



The Society of Rheology 74th Annual Meeting - Minneapolis, Minnesota

Meeting Schedule

Monday, October 14, 2002					Tuesday, October 15, 2002					Wednesday, October 16, 2002					Thursday, October 17, 2002					
8:30	E. S. Shaqfeh (PL1)				8:30	R. G. Larson (PL2)				8:30	J.-F. Berret (PL3)				8:05	SC1	IR1	HS23	SM1	
9:20	Coffee				9:20	Coffee				9:20	Coffee				8:30	SC2	IR2	HS24	SM2	
9:45	MR1	FM1	AS1	CF1	9:45	MR15	FM15	SL6	GL1	9:45	SD5	CE5	HS9	VP1	8:55	SC3	IR3	HS25	SM3	
10:10	MR2	FM2	AS2	CF2	10:10	MR16	FM16	SL7	GL2	10:10	SD6	CE6	HS10	VP2	9:20	SC4	IR4	HS26	SM4	
10:35	MR3	FM3	AS3	CF3	10:35	MR17	FM17	SL8	GL3	10:35	SD7	CE7	HS11	VP3	9:45	Coffee				
11:00	MR4	FM4	AS4	CF4	11:00	MR18	FM18	SL9	GL4	11:00	SD8	CE8	HS12	VP4	10:10	SC5	IR5	HS27	SM5	
11:25	MR5	FM5	AS5	CF5	11:25	MR19	FM19	SL10	GL5	11:25	SD9	CE9	HS13	VP5	10:35	SC6	IR6	HS28	SM6	
11:50	Lunch				11:50	Lunch				11:50	Lunch				11:00	SC7	IR7	HS29	SM7	
1:30	MR6	FM6	AS6	CF6	1:30	MR20	FM20	HS1	GL6	1:30	SD10	CE10	HS14	VP6	11:25	SC8	IR8	HS30	SM8	
1:55	MR7	FM7	AS7	CF7	1:55	MR21	FM21	HS2	GL7	1:55	SD11	CE11	HS15	VP7	11:50	SC9	IR9	HS31	SM9	
2:20	MR8	FM8	AS8	CF8	2:20	MR22	FM22	HS3	GL8	2:20	SD12	CE12	HS16	VP8	12:15	End				
2:45	MR9	FM9	AS9	CF9	2:45	MR23	FM23	HS4	GL9	2:45	SD13	CE13	HS17	VP9						
3:10	Coffee				3:10	Coffee				3:10	Coffee									
3:35	MR10	FM10	SL1	CF10	3:35	SD1	CE1	HS5	GL10	3:35	SD14	CE14	HS18	VP10						
4:00	MR11	FM11	SL2	CF11	4:00	SD2	CE2	HS6	GL11	4:00	SD15	CE15	HS19	VP11						
4:25	MR12	FM12	SL3	CF12	4:25	SD3	CE3	HS7	GL12	4:25	SD16	CE16	HS20	VP12						
4:50	MR13	FM13	SL4	CF13	4:50	SD4	CE4	HS8	GL13	4:50	SD17	CE17	HS21	VP13						
5:15	MR14	FM14	SL5	CF14	5:15	End				5:15	SD18	CE18	HS22	VP14						
5:40	End				5:30	Business Meeting				5:40	End									
7:00	Society Reception				7:00	Awards Reception				6:00	Poster Session & Refreshments									
					8:00	Awards Banquet														

Session Codes

AS = Associating and Self-Assembling Fluids
CE = Coating and Extensional Processes
CF = Really Complex Fluids: Food and Consumer Products
FM = Non-Newtonian Fluid Mechanics and Instabilities
GL = Rheology of Glasses and Glass-Forming Liquids

HS = Heterogeneous Systems: Suspensions, Composite, and Multiphase Materials
IR = Interfacial Rheology: Adhesion and Slip
MR = Marrucci Symposium: Molecular Rheology of Concentrated Polymeric Systems
PL = Plenary Lectures
SC = Stiff Chains: Biopolymers, Polyelectrolytes, and LCPs

SD = Structural Development in Flow
SL = Jamming, Frustration, and Vitrification in Suspensions and Liquids
SM = Rheology at the Sub-Micron Scale
VP = Viscoelasticity of Polymer Liquids

Monday, October 14

Morning

8:30 **PL1.** Do we really understand the coil stretch transition and extensional stresses of polymer solutions?. [E. S. Shagfeh](#)

9:20 COFFEE

University Ballroom

Ballroom A

Molecular Rheology

9:45 **MR1.** Predicting the response of entangled linear polymers in transient complex flow using the multi-mode DCR model with chain stretch. [P. Wapperom](#) and [R. Keunings](#)

10:10 **MR2.** Extensional stress growth, relaxation and capillary thinning in an entangled solution. [P. K. Bhattacharjee](#), [D. A. Nguyen](#), [G. H. McKinley](#) and [T. Sridhar](#)

10:35 **MR3.** Fluctuations in entanglements using a temporary network model with sliplinks. [J. D. Schieber](#)

11:00 **MR4.** Topological gel - a real slip link model. [F. Sawa](#), [T. Aoyagi](#), [J.-I. Takimoto](#) and [M. Doi](#)

11:25 **MR5.** On the strain measure in entangled polymeric liquids. [F. Greco](#)

11:50

Ballroom B

Fluid Mechanics and Instabilities

FM1. Effects of the variation of the rheological parameters in polymer-induced drag reduction. [K. D. Housiadas](#) and [A. N. Beris](#)

FM2. Polymer chain dynamics in drag reducing flows: A multiscale approach. [V. K. Gupta](#), [R. Sureshkumar](#) and [B. Khomami](#)

FM3. Effects of polymers on models of the turbulent buffer region. [P. A. Stone](#) and [M. D. Graham](#)

FM4. Stability analysis of multidimensional viscoelastic flows. [B. Sadanandan](#) and [R. Sureshkumar](#)

FM5. Stability analysis of polymer melt injection molding flows. [A. C. Bogaerds](#), [M. A. Hulsen](#), [G. W. Peters](#) and [F. P. Baaijens](#)

LUNCH

Ballroom C

Associating and Self-Assembling Fluids

AS1. Influence of multiple terminal hydrophobes on HEUR rheology. [P. T. Elliott](#) and [J. E. Glass](#)

AS2. Rheology of associative polymers: modulating hydrophobic interactions through inclusion compounds and surfactants. [A. A. Abdala](#), [R. English](#) and [S. A. Khan](#)

AS3. Association behavior of nonionic polyhedral oligosilsesquioxane (POSS) telechelics. [B.-S. Kim](#) and [P. T. Mather](#)

AS4. Block copolymers for the control of wax gelation in organic phases. [H. Ashbaugh](#) and [R. K. Prud'homme](#)

AS5. Block copolymer self-assembly of nematic gels. [M. D. Kempe](#), [J. A. Kornfield](#) and [M. L. Auad](#)

Ballroom D

Really Complex Fluids

CF1. The analysis of the frictional effect on stress-strain data from uniaxial compression of cheese. [M. Charalambides](#), [S. M. Goh](#) and [G. Williams](#)

CF2. Hierarchical investigation of factors influencing the rheological characteristics of milk fat. [G. G. Rye](#), [J. Litwinenko](#) and [A. G. Marangoni](#)

CF3. Biaxial deformation of dough using the bubble inflation technique. [M. Charalambides](#), [L. Wanigasooriya](#), [G. Williams](#) and [S. Chakrabarti](#)

CF4. Probing polymer interactions during dough fermentation with low intensity ultrasound. [M. G. Scanlon](#), [H. M. Elmehdi](#) and [J. H. Page](#)

CF5. Interfacial rheology of microbubble contrast agents for medical ultrasound. [K. Sarkar](#)

Afternoon

Ballroom A

Molecular Rheology

1:30 **MR6.** A differential constitutive equation for entangled pom-pom polymers with CCR. [G. Ianniruberto](#)

Ballroom B

Fluid Mechanics and Instabilities

FM6. The stability of Taylor-Couette flows of Boger fluids with varying thermal sensitivity. [J. M. White](#) and [S. J. Muller](#)

Ballroom C

Associating and Self-Assembling Fluids

AS6. Network formation and sieving performance of self-assembling hydrogels. [R. Lammertink](#) and [J. A. Kornfield](#)

Ballroom D

Really Complex Fluids

CF6. The application of rheological thermal analysis to foods. [M. Padmanabhan](#)

1:55	MR7. Complex flow simulation of reptation based models with a stochastic strain measure and local variations of life span distribution. <i>P. G. Gigras, M. Somasi and B. Khomami</i>	FM7. Non-monotonic flow of surfactant solutions in strain- and stress driven flow. <i>P. Fischer</i>	AS7. Tuning the linear viscoelastic behavior of wormlike micelles through polymer-surfactant interaction. <i>M. H. T. Truong and L. M. Walker</i>	CF7. Sealant, a complex commercial fluid. <i>C. C. White and D. Hunston</i>
2:20	MR8. Why does tube dilation work for stars?. <i>T. C. B. McLeish</i>	FM8. NMR study a the worm-like micellar aqueous solution CTAT in a capillary rheometer. <i>A. F. Méndez-Sánchez, C. D. Eccles, R. Dykstra and L. de Vargas</i>	AS8. Headgroup effect on drag reduction and microstructures of quaternary ammonium surfactants. <i>Y. Zhang, Y. Qi, Y. Talmon and J. L. Zakin</i>	CF8. The effect of rheology on printing performance of piezo inkjet inks. <i>C. M. Ylitalo</i>
2:45	MR9. Dynamics of star/linear polymeric systems. <i>D. Vlassopoulos and J. Roovers</i>	FM9. Birefringence changes in the flow of spouting materials. <i>J. Pérez-González, B. M. Marin-Santibañez, F. Rodríguez-González and L. de Vargas</i>	AS9. Shear induced multilamellar vesicles. <i>B.-S. Yang, R. K. Prud'homme and W. B. Russel</i>	CF9. Rheological characterization and modeling of aqueous guar gum solutions. <i>M. Dressler, P. Fischer, D. Renggli, D. Vinzce and E. J. Windhab</i>
3:10			COFFEE	
3:35	MR10. Quantitative prediction of linear viscoelastic properties for branched polymer melts using the hierarchical algorithm. <i>S. J. Park and R. G. Larson</i>	FM10. Stability and nonlinear dynamics of film blowing. <i>H. Kim, H. W. Jung and J. C. Hyun</i>	SL1. Optical rheology studies of the formation and aging behavior of soft glassy clay particle suspensions. <i>V. Viasnoff, L. Collins, D. Sessoms, B. Chung and J. L. Harden</i>	CF10. Interfacial shear rheology of milk proteins at the oil/water interface. <i>P. Erni and P. Fischer</i>
4:00	MR11. Rheology and molecular weight distribution of hyperbranched polymers. <i>S. Suneel, D. M. A. Buzzo, D. G. Groves, T. C. B. McLeish, D. Parker, A. Keeney and W. J. Feast</i>	FM11. Draw resonance in a fiber spinning process: Model predictions using linear stability analysis. <i>A. K. Doufas, M. Somasi and J. Storer</i>	SL2. Colloidal inks for directed assembly of 3-D periodic structures. <i>J. E. Smay and J. A. Lewis</i>	CF11. The rheology of model ice cream systems. <i>K. N. Odic, D. J. Cebula, M. R. Mackley and A. Russell</i>
4:25	MR12. Rheological investigation of the influence of short-chain branching on molecular order in melts of metallocene LLDPE. <i>I. A. Hussein</i>	FM12. Effect of upstream boundary conditions on the stability of fiber spinning in the highly elastic limit. <i>M. Renardy</i>	SL3. Scaling in the dynamics of jammed attractive colloids. <i>V. Trappe, H. Bissig, R. Keir, V. Prasad, S. Romer, P. Schurtenberger and D. A. Weitz</i>	CF12. Texture profiling with the vane: A general method for characterizing shear-sensitive soft matter. <i>A. Parker</i>
4:50	MR13. Prediction of dynamic moduli of low density polyethylene from chemistry and reactor conditions using architectural modeling. <i>J. J. Slot, H. C. Hoefsloot and P. D. Iedema</i>	FM13. Flow through tubes of two immiscible liquids with different rheological behaviors. <i>E. J. Soares, M. S. Carvalho and P. R. Souza Mendes</i>	SL4. Dense suspensions of colloidal particles under shear flow. <i>G. Petekidis, D. Vlassopoulos and P. N. Pusey</i>	CF13. The rheology and microstructure of structured fluids. <i>J. R. Stokes and J. H. Telford</i>
5:15	MR14. Rupture of entangled polymeric liquids in elongational flow. <i>Y. M. Joshi and M. M. Denn</i>	FM14. Comprehensive constitutive model for the prediction of stresses in immiscible blends. <i>A. S. Almusallam, R. G. Larson and M. J. Solomon</i>	SL5. Aging, structural evolution and non-linear rheology of thermoreversible colloidal gels. <i>P. Varadan, A. Mohraz and M. J. Solomon</i>	CF14. Rheological characterization of weekly structured food samples. <i>J. Laeuger, S. Will and K. Wollny</i>
5:40			END	
7:00		SOCIETY RECEPTION	Frederick R. Weisman Art Museum	

Tuesday, October 15

Morning

8:30 **PL2.** Tubes and slip links: Two views of entangled polymer rheology. *R. G. Larson* University Ballroom
 9:20 COFFEE

	<i>Ballroom A</i>	<i>Ballroom B</i>	<i>Ballroom C</i>	<i>Ballroom D</i>
	Molecular Rheology			Glasses and Glass-Forming Liquids
9:45	MR15. Complex fluid interfaces. <i>G. G. Fuller</i>	FM15. Effect of shear waves on viscoelastic drop deformation. <i>K. Sarkar</i>	SL6. Jamming, clustering and layering in sheared suspensions of platelike particles. <i>J. J. Higdon and Q. Meng</i>	GL1. Dependence of the volume relaxation time on thermal history. <i>P. Bernazzani and S. L. Simon</i>
10:10	MR16. Rigid rod probes of concentrated polymeric solutions. <i>P. S. Russo and R. Cush</i>	FM16. Computing 3-D flows with conformation tensor models. <i>X. Xie and M. Pasquali</i>	SL7. Viscosity bifurcation in pastes. <i>P. Coussot and D. Bonn</i>	GL2. Predicting volume relaxation data near glass transition. <i>G. Medvedev and J. M. Caruthers</i>
10:35	MR17. Rheo-optical and rheological behavior in shear of nematic solutions of rodlike polymers. <i>G. C. Berry and Z. Tan</i>	FM17. High Deborah number flow modeling with a stable and thermodynamically consistent constitutive equation. <i>Y. Kwon and S. Kim</i>	SL8. Local perturbations of jammed colloids. <i>P. Habdas and E. R. Weeks</i>	GL3. Evidence of glassy behavior in micellar block polyelectrolytes. <i>S. R. Bhatia, M. Crichton and A. Mourchid</i>
11:00	MR18. Numerical studies of liquid crystalline polymer in simple shear flow. <i>G. Sgalari, H. Klein, J. J. Feng, E. Meiburg and G. Leal</i>	FM18. Birefringence studies of a shear-thinning polymer solution in a time-dependent axisymmetric stagnation flow. <i>J. E. Bryant and W. R. Burghardt</i>	SL9. Aging effects in rheology and microrheology of colloids. <i>E. E. Pashkovski</i>	GL4. Hygro-thermal effects on the physical aging response of glassy polymers. <i>Y. Zheng and G. B. McKenna</i>
11:25	MR19. Microscopic and mesoscopic predictions of nematic polymers in shear-dominated flows. <i>G. Forest, Q. Wang and R. Zhou</i>	FM19. The extensional flow of a wormlike micellar solution past a sedimenting sphere. <i>C. Sheng and J. P. Rothstein</i>	SL10. Rheology and microstructure of depletion flocculated gels. <i>S. A. Shah and C. F. Zukoski</i>	GL5. Long term room temperature aging of polycarbonate resins. <i>D. G. LeGrand, S. Miller and P. McCloskey</i>
11:50			LUNCH	

Afternoon

	<i>Ballroom A</i>	<i>Ballroom B</i>	<i>Ballroom C</i>	<i>Ballroom D</i>
	Molecular Rheology			Glasses and Glass-Forming Liquids
1:30	MR20. Interrelations between rheology and defect texture in liquid crystals. <i>R. H. Colby</i>	FM20. Rotating flow of viscoelastic fluids in a pipe. <i>Z. Rusak and J. A. Tichy</i>	HS1. Decomposing dilution, tip stretching and Marangoni effects of surfactants on drop deformation. <i>Y. T. Hu</i>	GL6. Plasticization effects on the viscoelastic behavior of an epoxy resin: Physical aging response after carbon dioxide pressure-jumps. <i>M. Alcoutabi, F. Briatico-Vangosa, L. Banda and G. B. McKenna</i>
1:55	MR21. Rheology of nanoparticle – linear polymer blends. <i>T. T. Dao, M. E. Mackay, C. J. Hawker and B. van Horn</i>	FM21. Thermomechanical boundary layers in viscoelastic flow. <i>T. Hagen and J. D. Evans</i>	HS2. Numerical simulation of drop breakup and coalescence with soluble surfactant in 3D. <i>H. Zhou, V. Cristini, J. Lowengrub and C. W. Macosko</i>	GL7. Cooperative motion in glass-forming liquids. <i>B. M. Erwin and R. H. Colby</i>

2:20	MR22. Dendritic copolymers: Rheology, molecular structure, and properties of blends with PVC and PS. <i>N. Wagner, B. Tande and Y. Kim</i>	FM22. Development of extrusion instabilities for filled polymers. <i>D. M. Kalyon, E. Birinci and H. Gevgilili</i>	HS3. Rheology of immiscible blends with compatibilizer. <i>S. Velankar, P. Van Puyvelde, P. Moldenaers and J. Mewis</i>	GL8. Thermally stimulated recovery of inelastic deformation in epoxy/amine crosslinked and uncrosslinked systems. <i>H. Kawakami, H. Yamanaka and Y. Nanzai</i>
2:45	MR23. Dynamics of entangled associating polymers with large aggregates. <i>A. N. Semenov and M. Rubinstein</i>	FM23. Harmonic analysis of rheologically complex fluids. <i>T. Karis, C. A. Kim and M. S. Jhon</i>	HS4. Effect of compatibilization on cocontinuity in poly(ethylene oxide)/polystyrene blends. <i>J. A. Galloway and C. W. Macosko</i>	GL9. Structure-property evaluation of controlled epoxy networks. <i>N. E. Verghese, M. J. Marks and H. Q. Pham</i>
3:10			COFFEE	
	Structural Development in Flow	Coating and Extensional Processes		
3:35	SD1. Experimental observations during early stages of shear-induced crystallization in isotactic polypropylene and poly(1-butene). <i>H. H. Winter, A. Elmooumni and S. Acierno</i>	CE1. Dynamics of chains in high rate elongational flow. <i>H. H. Kausch and T. Q. Nguyen</i>	HS5. Flow-induced coalescence in polymeric emulsions. <i>P. Moldenaers, E. Van Hemelrijck, P. Van Puyvelde, S. Velankar and C. W. Macosko</i>	GL10. A model for predicting the super-Arrhenian behavior of glass forming materials. <i>R. Bhatia, G. Medvedev and J. M. Caruthers</i>
4:00	SD2. Molecular modeling of flow-induced crystallization of isotactic poly(1-butene). <i>P. L. Maffettone, S. Acierno, S. Coppola and N. Grizzuti</i>	CE2. A method of evaluating the extensional elasticity of weakly elastic liquids. <i>D. F. James and N. Yogachandran</i>	HS6. Normal stresses determination from analysis of drop shape under simple shear flow. <i>S. Guido, M. Simeone and F. Greco</i>	GL11. Studies of nano and molecular scale reinforcement on the yield and fracture behavior of glassy polymers. <i>A. J. Lesser</i>
4:25	SD3. Development of a microscopic non-isothermal two phase mixture theory for the description of flow-induced crystallization. <i>J. Van Meerveld and M. Hüttner</i>	CE3. Transient extensional viscosity of polymer melts in the filament stretching rheometer. <i>A. Bach, H. K. Rasmussen and O. Hassager</i>	HS7. Influence of weak elasticity on droplet behavior for immiscible polymer blends. <i>W. Lerdwijitjarud, R. G. Larson, A. Sirivat and M. J. Solomon</i>	GL12. Dependence of mechanical properties and viscoelastic relaxation on nanoclay loading of intercalated polycarbonate nanocomposites. <i>A. J. Hsieh and P. Moy</i>
4:50	SD4. Stratified morphology of a polypropylene/elastomer blend under channel flow. <i>M. Moffitt, Y. Rharbi, J.-D. Tong, M. A. Winnik, D. W. Thurman, J. P. Oberhauser, J. A. Kornfield and R. Ryntz</i>	CE4. Extensional viscosity of EX rubbers with varying ethylene content. <i>B. Patham and K. Jayaraman</i>	HS8. Stability under shear flow of strings formed in model mixtures of immiscible fluids. <i>J. A. Pathak and K. B. Migler</i>	GL13. Study on nonlinear deformation mechanism in glassy epoxy resin by birefringence technique. <i>T. Masatoshi, K. Hiroshi and N. Yukuo</i>
5:15			END	
5:30			BUSINESS MEETING Ballroom A	
7:00			AWARDS RECEPTION McNamara Alumni Center	
8:00			AWARDS BANQUET McNamara Alumni Center	

Wednesday, October 16

Morning

8:30
9:20

Ballroom A

Structural Development in Flow

- 9:45 **SD5.** Structure development is shear flow using a diffuse interface model.
P. D. Anderson, B. Keestra and H. E. Meijer
- 10:10 **SD6.** Dispersion visualisation in high viscosity ratio molten polymer systems under time and temperature-dependent shearing flow.
F. Mighri and M. A. Huneault
- 10:35 **SD7.** Neutron scattering from melts in complex flows.
T. C. B. McLeish, L. Hutchins, R. Richards, J. Bent, T. Gough, P. Coates, T. Nicholson, A. Likhtman and R. Graham
- 11:00 **SD8.** Measuring interfacial tension by retraction of surfactant-laden drops: Numerical simulation and experiments.
S. Velankar, H. Zhou, H.-K. Jeon and C. W. Macosko
- 11:25 **SD9.** Flow-induced structure formation in drag reducing polymers.
M. Liberatore, A. J. McHugh and E. Pollauf

11:50

Ballroom B

Coating and Extensional Processes

- CE5.** Relating the jetting behavior of model polymer solutions to their extensional flow properties.
L. Han, R. K. Gupta and D. Doraiswamy
- CE6.** Drop formation dynamics of constant low viscosity, elastic fluids.
V. Tirtaatmadja, J. J. Cooper-White, G. H. McKinley and D. V. Boger
- CE7.** Coating the outside of a rotating cylinder with non-Newtonian fluids.
J. Ashmore, A. Q. Shen, G. H. McKinley and H. A. Stone
- CE8.** Viscoelastic roll coating flows.
M. A. Johnson and D. W. Bousfield
- CE9.** Viscoelastic film splitting flows.
G. Zevallos, M. S. Carvalho and M. Pasquali

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Afternoon

Ballroom A

Structural Development in Flow

- 1:30 **SD10.** Small angle neutron scattering (SANS) study of shearing effects on drag reducing surfactant solutions.
Y. Qi, K. Littrell, P. Thyagarajan, Y. Talmon, Z. Lin and J. L. Zakin

Ballroom B

Coating and Extensional Processes

- CE10.** Low flow limit on slot coating of viscoelastic liquids.
J. Romero, W. Suszynsky, L. E. Scriven and M. S. Carvalho

Ballroom C

Heterogeneous Systems

- HS9.** Steady state shear flow and relaxation in concentrated immiscible polymer blends.
J. Mewis, T. Jansseune and P. Moldenaers
- HS10.** Morphology-diffusion coupling in multiphase mixtures.
A. El Afif, D. De Kee, R. Cortez and D. P. Gaver III
- HS11.** Finite element analysis of drop deformation in the viscoelastic two-phase entrance flow described by the Leonov model.
S. Kim and Y. Kwon
- HS12.** Interfacial tension in an immiscible blend containing a thermotropic liquid-crystalline polymer.
J. Wu and P. T. Mather
- HS13.** The shear modulus of random polydisperse soap foam.
A. M. Kraynik, D. A. Reinelt and F. van Swol

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Ballroom C

Heterogeneous Systems

- HS14.** Polypropylene nanocomposites.
F. Lortie, T. Truong, A. Stein and C. W. Macosko

Ballroom D

Viscoelasticity of Polymer Liquids

- VP1.** Brownian dynamics simulations for dilute polydisperse polymers in good solvents including effects of chain scission.
C.-C. Hsieh and R. G. Larson
- VP2.** Brownian dynamics simulation of symmetric and asymmetric three-arm branched polymers in dilute solution.
Y. M. Lee and Y. L. Joo
- VP3.** Recent Stressmeter developments.
A. S. Lodge
- VP4.** Standard reference materials: Non-Newtonian fluids for rheological measurements.
C. R. Schultheisz, K. M. Flynn, S. D. Leigh and G. B. McKenna
- VP5.** Viscoelastic effects in elongational flow: A new orifice impedance method.
N. M. Henderson and G. B. Thurston

Ballroom D

Viscoelasticity of Polymer Liquids

- VP6.** Dielectric response of liquid polymers in oscillatory shear flow.
Y. Peng and Y. M. Shkel

1:55	SD11. Degradation and recovery of drag-reducing surfactant solutions. <i>K. Gasljevic, K. Hoyer and E. F. Matthey</i>	CE11. Detachment of the polymer from the rolls in shear roll mill. <i>A. Shah, H. Gevgilili and D. M. Kalyon</i>	HS15. Effect of shear deformation and temperature on the crystallization morphology of intercalated polypropylene nanocomposites. <i>A. Somwangthanaroj, E. C. Lee and M. J. Solomon</i>	VP7. Mechanical hole burning spectroscopy: A comparison with dielectric non-resonant spectral hole burning. <i>X. F. Shi and G. B. McKenna</i>
2:20	SD12. Nano particle formation in turbulent impinging jets. <i>B. K. Johnson and R. K. Prud'homme</i>	CE12. Calendering of poro-elasto-viscoplastic sheet and coating. <i>C. N. Aggelidis and L. E. Scriven</i>	HS16. Exfoliation, networking and yield behavior in nano-suspension of modified montmorillonite clay. <i>Y. Zhong and S.-Q. Wang</i>	VP8. Further implications and applications of HN viscoelasticity modeling. <i>J. Janzen and J. R. Dorgan</i>
2:45	SD13. Rheology of polypropylene nanoclay composites. <i>G. S. Galgali, A. K. Lele, M. R. Mackley and R. Chellaswamy</i>	CE13. A pressure drop/flow rate relationship for flows of extensional-thickening liquids through porous media. <i>P. R. Souza Mendes and M. F. Naccache</i>	HS17. Rheological properties, processing and morphology of polymer-layered silicate nanocomposites. <i>H. Lee and G. H. McKinley</i>	VP9. Material function predictions of stochastic rheological model. <i>D. C. Senaratne and K. Feigl</i>
3:10			COFFEE	
3:35	SD14. In situ SAXS studies of shear-induced orientation in model polymer/clay nanocomposites. <i>L. M. Dykes, W. R. Burghardt and R. Krishnamoorti</i>	CE14. Stress development and crack formation in colloidal thick films during drying. <i>L. A. Brown and C. F. Zukoski</i>	HS18. A hybrid continuum-lattice dynamic self-consistent field model for nanocomposite fluids. <i>M. L. Mihajlovic and Y. Shnidman</i>	VP10. Finite step rate corrections in stress relaxation experiments: A comparison of two methods. <i>A. Flory and G. B. McKenna</i>
4:00	SD15. Preliminary investigation on configuration space distribution function in concentrated suspensions. <i>J. Fan, A. L. Graham, L. A. Davis and F. A. Gadala-Maria</i>	CE15. Modeling of dry spinning of polymer fibers. <i>Z. Gou and A. J. McHugh</i>	HS19. Elastic effects in polydispersed acrylic latexes. <i>S. K. Ahuja</i>	VP11. Topological effects on viscoelastic quantities in polyethylene resins. <i>P. J. Doerpinghaus and D. G. Baird</i>
4:25	SD16. The rheology of dispersions under high electric fields, compressive and shear flows. <i>F. E. Filisko and Y. Meng</i>	CE16. Numerical simulations of the effect of local material property variation on deformation of webs during loading. <i>P. Reardon, L. Thigpen, J. M. Leggoe and A. L. Graham</i>	HS20. The role of porosity on the rheology of silica dispersions. <i>N. N. Konate, R. W. Hughes, P. Reynolds and S. Stebbing</i>	VP12. Phase behavior and rheology of blends of hyperbranched polystyrene and polyvinyl methyl ether: Effect of architecture. <i>R. M. Kannan and S. Kharchenko</i>
4:50	SD17. Estimation of the pumpability of concretes from the mortar phase rheology. <i>K. T. Yücel</i>	CE17. The design of profile extrusion dies using 3-D computational fluid dynamics. <i>W. A. Gifford</i>	HS21. Rheology of highly concentrated particle-liquid systems. <i>R. G. Morgan, D. Lord, R. Kannan and A. R. Srinivasa</i>	VP13. Rheology and orientation behavior of metallocene-catalyzed semi-syndiotactic polypropylenes: Role of tacticity. <i>M. Sevegnay, R. M. Kannan and A. Siedle</i>
5:15	SD18. Curing process monitoring by rheology. <i>Z. J. Yang</i>	CE18. Rheological behaviour and model of alumina-polymer-based composites. <i>M. V. Kireitseu, S. G. Yerakhavets and M. Istomin</i>	HS22. Yield stress and wall slip phenomena in colloidal silica gels. <i>H. J. Walls, S. B. Caines and S. A. Khan</i>	VP14. An algebraic constitutive equation for complex flows of viscoelastic liquids. <i>R. L. Thompson, M. S. Carvalho and P. R. Souza Mendes</i>
5:40			END	
6:00			POSTER SESSION & REFRESHMENTS Humphrey Room	

Thursday, October 17

Morning

	Ballroom A Stiff Chains	Ballroom B Interfacial Rheology	Ballroom C Heterogeneous Systems	Ballroom D Rheology at the Sub-Micron Scale
8:05	SC1. Oscillatory stress responses of polymers in the nematic phase. <i>E. Somma, J. Vermant, P. Moldenaers, M. Gross and P. L. Maffettone</i>	IR1. Strong interactions at wall to generate anomalous wall slip behavior during flows of complex fluids. <i>D. M. Kalyon and H. Gevgilili</i>	HS23. Rheological properties of concentrated fiber suspensions in polymers. <i>M. Sepehr, G. Ausias, M. Grmela and P. J. Carreau</i>	SM1. Measurements of rheological and structural properties of thin lubricant films at high shear rates. <i>K. Mrizig, M. D. Dadmun and H. D. Cochran</i>
8:30	SC2. Shear-induced alignment of smectic side-chain liquid crystalline polymers. <i>S. Rendon, W. R. Burghardt, M. L. Auad and J. A. Kornfield</i>	IR2. Wall slip in drag flow: A direct rheological measurement. <i>P. S. Tapadia and S.-Q. Wang</i>	HS24. Effects of the specific energy input during mixing and the resulting degree of mixedness on the rheological behavior of concentrated suspensions. <i>C. Tsengoglou, D. M. Kalyon and E. Birinci</i>	SM2. The structure and dynamics of particle monolayers at a liquid-liquid interface subjected to flow. <i>E. J. Stancik, M. O. Widenbrant, G. T. Gavranovic, A. T. Laschitsch, J. Vermant and G. G. Fuller</i>
8:55	SC3. Study of the orientation field and topological defects in a nematic liquid crystal surrounding a spherical particle. <i>D. A. Hill and O. V. Sozinova</i>	IR3. Spurt in extrusion of polymer melts: A stick-slip phenomenon. <i>J. L. Dubbeldam and J. Molenaar</i>	HS25. Rheophysical investigations into natural mud suspensions. <i>C. Ancey and P. Coussot</i>	SM3. DNA fragmentation via contraction flow. <i>N. J. Woo and E. S. Shaqfeh</i>
9:20	SC4. The effects of hydrodynamic interactions on polymer dynamics in extensional flows. <i>C. M. Schroeder, S. Chu and E. S. Shaqfeh</i>	IR4. Slip at the interface between polymers under shear: A comparison of DSCF, MD and experimental study. <i>M. L. Mihajlovic, T. S. Lo, Y. Shnidman, W. Li and D. Gersappe</i>	HS26. Rheology and order in acicular ferromagnetic dispersions. <i>A. S. Bhandar and J. M. Wiest</i>	SM4. Effects of flow and confinement on DNA dynamics in microfluidic devices. <i>R. M. Jendrejack, J. J. de Pablo and M. D. Graham</i>
9:45			COFFEE	
10:10	SC5. Influence of chain stiffness on the relaxation of an initially straight semiflexible polymer. <i>P. Dimitrakopoulos and I. D. Dissanayake</i>	IR5. Viscosity reduction mechanism in high molecular mass polyethylene melt containing a small quantity of thermotropic liquid crystalline polymers. <i>P. Gao and C.-K. Chan</i>	HS27. P-V-T and relaxation characteristics of PP, LC-copolyester and their blends at high pressure. <i>E. I. Frenkin, V. G. Kulichikhin, V. E. Dreval, E. V. Kotova and V. N. Kuleznev</i>	SM5. Tracer microrheology of complex fluids and gels. <i>F. Cardinaux, L. Cipelletti, F. Scheffold, P. Schurtenberger, C. Heinemann, F. Escher and B. Conde-Petit</i>
10:35	SC6. Wavelength-dependent hydrodynamics of a solution of semiflexible rods. <i>D. C. Morse</i>	IR6. Squeeze flow of waterborne adhesives on porous substrates. <i>M. S. Tirumkudulu, W. B. Russel and T. J. Huang</i>	HS28. Dielectric spectroscopy of blends with a liquid crystalline dispersed phase. <i>P. Rai, M. M. Denn and B. Khushid</i>	SM6. Tracer Brownian motion in complex fluids. <i>S. Amin, C. J. Kloxin and J. H. van Zanten</i>
11:00	SC7. Rheology and single-molecule behavior of semiflexible chains in shear flow. <i>A. Montesi and M. Pasquali</i>	IR7. The rheology of microelectronics planarization (polishing). <i>M. Ronay</i>	HS29. Evolution of structure in electro- and magnetorheological fluids from a continuum perspective. <i>K. von Pfeil, M. D. Graham, J. F. Morris and D. J. Klingenberg</i>	SM7. Two-point microrheology and rearrangement noise in living cells. <i>J. C. Crocker and B. Hoffman</i>
11:25	SC8. Hydrogen bonding and intermolecular interactions in galactomann polymers. <i>R. K. Prud'homme and Y. Cheng</i>	IR8. Surface dynamics in polystyrene films. <i>K. Tanaka, A. Takahara and T. Kajiyama</i>	HS30. Metal particulate dispersions for data storage applications: Characterization as a function of polymer ratio and pigment volume concentration. <i>N. K. Nelson, Jr., J. J. Blackwell and K. O'Grady</i>	SM8. Matrix fluorescence photobleaching recovery - a diffusion based method for determining polydispersity. <i>G. J. Doucet, P. S. Russo, D. Neau and D. C. DeKee</i>

11:50 **SC9.** Fluorescence photobleaching recovery and dynamic light scattering studies of polyelectrolyte solutions. R. Cong, E. Temyanko and P. S. Russo

IR9. Interfacial rheology of graft-type siloxane surfactants. J. W. Anseth, R. M. Hill and G. G. Fuller

12:15

HS31. Formulation effects on magnetic mix microstructure. A. Potanin and N. K. Nelson, Jr.

SM9. Linear elasticity of cubic phases in block copolymer melts by self consistent field theory. C. A. Tyler and D. C. Morse

END

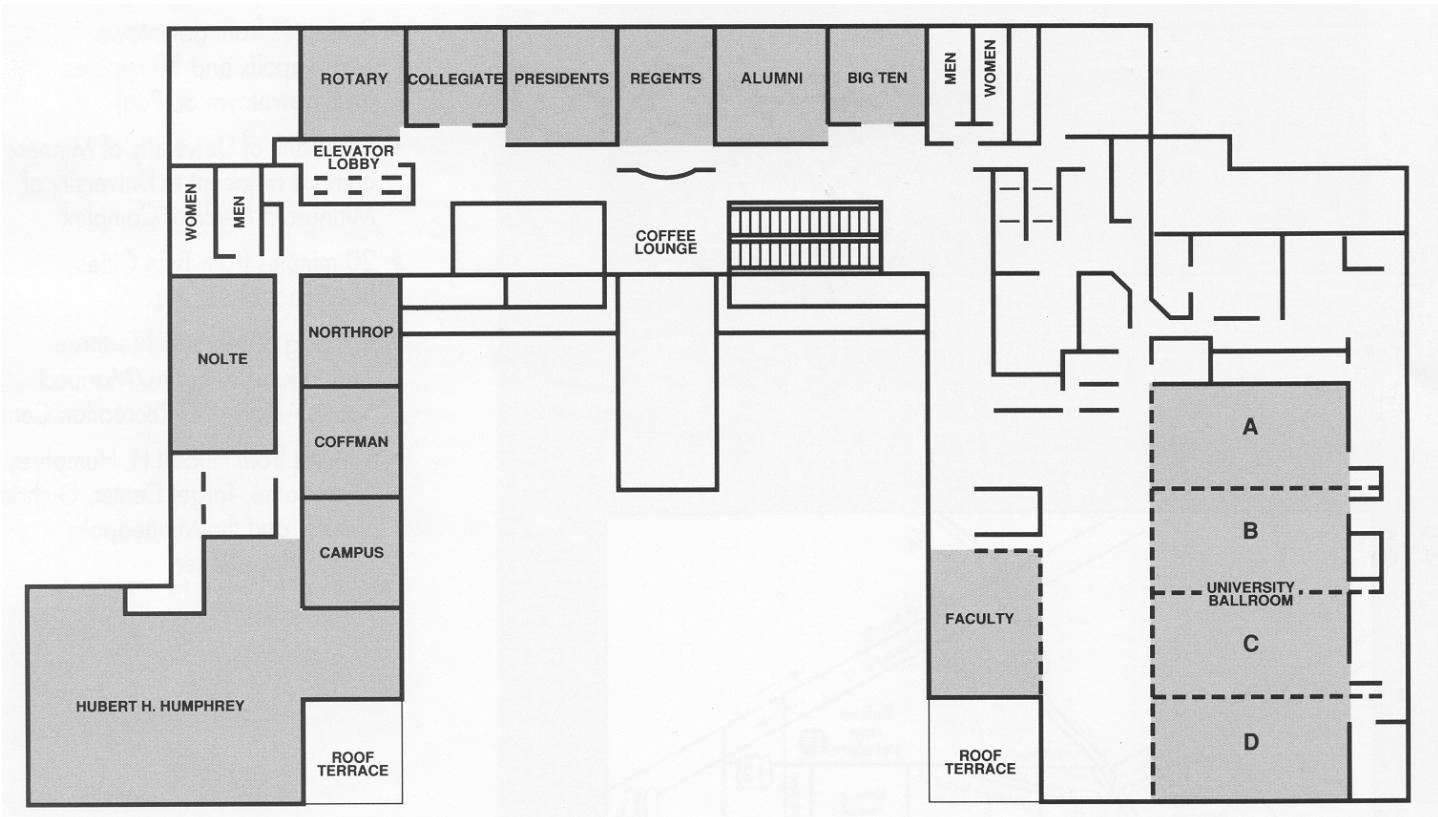
Poster Session

Wednesday 6:00 PM Humphrey Room

- PO1.** Rheo-optical investigations on polymer-clay nanocomposites. M. M. Mallwitz, D. P. Angelette and G. Schmidt
- PO2.** Nonlinear dynamics of a concentrated system of rigid rods subjected to periodic shear flows. L. Russo and P. L. Maffettone
- PO3.** Controlling gelation in polymer-clay dispersions. H. Sardinha and S. R. Bhatia
- PO4.** Dynamic simulation of bidisperse magnetorheological fluids. D. Kittipoomwong, J. C. Ulicny and D. J. Klingenber
- PO5.** Shear-induced self-diffusivities of a dilute suspension of rough spheres in nonlinear shear flow. W. Lin, A. L. Graham, M. S. Ingber and J. R. Abbott
- PO6.** Surface morphology of drying latex films. A. O. Shen, H. A. Stone and L. Shmylovich
- PO7.** Three dimensional boundary element simulations of concentrated suspensions in a spinning ball rheometer. A. M. Grillet, L. A. Mondy, M. S. Ingber and S. R. Subia
- PO8.** Rheological properties and interfacial tension of polypropylene-poly(styrene-co-acrylonitrile) blend containing compatibilizer. Y.-T. Sung, J. C. Hyun and W. N. Kim
- PO9.** Effects of pressure and supercritical CO₂ on the rheological properties of polymer melts. H. E. Park and J. M. Dealy
- PO10.** A constant volume model for immiscible polymer blends. B. J. Edwards and M. Dressler
- PO11.** Electromagnet for magnetorheological testing of solid and liquid magnetic suspensions. S. K. Cobb and Y. M. Shkel
- PO12.** Dynamic model for breakup of agglomerates in polymer melts under shear and extensional flows. T. Moribe and J. L. White
- PO13.** Dynamic properties of shear thickening colloidal suspensions. N. Wagner and Y. S. Lee
- PO14.** Determining end-effects in concentrated suspensions of neutrally buoyant particles. V. Chawla, R. S. Admuthe, A. L. Graham, L. A. Mondy and P. Reardon
- PO15.** Rheological control by reversible flocculation. G. G. Liang, B. S. Hawkett and R. I. Tanner
- PO16.** Visualization of single DNA-single obstacle collisions. G. C. Randall and P. S. Doyle
- PO17.** Reptation dynamics in mixtures of long and short chains: Tube dilation and impeded curvilinear diffusion. S.-Q. Wang, S. Wang, A. Halasa and W.-L. Hsu
- PO18.** Temperature and composition dependence of monomeric friction factors in a miscible polymer blend obtained by rheology and diffusion. J. C. Haley and T. P. Lodge
- PO19.** Filament depletion from colloidal probe particles in F-actin networks. B. S. Chae, L. Le Goff, F. Amblard and E. M. Furst
- PO20.** Rheology measurements of thin polymer films using the atomic force microscope. P. M. McGuigan and D. J. Yarusso
- PO21.** The dependence of the viscosity of semiflexible chains on the chain contour length, polymer concentration and persistence length. G. C. Berry
- PO22.** Modifying the rheological properties of collagen-rich tissues by crosslinking. G. Tae, F. Tessier, C. S. Nickerson, S. Hwang, J. A. Kornfield, M. Dickinson, A. Louie, J. Park, R. Lambert, H. Karageozian, K. Rich and V. Monnier
- PO23.** Block copolymer micellar soft crystal dynamics and structure. S. Amin and J. H. van Zanten
- PO24.** Shear-induced structure and dynamics of a hydrophobically modified polymer in the presence of anionic surfactant. V. Tirtaatmadja, J. J. Cooper-White and D. E. Dunstan
- PO25.** The structurization and rheology of diblock copolymer/hydrocarbon solutions. Z. Liu, S. Chattopadhyay and M. T. Shaw
- PO26.** Design, synthesis, and thermomechanical characterization of a new triblock copolymer with shape memory effects. C. Liu, G. Ettienne-Modeste and P. T. Mather
- PO27.** Linear viscoelastic behavior of a polymeric bicontinuous microemulsion. K. Krishnan, W. R. Burghardt, F. S. Bates and T. P. Lodge
- PO28.** Double reptation predictions of linear viscoelasticity in miscible polymer blends. J. A. Pathak, R. Kant, S. Kumar and R. H. Colby
- PO29.** Multiscale theory and simulation of rheological properties in sheared mesophase pitches. D. Grecov and A. D. Rey
- PO30.** Orientation behavior of a pentablock copolymer through solution extrusion. T. Harada, F. S. Bates and T. P. Lodge
- PO31.** Birefringence as a probe to follow phase transitions. R. Eskimergen, K. Mortensen, M. E. Vigild, K. Almdal, E. M. Kjær and N. Balsara
- PO32.** Rheology of supercritical CO₂ plasticized acrylic copolymers. M. J. Bortner and D. G. Baird

- PO34.** Shear rheology of fluoropolymers in the melt and solution states. *N. Mekhilef and C. Pattamaprom*
- PO35.** Nonlinear rheology of entangled star polymers. *A. K. Tezel, E. Geffroy and G. Leal*
- PO36.** Response of a poly(n-hexyl isocyanate)/p-xylene liquid crystalline system to an electric field and shear. *T. J. Menna, R. A. Lynch and F. E. Filisko*
- PO37.** Numerical simulation of the time-dependet flow of complex fluids in the cone and plate geometry. *J. Serrano-Pérez, G. González-Santos and J. D. Schieber*
- PO38.** Electric field response of rigid poly(n-hexyl isocyanate) solutions. *A. Acevedo and A. D. Shine*
- PO39.** Sensitivity and stability of polymer extensional deformation processes using frequency response. *J. S. Lee, H. W. Jung, L. E. Scriven and J. C. Hyun*
- PO40.** Hydrodynamic interaction between two cylinders in planar shear flow of viscoelastic fluid. *C. Kim, H. W. Jung and D. J. Won*
- PO41.** Structural recovery and physical aging of glass-formers. *S. L. Simon and D. J. Plazek*
- PO42.** Strain-induced change in dynamic mechanical spectrum of glassy poly(methyl methacrylate). *S. Yoshioka, K. Nishida and Y. Nanzai*
- PO44.** Theory of viscoelastic free surface flow instability. *M. D. Graham*
- PO45.** Shear induced band texture and its effect on the viscoelasticity of a model thermotropic copolyester HBA/HQ/SA. *P. Gao*
- PO46.** Analysis of the interface between a viscoplastic and a Newtonian liquid flowing through a tube. *M. F. Naccache, P. R. Souza Mendes, M. S. Carvalho and A. L. Martins*
- PO47.** Taylor-Couette instability of viscoplastic liquids. *O. Coronado, P. R. Souza Mendes and M. S. Carvalho*
- PO48.** Deformation of multiple non-Newtonian drops in the axisymmetric 4:1 contraction flow. *S. Kim, S. Kim and Y. Kwon*
- PO49.** Rheology and structure evolution during the flow of a medical-grade thermoplastic polyurethane. *G. Lu, D. M. Kalyon, I. Yilgor and E. Yilgor*
- PO50.** Rheology aspects of leather finishing formulations. *S. Alonso, L. Medina-Torres, E. Brito-de la Fuente, F. Avalos, J. C. Ortiz and R. Zitzumbo*
- PO51.** Effect of borax concentration on the rheological properties of hyaluronic acid/poly(vinylahcohol) blend system. *H.-O. Park, S. H. Kim, H. G. Sim, K. H. Ahn and S. J. Lee*
- PO52.** Effects of surfactant and polymers on foam rheology – interfacial rheology aspects. *X. Zhang, V. Subramanian and J. Glynn*
- PO53.** Rheological behaviour and fatigue of alumina-based-chrome carbide composite coatings. *M. V. Kireitseu and L. Yerakhavets*
- PO54.** A comparison of the stress and birefringence growth of dilute, semi-dilute and concentrated polymer solutions in extensional flows. *J. P. Rothstein and G. H. McKinley*
- PO55.** A three-dimensional nonlinear viscoelastic constitutive model for UHMWPE used in medical implants. *D. M. Rondinone, L. A. Pruitt and G. B. McKenna*
- PO56.** Influence of molecular architecture on extensional and shear rheology. *M. S. Owens, C. W. Macosko and L. E. Scriven*
- PO57.** Correlating strain hardening to extrusion foaming. *P. Spitael and C. W. Macosko*
- PO58.** New measurement technique for in-situ coating metrology. *S. B. Kharchenko, P. M. McGuigan and K. B. Migler*
- PO59.** Improving falling-ball tests for viscosity determination. *S. Feng, A. L. Graham, J. R. Abbott and P. Reardon*
- PO60.** Practical comparison of differential viscoelastic constitutive equations in finite element modeling of planar 4:1 contraction flow. *J. Lee, S. Yoon, Y. Kwon and S. Kim*
- PO61.** VMB – a new approach to programming rheological testing. *M. Grehlinger, J. Berting and A. J. Franck*
- PO62.** Independent stress measurement extends the viscosity and frequency range of low viscosity fluids. *A. J. Franck and R. F. Garritano*
- PO63.** Shear-free flows in a commercial rotational rheometer. *E. F. Brown*
- PO64.** A normal stress sensor system for complete characterization of polymer shear flow properties. *J. J. Magda, J.-W. Kim and S.-G. Baek*
- PO65.** Measurements of damping function for model polymer blends. *D. A. Vega, S. T. Milner and N. Hadjichristidis*
- PO66.** AFM-Based methodologies for interfacial nanorheology and nanotribology. *G. Haugstad, C. Dykstra, R. H. Schmidt, J. A. Hammerschmidt, D. Staarup, S. Tan, W. L. Gladfelter, C. W. Macosko and P. Cole*
- PO67.** Shear-induced mesostructure in nanoplatelet-polymer networks. *S. Lin-Gibson, G. Schmidt, H. Kim, C. C. Han and E. Hobbie*

Floor Plan – Radisson Hotel Metrodome



Social Program

Sunday, October 13

Welcoming Reception

7:00 PM – 9:00 PM University Ballroom (Radisson)

Sponsored by a generous contribution from TA Instruments

Monday, October 14

Society Reception

7:00 PM – 9:00 PM Frederick R. Weisman Art Museum

Wine sponsored by a generous contribution from Thermo Haake

Tuesday, October 15

Business Meeting

5:30 PM Ballroom A (Radisson)

Awards Reception

7:00 PM – 8:00 PM McNamara Alumni Center

Wine sponsored by a generous contribution from Rheometric Scientific

Awards Banquet

8:00 PM McNamara Alumni Center

Wednesday, October 16

Poster Session Refreshments

6:00 PM – 8:00 PM Humphrey Room (Radisson)

Sponsored by a generous contribution from Paar Physica USA