitive microgel suspensions. <u>M. Stieger</u> , <u>P. Lindner</u> and <u>W. Richtering</u>
11:00	SS4. Suspensions in extensional flow. <u>S. Smai</u> and <u>J. F. Brady</u>	FI4. Location of the continuous spectrum in complex flows of the UCM fluid. <u>M. Renardy</u>	CF3. Shear-induced tilt order in viscoelastic emulsions. <u>E. K. Hobbie</u>
11:25	SS5. Inertial influence on the rheology of a dilute suspension of spheres. <u>J. E. Morris</u> and <u>D. R. Mikulencak</u>	FI5. Linear stability of periodic channel flow: Local and non-local analyses. <u>B. Sadanandan</u> and <u>R. Sureshkumar</u>	CF4. Shear-induced phase separation in wormlike micellar fluids. <u>S. R. Raghavan</u> , <u>B. A. Schubert</u> and <u>E. W. Kaler</u>
11:50			
			SOCIETY LUNCHEON Crystal Ballroom

Afternoon

	Cabinet	Old Georgetown	Judiciary	Diplomat/Ambassador
	Simple Fluids To Suspensions	Flow Instabilities	Microstructure In Complex Fluids	Molecular Level Modeling and Theory
1:30	SS6. Two-dimensional suspensions: Dynamics and rheology. <u>G. G. Fuller</u> , <u>A. Laschitsch</u> , <u>M. Widenbrant</u> , <u>E. Stancik</u> and <u>J. Vermant</u>	FI6. Linear stability of homogeneous shear flow of linear and branched polymer melts. <u>V. Ganesan</u> and <u>B. Khomami</u>	CF5. Shear-induced displacement of isotropic-nematic spinodals. <u>T. Lenstra</u> , <u>Z. Dogic</u> and <u>J. Dhont</u>	ML6. On the strain measure tensor in entangled polymeric liquids. <u>F. Greco</u>

- 1:55 **SS7.** Apparent viscosity of the non-colloidal suspension under the influence of particles spin. *S. Feng, A. L. Graham, J. R. Abbott and H. Brenner*
- 2:20 **SS8.** Normal stresses and free surface deformation in concentrated suspensions of noncolloidal spheres in a viscoelastic fluid. *I. E. Zarraga, D. A. Hill and D. T. Leighton*
- 2:45 **SS9.** Flow of particulate suspensions through porous media subjected to resonant acoustic fields. *D. L. Feke*
- 3:10
- 3:35 **SS10.** Shear thickening and shear thinning in concentrated suspensions. *R. L. Hoffman*
- 4:00 **SS11.** Reversible shear thickening in concentrated colloidal dispersions. *N. J. Wagner and B. J. Maranzano*
- 4:25 **SS12.** Scaling relations for suspensions of soft spheres. *J. J. Mewis and G. Biebaut*
- 4:50 **SS13.** Rheology of hairy particle suspensions. *M. H. Duits, P. A. Nommensen, D. Van den Ende and J. Mellema*
- 5:15 **SS14.** A two-fluid model for electro- and magnetorheological fluids. *K. von Pfeil, M. D. Graham, J. E. Morris and D. J. Klingenberg*
- 5:40
- FI7.** Pseudospectral simulation of three-dimensional viscoelastic flow in undulating channel geometries. *P. Wapperom and A. N. Beris*
- FI8.** Controlling the end plate instability in the filament stretching rheometer. *A. Bach, H. K. Rasmussen and O. Hassager*
- FI9.** Non linear behaviour of viscoelastic micellar solutions. *J.-P. F. Decruppe and S. Lerouge*
- FI10.** The effect of salt valency and micelle surface charge on the shear thickening of dilute worm-like micellar solutions. *J. M. Politsch and D. J. Pine*
- FI11.** Flow instabilities in the non-local Johnson-Segalman model with concentration coupling: A linear analysis. *S. M. Fielding and P. D. Olmsted*
- FI12.** Vorticity versus gradient banding in complex fluids. *J. L. Goveas and P. D. Olmsted*
- FI13.** Stress-induced polymer migration effects in the Taylor-Couette flow: Numerical simulation of the stress-concentration coupling. *V. G. Mavrantzas, M. V. Apostolakis and A. N. Beris*
- FI14.** Extrusion of linear polyethylenes using dies constructed from copper alloys: New findings and their relevance for slip and flow instabilities. *L. Pérez-Trejo, J. Pérez-González and L. de Vargas*
- CF6.** Pathway from planar lamellae to multilamellar vesicles. *F. Nettesheim, J. Zipfel, P. Lindner, U. Ollson and W. Richtering*
- CF7.** Flow of temperature sensitive hydrogel suspensions. *P. Mullick and C. F. Zukoski*
- CF8.** Microstructure evolution through the shear thickening transition for concentrated colloidal dispersions by flow SANS measurements. *N. J. Wagner and B. J. Maranzano*
- COFFEE
- CF9.** Controlling structure and rheology of wormlike micelles through hydrophobicity of homopolymer and copolymer architecture. *M. T. Truong and L. M. Walker*
- CF10.** Drag reduction, rheological properties and microstructures of mixed cationic surfactants with different alkyl chain configurations. *Y. Qi, D. J. Hart, Y. Talmon and J. L. Zakin*
- CF11.** Scaling behavior of shear-induced sponge to lamellar transformations. *L. Porcar, W. A. Hamilton, P. D. Butler and G. G. Warr*
- CF12.** Visualization of conformational properties of single DNA molecules under shear flow. *C. K. Smith, R. Duggal and M. Pasquali*
- CF13.** Extensional Flow of DNA solutions: Simultaneous measurement of conformation and stress. *R. Dubbelboer, D. A. Nguyen and T. Sridhar*
- ML7.** Elasticity of polymer networks. *M. Rubinstein and S. Panyukov*
- ML8.** Local rheology, microstructure and chain stretching in a lattice model of polymer fluids under shear. *Y. Shnidman and M. Mihajlovic*
- ML9.** Counterion condensation and phase separation in solutions of hydrophobic polyelectrolytes. *A. V. Dobrynin and M. Rubinstein*
- ML10.** Multiscale simulation of associating polymer solutions. *R. A. Lionberger and S. Holleran*
- ML11.** Colloidal states of carbon black suspension in polymer melt. *V. Bouda, J. Chladek and J. Mikesova*
- ML12.** Microstructure and defects in liquid crystals induced by spherical drops or particles. *O. V. Sozinova and D. A. Hill*
- ML13.** Hydrodynamic theory for mixtures of liquid crystalline polymers and flexible polymers. *Q. Wang*
- ML14.** Effects of elastic anisotropy on sheared nematic polymers. *J. Tao and J. Feng*
- END

Tuesday, October 23

Morning

8:30	PL2. Modeling of entanglement – past and present. <u>M. Doi</u> Crystal Ballroom			
9:20	COFFEE			
	<i>Cabinet</i>	<i>Old Georgetown</i>	<i>Judiciary</i>	<i>Diplomat/Ambassador</i>
	Simple Fluids To Suspensions	Phenomena Near Solid Boundaries	Microstructure In Complex Fluids	Molecular Level Modeling and Theory
9:45	SS15. Evolution of stresses during latex film formation. <u>W. B. Russel</u>	SB1. Transient networks at high shear rates: Solid like friction, constitutive instability and slippage at the walls. <u>E. Michel</u> , <u>M. Filali</u> , <u>J. Kieffer</u> , <u>F. Molino</u> , <u>J. Appell</u> and <u>G. Porte</u>	CF14. Viscoelastic properties of polymer nanocomposites. <u>H. S. Jeon</u> and <u>J. K. Rameshwaram</u>	ML15. Simulations of inhomogeneous kinetic theory of liquid crystalline polymers. <u>J. K. Suen</u> , <u>R. A. Brown</u> and <u>R. C. Armstrong</u>
10:10	SS16. Experimental studies on aggregated suspensions in drying. <u>C. F. Zukoski</u> and <u>L. A. Brown</u>	SB2. A tube model for dynamics of tethered chains. <u>A. K. Lele</u> and <u>Y. M. Joshi</u>	CF15. A small angle neutron scattering study on polymer clay solutions. <u>G. Schmidt</u> , <u>A. I. Nakatani</u> , <u>P. D. Butler</u> and <u>C. C. Han</u>	ML16. Hydrodynamic coefficients for dynamic mean-field models of LCPs. <u>D. C. Morse</u>
10:35	SS17. Self-similar behavior in coagulating systems. <u>H. Aref</u> and <u>D. Pushkin</u>	SB3. Stick-slip flow and molecular relaxation dynamics near surfaces. <u>T. T. Dao</u> and <u>L. A. Archer</u>	CF16. Novel rheological properties in polymer-organoclay composites. <u>M. Y. Gelfer</u> , <u>L. Liu</u> , <u>B. Hsiao</u> , <u>B. Chu</u> , <u>H. H. Song</u> , <u>C. Avila-Orta</u> , <u>C. Burger</u> , <u>M. Si</u> and <u>M. Rafailovich</u>	ML17. Capillary instabilities in thin nematic liquid crystalline fibers. <u>A. G. Cheong</u> , <u>A. D. Rey</u> and <u>P. T. Mather</u>
11:00	SS18. Flow-induced structure and the yielding of colloidal particulate gels: Scattering and direct visualization studies. <u>P. Varadan</u> and <u>M. J. Solomon</u>	SB4. Visualization studies of polymer flow at boundary discontinuities: Sharkskin and extrudate swell. <u>Z. Zhu</u> and <u>S.-Q. Wang</u>	CF17. Structure and rheology of goethite suspensions. <u>D. F. James</u> and <u>B. C. Blakey</u>	ML18. Dynamics of shear-induced monodomains for finite-aspect-ratio macromolecules. <u>G. Forest</u> and <u>Q. Wang</u>
11:25	SS19. Material instability with stress localization. <u>J. D. Goddard</u>	SB5. Flow-split of polymer melts during capillary extrusion: Gaining insight into a new flow instability. <u>A. Santamaría</u> , <u>M. Fernández</u> , <u>A. Muñoz-Escalona</u> and <u>L. Méndez</u>	CF18. Modelling viscosity of suspensions of alumina and kaolin as a function of volumetric concentration of solids. <u>A. De Noni Jr.</u> , <u>D. E. Garcia</u> and <u>D. Hotza</u>	ML19. Dynamics of flow induced isotropic/nematic transition with the Doi model. <u>M. Grosso</u> and <u>P. L. Maffettone</u>
11:50	LUNCH			

Afternoon

	<i>Cabinet</i>	<i>Old Georgetown</i>	<i>Judiciary</i>	<i>Diplomat/Ambassador</i>
	Simple Fluids To Suspensions	Polymer Solutions and Melts	Microstructure In Complex Fluids	General Papers
1:30	SS20. Tubular entry flows revisited. <u>D. V. Boger</u>	SM1. On the origins and consequences of the BKZ theory. <u>B. Bernstein</u>	CF19. High-shear-rate optical rheometer for polymer solutions and melts. <u>K. Mriziq</u> , <u>H.-J. Dai</u> , <u>M. D. Dadmun</u> and <u>H. D. Cochran</u>	GPI. Dynamics of fiber coating with surfactant solution. <u>A. Q. Shen</u> , <u>S. Howard</u> and <u>G. H. McKinley</u>

1:55	SS21. Modeling fiber spinning: From liquid to semi-solid. <u>A. J. McHugh</u>	SM1 continues	CF20. Study of uniaxial extensional flow and morphology of elastomeric polypropylenes. <u>G. G. Fuller, W. Wiyatno, H. Schonherr, J. Pople, R. M. Waymouth, C. Frank and A. Gast</u>	GP2. Microscale polymer processing. <u>A. K. Lele and M. R. Mackley</u>
2:20	SS22. Kinetic phase diagrams of star polymers. <u>D. Vlassopoulos, E. Stiakakis and J. Roovers</u>	SM2. Some comments on the K-BKZ constitutive equation as applied to biaxial extensional flows of polymer sheets. <u>A. S. Wineman</u>	CF21. Rheology and morphology of phosphate glass-PS-LDPE ternary blends. <u>P. C. Guschl and J. U. Otaigbe</u>	GP3. Contraction flow behavior of metallocene-catalyzed polyethylenes. <u>P. J. Doerpinghaus and D. G. Baird</u>
2:45	SS23. Identification of genes regulated by shear stress using microarray technology in human endothelial cells. <u>L. V. McIntire</u>	SM3. Bernstein, Kearsley and Zapas: Extension of the model using time-strain separability and the Valanis-Landel function. <u>G. B. McKenna</u>	CF22. Real-time SAXS studies of flow alignment processes in a lamellar diblock copolymer. <u>W. R. Burghardt and F. E. Caputo</u>	GP4. The Smoluchowski equation and the electroviscous effect. <u>L. C. Cerny and E. R. Cerny</u>
3:10			COFFEE	
3:35	SS24. Toward a molecular interpretation of turbulent drag reduction. <u>E. S. Shaqfeh, J. Hur, V. Terrapon and P. Moin</u>	SM4. Evaluation of molecularly-based constitutive equations for branched polymers in single- and double-step strain flows. <u>C. Chodankar, D. Venerus and J. Schieber</u>	CF23. Robust simulation of rheologically complex multiphase systems using a novel 3D finite element method. <u>R. W. Hooper, V. Cristini, J. Lowengrub, C. W. Macosko and J. J. Derby</u>	GP5. Axial flow between eccentric cylinders. <u>C. Kilitawong and A. J. Giacomin</u>
4:00	SS25. On the role of surface conduction in the electrohydrodynamic deformation of drops and bubbles. <u>C. L. Burcham and D. A. Saville</u>	SM5. Incompressible finite elements for BKZ fluids. <u>D. S. Malkus</u>	CF24. Exact numerical solutions of particle interactions in nonlinear shear fields. <u>W. Lin, A. L. Graham, J. W. Leggoe and M. Ingber</u>	GP6. Mechanics of two rigid spheres falling co-linearly in a Bingham material. <u>B. T. Liu, S. J. Muller and M. M. Denn</u>
4:25	SS26. Compatibilizer effects on drop coalescence. <u>L. G. Leal, C. C. Park, J. W. Ha and Y. Yoon</u>	SM6. Some success stories in the numerical simulation of polymer flows with the K-BKZ model. <u>E. Mitsoulis and S. Hatzikiriakos</u>	CF25. Calculation of transient stress behavior in dilute immiscible blends via experiments and numerical simulations. <u>T. Jansseune, J. J. Mewis, P. Moldenaers, V. Cristini and C. W. Macosko</u>	GP7. Rheological characterization of complex ABS/PC blends. <u>R. Liang and R. K. Gupta</u>
4:50	SS27. Cell-level stress in random soap foams. <u>A. M. Kraynik, D. A. Reinelt and F. van Swol</u>	SM7. A microscopic-based, stochastic model for polymeric fluids and its equivalence to the Rivlin-Sawyers model. <u>K. Feigl</u>	CF26. Numerical simulation of drops and bubbles in three dimensional viscoelastic flows. <u>S. B. Pillapakkam and P. Singh</u>	GP8. Temperature monitoring of capillary rheometry. <u>A. J. Bur and H. Lobo</u>
5:15			END	
5:30			BUSINESS MEETING	Cabinet/Judiciary
7:00			AWARDS RECEPTION	Foyer of Crystal Ballroom
8:00			AWARDS BANQUET	Crystal Ballroom

Wednesday, October 24

Morning

8:30	PL3. Microrheology of DNA near surfaces. <i>R. G. Larson, L. Li and M. Chopra</i> Crystal Ballroom			
9:20	COFFEE			
	Cabinet	Old Georgetown	Judiciary	Diplomat/Ambassador
	Polymers With Complex Architecture	Polymer Solutions and Melts	Two Phase Systems	General Papers
9:45	CA1. Rheological properties of dendritically branched polystyrenes. <i>J. R. Dorgan, D. Vlassopoulos and D. M. Knauss</i>	SM8. Temperature and Hencky strain shifting of convergent flow measured effective elongational viscosity. <i>J. R. Collier, S. Petrovan and P. Patil</i>	TS1. Polymer bicontinuous microemulsions under shear. <i>T. P. Lodge, K. Krishnan, F. S. Bates and W. R. Burghardt</i>	GP9. Field-induced gelation, yield stress, and fragility of an electrorheological suspension. <i>B. D. Chin and H. H. Winter</i>
10:10	CA2. Dynamics of asymmetric branched polymers. <i>J. H. Lee and L. A. Archer</i>	SM9. The breakup of free jets of dilute polymer solutions. <i>B. G. Price, D. S. Ross and C. J. Kloxin</i>	TS1 continues	GP10. Field-aided manufacturing of polymer composites with anisotropic structure. <i>G. Kim, T. R. Filanc-Bowen, T. A. Osswald, L.-S. Turng and Y. M. Shkel</i>
10:35	CA3. Solution, melt, and blend rheology and microstructure of dendritic polymers. <i>B. M. Tande, N. J. Wagner and Y. H. Kim</i>	SM10. Stress and birefringence measurements in non-homogeneous transient uniaxial extensional rheometry. <i>J. P. Rothstein, Y. L. Joo, G. H. McKinley, R. C. Armstrong and R. A. Brown</i>	TS2. Drop dynamics under large-amplitude oscillatory shear flow. <i>R. Cavallo, S. Guido, D. Bogetti and P. L. Maffettone</i>	GP11. A constitutive theory for acicular ferromagnetic dispersions. <i>A. S. Bhandar and J. M. Wiest</i>
11:00	CA4. Rheo-optical investigation of star and hyperbranched polystyrene melts: Role of architecture. <i>R. M. Kannan, S. B. Kharchenko, J. Cernohous and S. Venkataramani</i>	SM11. Jet break up of viscoelastic solutions using forced disturbances. <i>Y. Christanti and L. M. Walker</i>	TS3. Droplet deformation and breakup in mixed flow fields. <i>K. Feigl, P. Fischer, S. F. Kaufmann, M. Loewenberg and E. Windhab</i>	GP12. Influence of the chainlength distribution on the magnetorheological properties of inverse ferro-fluids. <i>D. Van den Ende and J. Mellema</i>
11:25	CA5. The molecular rheology of hyperbranched architectures. <i>A. T. Lee and A. J. McHugh</i>	SM12. The effects of fluid elasticity on drop formation. <i>J. J. Cooper-White, J. E. Fagan and D. V. Boger</i>	TS4. Complex flows of concentrated emulsions. <i>N. C. Shapley, M. A. D'avila, J. H. Walton, S. R. Dungan, R. J. Phillips and R. L. Powell</i>	GP13. Magneto-sweep: A method to characterize magneto rheological fluids. <i>J. Laeuger, K. Wollny and S. Huck</i>
11:50	LUNCH			

Afternoon

	Cabinet	Old Georgetown	Judiciary	Diplomat/Ambassador
	Polymers With Complex Architecture	Polymer Solutions and Melts	Two Phase Systems	Local Rheology and Structure
1:30	CA6. Effect of solvent quality on the behavior of model HASE polymer solutions: A tracer microrheology study. <i>A. A. Abdala, S. Amin, S. A. Khan and J. H. van Zanten</i>	SM13. Dynamic fragility in polymers: A comparison in isobaric and isochoric conditions. <i>G. B. McKenna and D. Huang</i>	TS5. Shear-induced coalescence in compatibilized polymer blends. <i>P. Moldenaers, S. Velankar and P. Van Puyvelde</i>	LS1. Dynamics and microrheology of biopolymers and membranes. <i>F. C. MacKintosh</i>

1:55	CA7. Aspects of deformation in dynamically vulcanized EPDM/iPP thermoplastic elastomers. <u>A. J. Lesser</u>	SM14. Viscoelastic properties of some inorganic glass-formers. <u>D. J. Plazek</u> , <u>S. L. Simon</u> and <u>K. M. Bernatz</u>	TS6. Droplet coalescence in polymer blends: The effects of droplet deformation and interface immobilization. <u>S. D. Hudson</u> , <u>A. M. Jamieson</u> , <u>B. E. Burkhart</u> , <u>P. V. Gopalkrishnan</u> , <u>M. A. Rother</u> and <u>R. H. Davis</u>	LS2. Factors determining the microrheology of cytoskeletal networks. <u>S. C. Kuo</u> , <u>J. L. McGrath</u> and <u>F. Peng</u>
2:20	CA8. Rheology and morphology of rod/coil molecular composites. <u>J. Wu</u> , <u>G.-M. Kim</u> and <u>P. T. Mather</u>	SM15. Development of an apparatus for the measurement of dynamic viscoelastic properties of rheologically complex materials at ultrasonic-frequency. <u>I. Zeroni</u> and <u>M. Gottlieb</u>	TS7. The effect of surfactants on drop deformation, collisions and breakup. <u>H. Zhou</u> , <u>V. Cristini</u> , <u>J. Lowengrub</u> and <u>C. W. Macosko</u>	LS3. Combining two-point and one-point microrheology. <u>A. J. Levine</u> and <u>T. C. Lubensky</u>
2:45	CA9. Low shear rate rheology of thermotropic liquid crystalline polymers. <u>E. C. Scribber</u> , <u>P. Rangarajan</u> and <u>D. G. Baird</u>	SM16. Direct numerical simulations of turbulent channel flow with polymers close to maximum drag reduction. <u>P. K. Ptasincki</u> , <u>M. A. Hulsen</u> , <u>B. J. Boersma</u> , <u>F. T. Nieuwstadt</u> and <u>B. H. Van den Brule</u>	TS8. Melt rheology of polyphosphate glasses. <u>P. C. Guschl</u> , <u>S. B. Adalja</u> and <u>J. Otaigbe</u>	LS4. Viscoelasticity of synovial fluid. <u>K. N. Oates</u> , <u>W. E. Krause</u> and <u>R. H. Colby</u>
3:10	COFFEE			
	Solid Rheology			
3:35	SR1. Solid rheology of polymers: From networks to glasses. <u>G. B. McKenna</u>	SM17. Shear-enhanced crystallization of isotactic polypropylene: The role of long chains in crystallization kinetics and morphology development. <u>M. Seki</u> , <u>J. P. Oberhauser</u> , <u>D. W. Thurman</u> , <u>J. A. Kornfield</u> and <u>K. Takagi</u>	TS9. String formation in immiscible polymer blends. <u>J. A. Pathak</u> and <u>K. B. Migler</u>	LS5. Two-particle microrheology of actin solutions with a high-speed microscope. <u>J. C. Crocker</u> , <u>R. Beigi</u> , <u>A. Bausch</u> and <u>M. L. Gardel</u>
4:00	SR1 continues	SM18. Effect of pressure on the viscosity of polymer melts swollen with dissolved carbon dioxide. <u>J. M. Smolinski</u> , <u>C. W. Manke</u> and <u>E. Gulari</u>	TS10. The effect of a confinement on the kinetics of polymer threads and droplets in an immiscible matrix. <u>Y. Son</u> and <u>K. B. Migler</u>	LS6. One- and two-particle microrheology in biological and synthetic polymer solutions. <u>C. F. Schmidt</u> , <u>F. Gittes</u> , <u>F. C. MacKintosh</u> , <u>P. Ohmsted</u> , <u>K. Addas</u> , <u>J. X. Tang</u> and <u>A. J. Levine</u>
4:25	SR2. Hierarchical aspects of yield and nonlinear deformation in rubber modified glassy polymers. <u>A. J. Lesser</u>	SM19. Plasticization with carbon dioxide to facilitate melt spinning of high acrylonitrile content copolymers. <u>M. J. Bortner</u> and <u>D. G. Baird</u>	TS11. Motion of a cylindrical viscoelastic drop immersed in planar flow of a Newtonian fluid. <u>K. Jayaraman</u> , <u>D. J. Backes</u> and <u>B. Patham</u>	LS7. Mechanical properties and microstructure of living cells. <u>M. T. Valentine</u> , <u>A. Bausch</u> , <u>H. Stevens</u> and <u>D. A. Weitz</u>
4:50	SR3. Stress optical behavior across the dynamic glass transition and prediction of residual birefringence in injection molded parts. <u>H. H. Lee</u> , <u>Y. B. Lee</u> , <u>J. A. Kornfield</u> , <u>T. H. Kwon</u> and <u>K. Yoon</u>	SM20. Shear enhanced concentration fluctuations in a polymer solution. <u>G. T. Templin</u> and <u>D. J. Pine</u>	TS12. Two-fluid demixing theory predictions of stress-induced turbidity of polystyrene solutions in dioctylphthalate. <u>M. Minale</u> and <u>K. F. Wissbrun</u>	LS8. One- and two-point microrheology of F-actin networks. <u>M. L. Gardel</u> , <u>M. T. Valentine</u> , <u>J. C. Crocker</u> , <u>A. Bausch</u> and <u>D. A. Weitz</u>
5:15	SR4. Rheology of glass formation. <u>B. M. Erwin</u> and <u>R. H. Colby</u>	SM21. Local chain motion and macroscopic behaviour of poly(dimethyl siloxane)s. <u>R. Occone</u> , <u>V. Arrighi</u> and <u>S. Gagliardi</u>	TS13. Shear-induced coalescence of aqueous biopolymer mixtures by optical sectioning. <u>S. Caserta</u> , <u>M. Simeone</u> and <u>S. Guido</u>	LS9. Dynamics of actin-coated membranes. <u>E. Helfer</u> , <u>L. Bourdieu</u> , <u>S. Harlepp</u> , <u>J. Robert</u> , <u>F. C. MacKintosh</u> and <u>D. Chatenay</u>
5:40	END			
6:00	POSTER SESSION & REFRESHMENTS Crystal Ballroom			

Thursday, October 25

Morning

	<i>Cabinet</i>	<i>Old Georgetown</i>	<i>Judiciary</i>	<i>Diplomat/Ambassador</i>
	Solid Rheology	Polymer Solutions and Melts	Two Phase Systems	Local Rheology and Structure
8:05	SR5. On the inhomogeneous shearing deformation of a non-homogeneous Gent slab: Self-homogenizing effect of finite chain extensibility. <i>B. Bernstein, E. Bilgili and H. Arastoopour</i>	SM22. Rheology and orientation behavior of metallocene-catalyzed semi-syndiotactic polypropylenes: Role of tacticity. <i>R. M. Kannan, G. Parthasarathy, V. Maheshwari, M. Sevegney and A. Siedle</i>	TS14. Yield stress measurements in suspensions : A round robin project. <i>D. C. De Kee and D. Q. Nguyen</i>	LS10. Combinatorial rheology: Microrheology as a tool for rapid materials screening. <i>V. Breedveld and D. J. Pine</i>
8:30	SR6. Predicting in-service performance for sealant. <i>C. C. White, M. R. VanLandingham, C. Buch and J. W. Chin</i>	SM23. Structure, relaxations and gelformation in enzymatically modified guar gum solutions. <i>M. H. Duits, R. H. Wientjes and J. Mellema</i>	TS15. Rheological properties of silica suspensions. <i>S. Savarmand, P. J. Carreau, F. Bertrand and D. J. Vidal</i>	LS11. Observations of particle dynamics in concentrated polymer solutions. <i>E. R. Weeks, R. Verma, J. C. Crocker and A. G. Yodh</i>
8:55	SR7. Anisotropic thermal conduction in cross-linked elastomers subjected to uniaxial elongation. <i>D. Venerus, R. Dilipkumar, J. Schieber and A. Broerman</i>	SM24. Solution rheology of comb-type associative polymers: Effects of variation in hydrophobe spacer chain length. <i>A. R. Hirst and R. J. English</i>	TS16. Rheology and microstructure of mixed colloidal gels. <i>J. A. Yerian, C. L. Griffin, S. A. Khan and P. S. Fedkiw</i>	LS12. Microrheology of cross-linked polymers. <i>B. R. Dasgupta and D. A. Weitz</i>
9:20	SR8. Segmental dynamics of low molecular weight cyclic polystyrene. <i>P. G. Santangelo, C. M. Roland, T. Chang and J. Roovers</i>	SM25. Molecular weight dependence of the tumbling parameter for nematic solutions of side-group liquid crystalline polymers. <i>M. D. Kempe, M. L. Auad and J. A. Kornfield</i>	TS17. Rheology and flow X-ray scattering of soft sterically stabilized latices. <i>J. Vermant, H. Hoekstra, J. J. Mewis and T. Narayan</i>	LS13. Rotational diffusion microrheology of complex fluids. <i>T. G. Mason and Z. Cheng</i>
9:45			COFFEE	
10:10	SR9. Effect of solvent quality on the elastic and osmotic moduli of polymer gels. <i>F. Horkay</i>	SM26. Non-linear viscoelasticity and modeling of entangled polymer solutions: From shear to uniaxial extension. <i>P. K. Bhattacharjee, J. P. Oberhauser, L. G. Leal, T. Sridhar and G. H. McKinley</i>	TS18. Computational study of colloidal suspensions using dissipative particle dynamics. <i>N. S. Martys and J. S. Sims</i>	LS14. Measuring the viscosity of nanoliter droplets. <i>Y. T. Hu and A. Lips</i>
10:35	SR10. Predicting the yield stress of particulate suspensions via computer simulation. <i>S. Pyett and R. A. Lionberger</i>	SM27. A critical examination of reptation models for binary polymer mixtures. <i>S. Wang and S.-Q. Wang</i>	TS19. Simulation of flexible fiber suspensions. <i>L. H. Switzer and D. J. Klingenberg</i>	LS15. Rheological measurements using nanoindentation techniques. <i>M. R. VanLandingham, C. C. White, X. Gu and T. Nguyen</i>
11:00	SR11. Change of hydrogel elastic modulus at a pH-induced swelling transition. <i>I. S. Bang, R. Emami, J. J. Magda, M. H. Han, I. S. Han and F. Horkay</i>	SM28. Dynamics of entangled polymer liquids in slow flows. <i>J. Sanchez-Reyes and L. A. Archer</i>	TS20. Sedimentation of a sphere in a fiber suspension. <i>M. Chaouche and D. Antonio</i>	LS16. Rheo-optical investigation of the thermoreversible gelation of gelatin. <i>L. Guo and R. H. Colby</i>
11:25	SR12. Validation of a unified thermodynamic theory of polymer nonlinear viscoelasticity. <i>D. B. Adolf, R. S. Chambers and J. M. Caruthers</i>	SM29. Adaptive configuration fields for advanced reptation models. <i>P. G. Gigras and B. Khomami</i>	TS21. Sedimentation of solid particles in viscoelastic fluids. <i>H. H. Hu and M. Zhu</i>	LS17. Effect of probe size on the microrheological response of associative polymers with Maxwell linear viscoelasticity. <i>Q. Lu and M. J. Solomon</i>

11:50 **SR13.** A thermodynamically consistent theory of nonlinear viscoelasticity in curing thermosets. R. S. Chambers, D. B. Adolf and J. M. Caruthers

SM30. Slip at an entangled polymer interface. J. L. Goveas

TS22. Modeling migration in a suspension of spheres in a shear-thinning liquid. R. M. Miller and J. E. Morris

LS18. Tracer microrheology of surfactant solutions. S. Amin, C. J. Kloxin, R. M. van Zanten and J. H. van Zanten

12:15

END

Poster Session

Wednesday 6:00 PM Crystal Ballroom

- PO1.** Modifying the rheological properties of collagen-rich tissues by crosslinking. J. A. Kornfield, G. Tae, M. Dickinson, A. Louie, R. Lambert, H. Karageozian, J. Park, K. A. Rich and V. Monnier
- PO2.** A potential biodegradable rubber -- viscoelastic properties of a soybean oil based composite. J. Xu, Z. Liu, S. Z. Erhan and C. J. Carriere
- PO3.** Influence of the retardation effects on rheological behaviour of liquid crystalline polymer. S. Han and Y. Wang
- PO4.** Aqueous solutions of block copolypeptides: Controlling rheology and phase behavior through block architecture. V. Breedveld, A. Nowak, T. J. Deming and D. J. Pine
- PO5.** Micro-rheology of "pom-pom" 1,4-polybutadiene solutions and melts. J. Juliani and L. A. Archer
- PO6.** Unusual features in the linear viscoelasticity of telechelic fluoroalkyl PEGs. R.-L. Hough and R. J. English
- PO7.** Model rheological behavior of mixed systems of nonionic polymer and living polyelectrolyte. M. T. Truong and L. M. Walker
- PO8.** Hydrophobic effects on rheological properties of polyelectrolytes in aqueous solutions without added salt. N. Plucktaeesak, J. S. Tan and R. H. Colby
- PO9.** Rheological and processing properties of blends of hyperbranched and linear polymers. I. Sendjarevic and A. J. McHugh
- PO10.** Encapsulated microbubbles in blood flow: New method for drug/gene delivery. D. B. Khismatullin
- PO11.** Transient shear and extensional rheological properties of intercalated clay/polymer nanocomposites. H. Lee and G. H. McKinley
- PO12.** Time evolution microstructures in polymer/layered silicate nanocomposites. J. U. Park, D. H. Kim, K. H. Ahn and S. J. Lee
- PO13.** Dynamic properties of shear thickening colloidal suspensions. Y. S. Lee, K. Miller and N. J. Wagner
- PO14.** Melt rheology, drop deformation and morphology development during crystallization of phase-separated blends. D. W. Thurman, L. Fernandez-Ballester and J. A. Kornfield
- PO15.** Temperature and concentration dependence of bubble dynamics in wormlike micellar fluids. N. Z. Handzy and A. Belmonte
- PO16.** Drop pinch-off and filament dynamics of wormlike micellar fluids. L. B. Smolka and A. Belmonte
- PO17.** Elastification of concentrated emulsions. P. K. Rai and T. G. Mason
- PO18.** Elasticity-driven shape oscillations of a non-Newtonian drop. D. B. Khismatullin and A. Nadim
- PO19.** Visualizing slip at polymer-polymer melt interfaces. R. Zhao and C. W. Macosko
- PO20.** Critical properties and phase separation in lattice Boltzmann fluid mixtures. N. S. Martys and J. F. Douglas
- PO21.** Rheological characterization of fuel oils and effect of paraffins and asphaltenes constituents. I. M. El-gamal, G. M. Abdel-Aleim, F. K. Gad and A.-N. A. Bahran
- PO22.** Dynamic self-consistent field study of rheology and morphology of block copolymer under shear flow. M. Mihajlovic and Y. Shnidman
- PO23.** Analysis of hydrodynamic interactions for DPD polymer chains in solution. G. Pan and C. W. Manke
- PO24.** Viscoelastic free surface instabilities during exponential stretching. R. D. Welsh, J. Bico and G. H. McKinley
- PO25.** Cavitation, rupture and extensional deformation in extrusion instabilities. Y. Son and K. B. Migler
- PO26.** Creep and recovery of novel organic-inorganic polymer hybrids. J. U. Otaigbe and S. B. Adalja
- PO27.** Wall slip and rupture of elastomers. S. F. Costeux and J. M. Dealy
- PO28.** Qualitative estimation of blend morphology from normal stress data. M. Minale and P. L. Maffettone

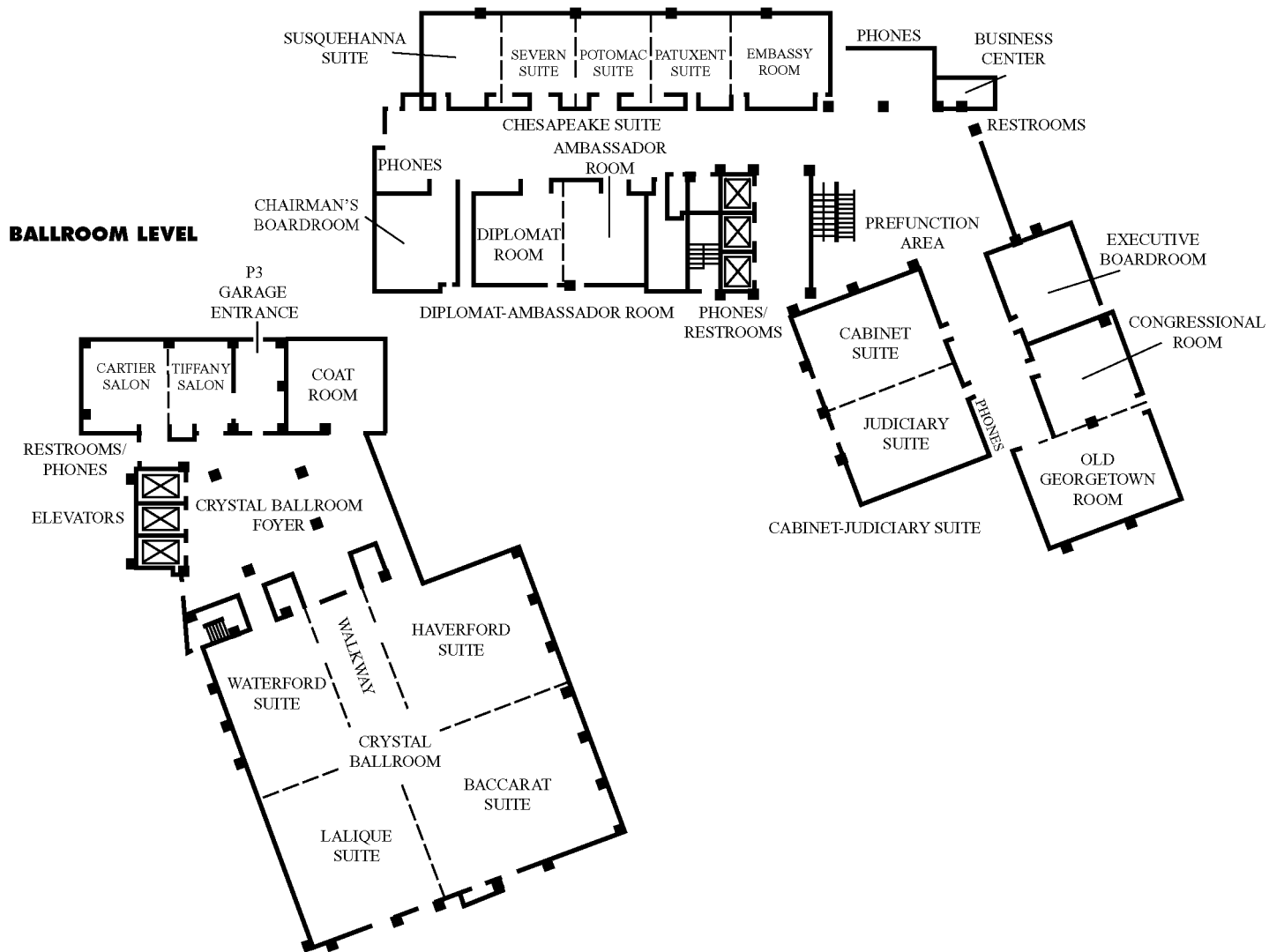
- PO29.** Shear thinning in polyelectrolyte solutions. *R. H. Colby, D. C. Boris and W. E. Krause*
- PO30.** Standard reference materials: Non-Newtonian fluids for rheological measurements. *C. R. Schultheisz and G. B. McKenna*
- PO31.** Quantitative first and third normal stress measurements in polymer melts: Role of tacticity and architecture. *V. Maheshwari, S. B. Kharchenko and R. M. Kannan*
- PO32.** Rheological profile of Okenia hypogaea starch dispersions in aqueous solution of DMSO. *J. Solorza-Feria, A. L. Bello-Perez, A. R. Jimenez-Aparicio and M. L. Arenas-Ocampo*
- PO33.** Havriliak-Negami analyses of viscosity data for some model polymer systems. *J. Janzen*
- PO34.** Spurt and other shear flow dynamics for a thixotropic Johnson-Segalman model. *B. W. Kolkka*
- PO35.** Numerical analysis and experimental studies on the role of rheological properties in effecting die swell of low-density polyethylene, polypropylene and polystyrene. *J. U. Otaigbe and K. K. Kar*
- PO36.** Large amplitude oscillatory shear flow of a network model. *H. G. Sim, S. H. Kim, K. H. Ahn and S. J. Lee*
- PO37.** Reptation relaxation probed by critical fluctuations in polymer solutions. *A. F. Kostko, M. A. Anisimov, J. V. Sengers and I. K. Yudin*
- PO38.** On constitutive equation of rate type for liquid crystalline polymer – anisotropic viscoelastic fluid. *S. Han*
- PO39.** Calculation of the discrete relaxation spectrum for polymeric materials using a nonlinear regression method. *G. Sodeifian and A. Haghtalab*
- PO40.** A solution rheology approach to component dynamics in blends of polyisoprene/1,2-polybutadiene. *S. Wang and S.-Q. Wang*
- PO41.** Effect of boundary conditions on steady rheological behaviour of mesophase pitch. *D. Grecov, A. D. Rey and A.-G. Cheong*
- PO42.** Combining rheology and SEC to quantitatively characterize long chain branching in an industrial polymer. *S. L. Anna and A. M. Striegel*
- PO43.** Pressure gradient rheometer. *B. M. Tande and A. Vaynberg*
- PO44.** Rheo-optical FTIR spectroscopic investigation of crystal structure growth and response in semi-crystalline polymers. *R. M. Kannan, M. Sevegney and G. Parthasarathy*
- PO45.** Actuating properties of soft gels with ordered iron particles: Basis for a shear actuator. *Y. An, B. Liu and M. T. Shaw*
- PO46.** Squeeze-flow characterization of HDPE melts using a Fizeau interferometer. *E. C. Cua and M. T. Shaw*
- PO47.** RheoVision: The correlation between flow and microstructure. *D. Eidam, F. Bar and P. Reinheimer*
- PO48.** New developments for improving the accuracy in temperature control for rotational rheometers. *J. Laeuger, M. Bernzen and G. Raffer*
- PO49.** Recent findings related to the kinetics and thermodynamics of Environmental Stress Cracking of glassy polymers. *A. J. Lesser*
- PO50.** Viscoelasticity of gels obtained from EVA/SBS/motor oil solutions. *A. Santamaría, M. E. Muñoz and M. S. Barral*
- PO51.** Does movement during cure affect overall sealant performance? *C. Buch and C. C. White*
- PO52.** Intercalation and exfoliation of modified montmorillonite clay in dicyclopentadiene. *M. Yoonessi, H. Toghiani, C. Pittman and W. Kingery*

The Bingham award lecture and the plenary lectures are sponsored through a generous contribution from the National Institute of Standards and Technology Polymers Division.

A generous contribution from Paar Physica USA is used to defray general meeting costs.

Floor Plan - Hyatt Regency Bethesda

CONFERENCE LEVEL



Social Program

Sunday, October 21

Welcoming Reception

7:00 PM – 9:00 PM Fellini's Bar and Grill (Lobby Level)

Sponsored by a generous contribution from TA Instruments

Monday, October 22

Society Luncheon

11:50 AM – 1:30 PM Crystal Ballroom

Tuesday, October 23

Business Meeting

5:30 PM Cabinet/Judiciary Rooms

Awards Reception

7:00 PM – 8:00 PM Crystal Ballroom Foyer

Sponsored by a generous contribution from Rheometric Scientific

Awards Banquet

8:00 PM Crystal Ballroom

Wednesday, October 24

Poster Session Refreshments

6:00 PM – 8:00 PM Crystal Ballroom

Sponsored by a generous contribution from Bohlin Instruments