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EDUCATION AND EXPERIENCE

1997 - present *Bernard J Lucci Professor of Chemical Engineering*, University of Michigan. Professor, 2009-2024. Associate Professor, 2003-2009. Assistant Professor, 1997-2003. Also appointed in Macromolecular Science and Engineering.

1996 – 1997 *Post-doctoral fellow*. With Professor D.V. Boger, University of Melbourne.

1991 – 1996 *Ph.D. Chemical Engineering*. University of California at Berkeley. Dissertation advisor: Professor S.J. Muller.

1990 – 1991 *Department of Economics, visiting student*. Rotary International Fellow. Université d'Aix-Marseille II, Aix-en-Provence, France.

1986 – 1990 *Bachelor of Science: Chemical Engineering; Double major: Economics*. University of Wisconsin at Madison.

AWARDS & HONORS

2024 *Bernard J. Lucci Professor of Chemical Engineering,* University of Michigan

2022 *Fellow*, Society of Rheology.

2017 *Fellow*, American Physical Society.

2016 *Fellow*, American Association for the Advancement of Science.

2015 *Fellow*, Academic Leadership Program of the Committee on Institutional Cooperation (now called the Big Ten Academic Alliance)

2013 *Department of Chemical Engineering Faculty Excellence Award*, University of Michigan

2011 *Soft Matter Lectureship*, The Royal Society of Chemistry's journal *Soft Matter*

2010 *Education Excellence Award*, College of Engineering, University of Michigan

2008 *Faculty Recognition Award*, University of Michigan

2006 *ASEE Outstanding Professor of the Year*, U-Michigan Chapter of ASEE

2003 *Henry Russel Award*, University of Michigan

2002 *Class of 1938E Award*, College of Engineering, University of Michigan

2002 *Non-tenured Faculty Award*, 3M Corporation

2001 *Department of Chemical Engineering Faculty Excellence Award*, University of Michigan

2001 *NSF CAREER award*, Directorate of Engineering

2000 *Dow Corning Assistant Professor*, University of Michigan (2000 – 2003).

ACADEMIC LEADERSHIP AT THE UNIVERSITY OF MICHIGAN

2018 – present *Dean, Horace H. Rackham School of Graduate Studies and Vice-Provost for Academic Affairs – Graduate Studies.*

2017 – 2018 *Interim Dean, Horace H. Rackham School of Graduate Studies and Interim Vice-Provost for Academic Affairs – Graduate Studies.*

2013 – 2017 *Associate Dean for Academic Programs and Initiatives*, Horace H. Rackham School of Graduate Studies.

PROFESSIONAL MEMBERSHIP

American Institute of Chemical Engineers, American Chemical Society, American Physical Society, Society of Rheology, American Society for Engineering Education, the American Association for the Advancement of Science, and the Council of Graduate Schools.

REFEREED PUBLICATIONS

131) Liu, T. and M.J. Solomon, "Reconfigurable Grating Diffraction Structural Color in Self-Assembled Colloidal Crystals," *Small* **19** 2301871 (2023). PMID: 37144433. DOI: 10.1002/smll.202301871

130) Saud, K.T. and M.J. Solomon, "Microdynamics of active particles in defect-rich colloidal crystals," *J. Colloid Interface Science.* **641** 950-960 (2023). PMID: 36989821; DOI: 10.1016/j.jcis.2023.03.025

129) Saud, K.T., J. Xu, S. Wilkanowicz, Y. He, J.J. Moon, and M.J. Solomon, "Electrosprayed microparticles from inulin as poly(vinyl alcohol) for colon-targeted delivery of prebiotics," *Food Hydrocolloids* 140 108625 (2023). DOI: https://doi.org/10.1016/j.foodhyd.2023.108625.

128) Beckwith, J.K., M. Ganesan, J.S. VanEpps, A. Kumar, and M.J. Solomon, "Rheology of Candida albicans fungal biofilms," *Journal of Rheology* **66**(4) 683-697 (2022). DOI: 10.1122/8.0000427

127) Liu, T., T. Liu, F. Gao, S.C. Glotzer, and M.J. Solomon, "Structural Color Spectral Response of Dense Structures of Discoidal Particles Generated by Evaporative Assembly," *J. Phys. Chem B* **126** 6 1315-1324 (2022). DOI: 10.1021/acs.jpcb.1c10015

126) Kao, P-K, M.J. Solomon, and M. Ganesan, "Microstructure and elasticity of dilute gels of colloidal discoids," *Soft Matter* **18** 1350-1363 (2022). DOI: 10.1039/D1SM01605A

125) Liu, T., B. VanSaders, J.T. Keating, S.C. Glotzer, and M.J. Solomon, "Effect of Particles of Irregular Size on the Microstructure and Structural Color of Self-Assembled Colloidal Crystals," *Langmuir* 37 13300 – 13308 (2021). https://doi.org/10.1021/acs.langmuir.1c01898

124) Rocklin, D.Z., L.C. Hsiao, M. Szakasits, M.J. Solomon, and X. Mao, "Elasticity of colloidal gels: structural heterogeneity, floppy modes, and rigidity," *Soft Matter* (2021). DOI: 10.1039/D0SM00053A

123) Vitale, C., T.M. Ma, J. Sim, E. Martinez-Nieves, U. Kadiyala, M.J. Solomon, and J. Scott VanEpps, "*Staphylococcus epidermidis* has growth phase dependent affinity for fibrinogen and resulting fibrin clot elasticity," *Frontiers in Microbiology* 12:649534 (2021). DOI: 10.3389/fmicb.2021.649534

122) Kao, P-K., B.J. VanSaders, S.C. Glotzer and M.J. Solomon, "Accelerated annealing of colloidal crystal monolayers by means of cyclically applied electric fields," *Scientific Reports* **11** 11042 (2021). DOI: 10.1038/s41598-021-90310-7

121) Saud, K., M. Ganesan, and M.J. Solomon, "Yield stress behavior of colloidal gels with embedded active particles," *Journal of Rheology* 65 225-239 (2021). DOI: 10.1122/8.0000163

120) Beckwith, J.K., J.S. VanEpps, and M.J. Solomon, "Differential Effects of Heated Perfusate on Morphology, Viability, and Dissemination of *Staphylococcus epidermidis* Biofilms," *Applied and Environmental Microbiology* 86:e01193-20 (2020). DOI:10.1128/AEM.01193-20. PMID: 32801173

119) Liu, T., B. VanSaders, S.C. Glotzer, and M.J. Solomon, "Effect of Defective Microstructure and Film Thickness on the Reflective Structural Color of Self-Assembled Colloidal Crystals," *ACS*

Applied Materials and Interfaces 12 8 9842-9850 (2020). DOI: 10.1021/acsami.9b22913.

118) Wei, Y., M.J. Solomon, and R.G. Larson, "Time-dependent Shear Rate Inhomogeneities and Shear Bands in a Thixotropic Yield-Stress Fluid under Transient Shear," *Soft Matter* **15**, 7956 – 7967 (2019). DOI: 10.1039/C9SM00902G.

117) Kao, P-K. B.J VanSaders, M.D. Durkin, S.C Glotzer and M.J. Solomon, "Anisotropy Effects on The Kinetics of Colloidal Crystallization and Melting: Comparison of Spheres and Ellipsoids," *Soft Matter* 15*,* 7479 – 7489 (2019). DOI: 10.1039/C9SM00887J

116) Gasbarro, N.M. and M.J. Solomon, "Yield stress and rheology of a self-associating chitosan solution," *Rheological Acta* 58: 729-739 (2019). DOI: 10.1007/s00397-019-01173-9.

115) Szakasits, M.E., Saud, K.T., Mao, X. and Solomon, M.J., "Rheological implications of embedded active matter in colloidal gels," *Soft Matter* 15 18012-18021 (2019). DOI: 10.1039/c9sm01496a.

114) Wei, Y., M.J. Solomon, and R.G. Larson, "Letter to the Editor: Modeling the nonmonotonic time-dependence of viscosity bifurcation in thixotropic yield-stress fluids," *Journal of Rheology* 63(4) 673-674 (2019). DOI: 10.1122/1.5098485.

113) Whitaker, K., Z. Varga, L.C. Hsiao, M.J. Solomon, J.W. Swan, and E.M. Furst, "Colloidal gel elasticity arises from the packing of locally glassy clusters," *Nature Communications* (2019). DOI: 10.1038/s41467-019-10039-w

112) Shemi, O. and M.J. Solomon, "Self-propulsion and active motion of Janus ellipsoids," *J. Phys. Chem. B* 122(44) 10247-10255 (2018). DOI: 10.1021/acs.jpcb.8b08303

111) Adams, A.A., M.J. Solomon and R.G. Larson, "Nonlinear kinetic-rheology model for reversible scission and deformation of wormlike micelles," *Journal of Rheology*, 62(6) 1419-1427 (2018); DOI: 10.1122/1.5041265

110) Ferrar, J.A., D.S. Bedi, S. Zhou, P. Zhu, X. Mao, and M.J. Solomon," Capillary-driven binding of thin triangular prisms at fluid interfaces," *Soft Matter,* **14** 3902-3918 (2018)*,* DOI: 10.1039/C8SM00271A.

109) Solomon, M.J., "Tools and Functions of Reconfigurable Colloidal Assembly," *Langmuir* 34 11205-11219 (2018); DOI: 10.1021/acs.langmuir.7b03748.

108) Wei, Y., M.J. Solomon, and R.G. Larson, "A Multi-Mode Structural Kinetics Constitutive Equation for the Transient Rheology of Thixotropic Elasto-viscoplastic Fluids," *Journal of Rheology* **62** (2018) DOI: 10.1122/1.4996752.

107) Ferrar, J.A., L. Pavlovsky, Y. Liu, E. Viges, and M.J. Solomon, "Two-step continuous production of monodisperse colloidal ellipsoids at rates of one gram per day," *AIChE Journal* 64(2) 697-707 (2018); DOI:10.1002/aic.16009.

106) Adams, A., X. Xia, M.J. Solomon, and R.G. Larson, "Concentration, salt and temperature dependence of strain hardening of step shear in CTAB/NaSal surfactant solutions," *Journal of Rheology* **61**, 967–977 (2017). doi:10.1122/1.4996008.

105) Hsiao, L.C., I. Saha-Dalal, R.G. Larson, Solomon, M.J., "Translational and rotational dynamics in dense suspensions of smooth and rough colloids," Soft Matter 13(48) 9229-9236 (2017). DOI: 10.1039/c7sm02115a

104) Ma, T.M., J.S. vanEpps, M.J. Solomon, "*Structure, Mechanics, and Instability of Fibrin Clot Infected with Staphylococcus epidermidis*," *Biophysical Journal* 113(9) 2100-2109 (2017). PMID: 29117532. DOI: http://dx.doi.org/10.1016/j.bpj.2017.09.001

103) Silvera Batista, C., H. Rezvantalab, R.G. Larson, and M.J. Solomon, "Controlled Levitation of Colloids through Direct Current Electric Fields," *Langmuir* **33** (41), 10861–10867 (2017). DOI: 10.1021/acs.langmuir.7b00835.

102) Hsiao, L. C., Jamali, S., Glynos, E., Green, P. F., Larson, R. G., and Solomon, M. J. "Rheological

State Diagrams for Rough Colloids in Shear Flow," *Physical Review Letters* 119, no. 15 (2017): 158001. doi:10.1103/PhysRevLett.119.158001.

101) Szakasits, M.E., W. Zhang, and M.J. Solomon, "Dynamics of fractal cluster gels with embedded active colloids," *Physical Review Letters* 119, 58001 (2017). doi:10.1103/PhysRevLett.119.058001

100) Ganesan, M. and M.J. Solomon, "High-density Equilibrium Phases of Colloidal Ellipsoids by Application of Optically Enhanced, Direct Current Electric Fields," *Soft Matter* **6**, 557–562 (2017). doi:10.1039/C7SM00359E,

99) Stewart, E.J., D.E. Payne, B.R. Boles, J.G. Younger, M.J. Solomon, "Effect of antimicrobial and physical treatments on growth of multispecies staphylococcal biofilms," *Applied and Environmental Microbiology*, (2017) doi: 10.1128/AEM.03483-16.

98) Wei, Y., M.J. Solomon, and R.G. Larson, "Quantitative nonlinear thixotropic model with stretched exponential relaxation in transient shear flows," *Journal of Rheology*, **60** 1301-1315 (2016). DOI: 10.1122/1.4965228

97) Ganesan, M., S. Knier, J.G. Younger, and M.J. Solomon, "Associative and entanglement contributions to the solution rheology of a bacterial polysaccharide," *Macromolecules* **49**(21) 8313-8321 (2016). DOI: 10.1021/acs.macromol.6b01598.

96) McCarroll, L., M.J. Solomon, and W. Schultz, "Differential analysis of capillary break-up rheometry for Newtonian liquids," *J. Fluid Mechanics* **804** 116-129 (2016). DOI: http://dx.doi.org.proxy.lib.umich.edu/10.1017/jfm.2016.531

95) Kim, Y, A. Adams, W.H. Hartt, R.G. Larson, and M.J. Solomon, "Transient, near-wall shear-band dynamics in channel flow of wormlike micelle solutions," *J. Non-Newtonian Fluid Mechanics* **232** 77-87 (2016). DOI: 10.1016/j.jnnfm.2016.03.009

94) Stotsky, Jay A., Jason F. Hammond, Leonid Pavlovsky, Elizabeth J. Stewart, John G. Younger, Michael J. Solomon, and David M. Bortz. "Variable Viscosity and Density Biofilm Simulations Using an Immersed Boundary Method, Part II: Experimental Validation and the Heterogeneous Rheology-IBM." *Journal of Computational Physics* 316: 204–22 (2016). doi:10.1016/j.jcp.2016.04.027.

93) Beltran-Villegas, D., Colón-Meléndez, L., M.J. Solomon, and R.G. Larson, "Kinetic modeling and design of colloidal lock and key assembly," *J. Colloid Interface Science* **463** 242-257 (2016). DOI: 10.1016/j.jcis.2015.10.062.

92) Richardson, I.P., R. Sturtevant, M. Heung, M.J. Solomon, J.G. Younger, and J. Scott VanEpps, "Hemodialysis Catheter Heat Transfer for Biofilm Prevention and Treatment**,"** *ASAIO Journal* 62(1) 92-9 (2016). doi: 10.1097/MAT.0000000000000300. PMID: 26501916.

91) Schwartz, K., M. Ganesan, D.E. Payne, M.J. Brown, M.J. Solomon, B.R. Boles, "Extracellular DNA facilitates the formation of functional amyloids in *Staphylococcus aureus* biofilms," *Molecular Microbiology* 99(1) 123-134 (2016). DOI: 10.1111/mmi.13219

90) Rahami, S., C.H. Villa, A.F. Dishman, M.E. Grabowski, D. Pan, H. Durmaz, A.C Misra, L. Colón-Meléndez, M.J. Solomon, V.R. Muzykantov, and J. Lahann, "Long-circulating Janus nanoparticles made by electrohydrodynamic co-jetting for systemic drug delivery applications," Journal of Drug Targeting 23 750-758 (2015). DOI: 10.3109/1061186X.2015.1076428.

89) Hsiao, L.C., B.A. Schultz, J. Glaser, M. Engel, M.E. Szakasits, S.C. Glotzer, M.J. Solomon, "Metastable orientational order of colloidal discoids," *Nature Communications,* 6:8507 (2015). doi: 10.1038/ncomms9507.

88) Stewart, E.J., M. Ganesan, J.G. Younger, and M.J. Solomon, "Artificial biofilms establish the role of matrix interactions in staphylococcal biofilm assembly and disassembly," *Scientific Reports*, **5**, 13081 (2015); doi: 10.1038/srep13081. PMID: 26272750.

87) Sturtevant, R.A., P. Sharma, L. Pavlovsky, E.J. Stewart, M.J. Solomon, J.G. Younger, "Thermal

Augmentation of Vancomycin against Staphylococcal Biofilms," *Shock*, 44(2), 121-127 (2015); doi: 10.1097/SHK.0000000000000369. PMID: 25784524.

86) Colón-Meléndez, L., D. Beltran-Villegas, J. Liu, M. Spellings, S. Sacanna, D. Pine, S.C. Glotzer, R.G. Larson and M.J. Solomon, "Measuring and predicting rate constants for colloidal particle lock-and-key binding," *Journal of Chemical Physics* **142**(17) 174909 (2015). DOI: 10.1063/1.4919299

85) Ferrar, J.A. and M.J. Solomon, "Kinetics of colloidal deposition, assembly, and crystallization in steady electric fields," *Soft Matter*, **11**, 3599 – 3611 (2015). DOI: 10.1039/C4SM02893G

84) Pavlovsky, L., R. Sturtevant, J.G. Younger, and M.J. Solomon, "Effects of Temperature on the Morphological, Polymeric, and Mechanical Properties of *Staphylococcus epidermidis* Bacterial Biofilms," *Langmuir* **31**(6) 2036-2042 (2015)**.** DOI: 10.1021/la5044156. PMID: 25602470.

83) Shah, A.A. B. Schultz, W. Zhang, S.C. Glotzer, and M.J. Solomon, "Actuation of shape-memory colloidal fibres of Janus ellipsoids," *Nature Materials* **14** 117-124 (2015) DOI: 10.1038/nmat4111.

82) Shemi, O. and M.J. Solomon, "Effect of surface chemistry and metallic layer thickness on the clustering of metallodielectric Janus spheres," *Langmuir* **30**(51) 15408-15415 (2014). DOI: 10.1021/la503486p

81) Hsiao, L.C., H. Kang, K.H. Ahn, and M.J. Solomon, "Role of shear-induced dynamical heterogeneity in the non-linear rheology of colloidal gels," *Soft Matter* **10**(46) 9254-9259 DOI: 10.1039/C4SM01375A (2014).

80) Pavlovsky, L., M. Ganesan, J.G. Younger, and M.J. Solomon, "Elasticity of microscale volumes of viscoelastic soft matter by cavitation rheology," *Applied Physics Letters* **105**, 114105 (2014); DOI: 10.1063/1.4896108. PMID: 25316925.

79) Shah, A.A., M. Ganesan, J. Jocz, and M.J. Solomon, "Direct Current Electric Field Assembly of Colloidal Crystals Displaying Reversible Structural Color," *ACS Nano* **8**(8), 8095–8103 (2014). DOI: 10.1021/nn502107a.

78) Hsiao, L.C., K.A. Whitaker, M.J. Solomon, and E.M. Furst, "A model colloidal gel for coordinated measurements of force, structure, and rheology," **58** 1485-1504 *J. Rheology* (2014). DOI: 10.1122/1.4884965

77) Hammond, J.F., E.J. Stewart, J.G. Younger, M.J. Solomon, and D.M. Bortz, "Variable Viscosity and Density Biofilm Simulations using an Immersed Boundary Method, Part I: Numerical Scheme and Convergence Results," *Computer Modeling in Engineering and Sciences* 1(1) 1-47 (2014). DOI: 10.3970/cmes.2014.098.295.

76) Kim, Y, A.A. Shah, and M.J. Solomon, "Spatially and temporally reconfigurable assembly of colloidal crystals," *Nature Communications*, **5**:3676 DOI: 10.1038/ncomms4676 (2014).

75) Stewart, E.J., A. Satorius, J.G. Younger, and M.J. Solomon, "Role of environmental and antibiotic stress on *Staphylococcus epidermidis* biofilm microstructure," *Langmuir*. **29**(23) 7017-7024 (2013). PMID: 23688391. doi: 10.1021/la401322k

74) Ganesan, M., E.J. Stewart, J. Szafranksi, A.E. Satorius, J.G. Younger, and M.J. Solomon, "Molar mass, entanglement, and associations of the biofilm polysaccharide of *Staphylococcus epidermidis*," *Biomacromolecules*, **14** 1474-1481 (2013). PMID: 23540609. doi: 10.1021/bm400149a

73) Satorius AE, Szafranski J, Pyne D, Ganesan M, Solomon MJ, Newton DW, Bortz DM, Younger JG. "Complement c5a generation by staphylococcal biofilms," *Shock* 39(4) 336-342 (2013). PMID: 23459111

72) Shah, A, B. Schultz, K.L. Kohlstedt, S.C. Glotzer, and M.J. Solomon, "Synthesis, Assembly, and Image Analysis of Spheroidal Patchy Particles," *Langmuir*, **29** 4688-4696 (2013). DOI: 10.1021/la400317t

71) Pavlovsky, L., J.G. Younger and M.J. Solomon. "In situ rheology of *Staphylococcus epidermidis* Bacterial Biofilms," *Soft Matter*, **9**(1) 122-131 (2013). PMID: 25544855. **DOI:**

10.1039/C2SM27005F

70) Hsiao, L.C., R.S. Newman, S.C. Glotzer, and M.J. Solomon, "Role of isostaticity and load-bearing microstructure in the elasticity of yielded colloidal gels," *Proceedings of the National Academy of Sciences of the United States of America* **109**(40) 16029-16034 (2012).

69) Thornton, M., C. Irvin, H. M. Chung, D. M. Bortz, M. J. Solomon, & J. G. Younger., "Multicellularity and Antibiotic Resistance in Klebsiella pneumoniae Grown under Bloodstream-Mimicking Fluid Dynamic Conditions," *J. Infectious Diseases* **206** 588-595 (2012).

68) Shah, A., H. Kang, K. Kohlstedt, K-H Ahn, S.C. Glotzer, C.W. Monroe and M.J. Solomon, "Liquid crystal order in colloidal suspensions of spheroidal particles by direct current electric field assembly," *Small* **8(10)** 1551-1562 (2012).

67) Solomon, M.J., "Directions for targeted self-assembly of anisotropic colloids from statistical thermodynamics," *Current Opinion in Colloid Interface Science*, **16** 158-167 (2011).

66) Dzul, S.P., M.M. Thornton, D.N. Hohne, D.M. Bortz, M.J. Solomon and J.G. Younger, "Contribution of the *Klebsiella pneumoniae* Capsule to Bacterial Community Microstructure Determined With High-Resolution Confocal Microscopy," *Applied and Environmental Microbiology* **77(5)** 1777-1782 (2011).

65) Byrne, E., S. Dzul, M.J. Solomon, J. Younger and D.M. Bortz, "Postfragmentation density function for bacterial aggregates in laminar flow," *Phys. Rev E.* **83** 041911 (2011).

64) Mukhija, D. and M.J. Solomon, "Nematic order in suspensions of colloidal rods by application of a centrifugal field," *Soft Matter*, **7** 540-545 (2011).

63) Elbing, B., M.J. Solomon, M. Perlin, D. Dowling and S.L. Ceccio, "Degradation of Drag-Reducing Polymer Solutions within a High-Reynolds Number Turbulent Boundary Layer," J. Fluid Mechanics **670** 337-364 (2011).

62) Shereda, L.T., R.G. Larson, and M.J. Solomon, "Shear banding in crystallizing colloidal suspensions," *Korea-Australia Rheology Journal* **22(4)** 309-316 (2010).

61) Shereda, L.T., R.G. Larson, and M.J. Solomon, "Boundary-driven colloidal crystallization in simple shear flow," *Physical Review Letters*, **105** 228302 (2010).

60) Iacovella, C.R., R.E. Rogers, S.C. Glotzer and M.J. Solomon, "Pair interaction potentials of colloids by extrapolation of confocal microscopy measurements of collective structure," *J. Chem. Phys*. **133** art no 164903 (2010).

59) Zeitoun, R., D. Chang, S. Langelier, J. Millunchick, M. J. Solomon and M.A. Burns, "Selective Arraying of Complex Particle and Cell Pattern," *Lab on a Chip* **10** 1142-1147 (2010).

58) Solomon, M.J., "Reconfigurable colloids," *Nature* **464** 496-498 (2010).

57) Solomon, M.J. and P.T. Spicer, "Microstructural regimes of colloidal rod suspensions, gels, and glasses," *Soft Matter*, **6** 1391-1400 (2010).

56) Solomon, M.J. R. Zeitoun, D. Ortiz, K.E. Sung, A. Shah, M.A. Burns, S.C. Glotzer, J.M. Millunchick, "Toward assembly of open colloidal structures from anisotropic pentamer particles," *Macromolecular Rapid Communications* **31** 196-201 (2010).

55) Kogan, M and M.J. Solomon, "Electric-field induced yielding of colloidal gels in microfluidic capillaries," *Langmuir*, **26(2)** 1207-1213 (2010).

54) Elbing, B.R., E.S. Winkel, M.J. Solomon and S.L. Ceccio, "Degradation of homogeneous polymer solutions in large diameter, high shear turbulent pipe flow," *Experiments in Fluids* **47** 1033-1044 (2009).

53) Wilkins, G.M.H., P.T. Spicer and M.J. Solomon, "Nanocolloidal system to explore structural and dynamical transitions in rod networks, gels and glasses," *Langmuir* **25** 8951-8959 (2009).

52) Hohne, D.N., J.G. Younger and M.J. Solomon, "Flexible microfluidic device for mechanical

property characterization of soft viscoelastic solids such as bacterial biofilms," *Langmuir* **25** 7177-7768 (2009). doi: 10.1021/la803413x

51) Long, Z., A.M. Shetty, M.J. Solomon and R.G. Larson, "Fundamentals of magnet-actuated droplet manipulations on an open hydrophobic surface," *Lab on a Chip* **9** 1567-1575 (2009).

50) Shetty, A.M., G.M.H. Wilkins, J. Nanda and M.J. Solomon, "Multi-angle depolarized dynamic light scattering of single-walled carbon nanotubes," *J. Phys. Chem. C* **113** 7129-7133 (2009).

49) Winkel, E.S., G. Oweis, S.A. Vanapalli, D.R. Dowling, M. Perlin, M.J. Solomon and S.L. Ceccio, "High Reynolds number turbulent boundary layer friction drag reduction from wall-injected polymer solutions," *Journal of Fluid Mechanics* **621** 259-288 (2009).

48) Shetty, A.M. and M.J. Solomon, "Aggregation in dilute solutions of high molar mass poly(ethylene oxide) and its effect on polymer turbulent drag reduction," *Polymer* **50**(1) 261-270 (2009).

47) Shereda, L.T., R.G. Larson and M.J. Solomon, "Local stress control of spatiotemporal ordering of colloidal crystals in complex flows," *Physical Review Letters,* **101** art no 038301 (2008). DOI: http://dx.doi.org/10.1103/PhysRevLett.101.038301

46) Hohne, D.N., H-Y Chen, J. Lahann and M.J. Solomon, "Near-surface structure of lithographic ink-fountain solution emulsions on model substrates," *Colloids and Surfaces A* **326** 138-146 (2008).

45) Dibble, C.J., M. Kogan and M.J. Solomon, "Structural origins of dynamical heterogeneity in colloidal gels," *Physical Review E* **77** art no 050401(R) (2008).

44) Yin, G. and M. J. Solomon, "Soft glassy rheology model applied to the stress relaxation of a thermoreversible colloidal gel," *Journal of Rheology* **52** 785-800 (2008).

43) Vanapalli, S.A., C.R. Iacovella, K.E. Sung, D. Mukhija, J.M. Millunchick, M.A. Burns, S.C. Glotzer, M.J. Solomon, "Assembly and packing of spheres in confined microchannels for anisotropic particle synthesis," *Langmuir* **24** 3661-3670 (2008).

42) Kogan, M., C.J. Dibble, R.E. Rogers and M.J. Solomon, "Viscous solvent colloidal system with well-characterized interactions for direct visualization of suspension structure, dynamics and rheology," *Journal Colloid Interface Science* **318** 252-263 (2008).

41) Sung, K.E., S.A. Vanapalli, D. Mukhija. H. McKay, J.M. Millunchick, M.A. Burns and M.J. Solomon, "Programmable fluidic production of microparticles with configurable anisotropy," *J. Am. Chem. Soc*., **130** 1335-1340 (2008).

40) Poeckh, T. S. Lopez, O.A. Fuller, M.J. Solomon and R.G. Larson, "Silica-based nucleic acid purification microchip: principles and application to influenza A detection" *Analytical Biochemistry* **373** 253-262 (2008).

39) Mukhija, D. and M.J. Solomon, "Translational and rotational dynamics of colloidal rods by direct visualization with confocal microscopy," *Journal Colloid and Interface Science* **314** 98-106 (2007).

38) Glotzer, S.C. and M.J. Solomon, "Anisotropy of building blocks and their assembly into complex structures," *Nature Materials* **6** 557-562 (2007). DOI: 10.1038/nmat1949.

37) Dibble, C.J., M. Kogan and M.J. Solomon, "Structure and dynamics of colloidal depletion gels: coincidence of transitions and heterogeneity," *Phys Rev E*, **74** art no. 041403 (2006). DOI: 10.1103/PhysRevE.74.041403

36) Vanapalli, S.A., S.L. Ceccio and M.J. Solomon, "Universal scaling for polymer chain scission in turbulence," *Proceedings of the National Academy of Sciences of the United States of America* **103**(45) 16660-16665 (2006). DOI: 10.1073/pnas.0607933103

35) Mohraz, A. and M.J. Solomon, "Gelation and internal dynamics of colloidal rod aggregates," *Journal Colloid Interface Science* **300**(1) 155-162 (2006).

34) Lee, M., M. Alcoutlabi, J.J. Magda, C. Dibble, M.J. Solomon, X.F. Shi and G.B. McKenna, "The shear-thickening transition of model colloidal spheres and its effect on the radial pressure profile

during cone-and-plate and parallel plate shearing flows," *Journal of Rheology* **50(3)** 293-312 (2006).

33) Solomon, T. and M.J. Solomon, "Stacking fault structure in shear-induced colloidal crystallization," *Journal of Chemical Physics*, **124** art no. 134905 (2006).

32) Mohraz, A. and M.J. Solomon, "Direct visualization of colloidal rod assembly by confocal microscopy," *Langmuir* **21(12)** 5298-5306 (2005).

31) Vanapalli, S.A, M. Islam, M.J. Solomon, "Scission-induced bounds on maximum polymer drag reduction in turbulent flow," *Physics of Fluids*, **17** art no. 095108 (2005).

30) Wu, K.C., K.F. Seefeldt, M.J. Solomon and J.W. Halloran, "Prediction of ceramic stereolithograpy resin sensitivity from theory and measurement of diffuse photon transport," *Journal of Applied Physics*, **98** art no. 024902 (2005).

29) Vermant, J. and M.J. Solomon, "Flow induced structure in colloidal suspensions," *Journal of Physics: Condensed Matter.* **17** R187-R216 (2005).

28) Mohraz, A. and M.J. Solomon, "Orientation and rupture of fractal colloidal gels during start-up of steady shear flow," *Journal of Rheology* **49**(3) 657-681 (2005). http://dx.doi.org/10.1122/1.1895799

27) Solomon, M.J. and M. Kogan, "Confocal Optical Microscopy," in *Encyclopedia of Condensed Matter Physics*, G. Bassani, G. Liedl and P. Wyder, (eds). Elsevier 229-235 (2005).

26) Glotzer, S.C., M.J. Solomon and N. Kotov, "Self-assembly: from nanoscale to microscale colloids," *AIChE Journal*, 50(12) 2978-2985 (2004).

25) Kim, K. M.T. Islam, X. Shen, A.I. Sirviente and M.J. Solomon, "Effect of macromolecular polymer structures on drag reduction in a turbulent channel flow," *Physics of Fluids* **16**(11) 4150-4162 (2004).

24) Mohraz, A. D.B. Moler, R.M. Ziff and M.J. Solomon, "Effect of monomer geometry on the fractal structure of colloidal rod aggregates," *Physical Review Letters* **92**(15) art no 155503 (2004).

23) Solomon, M.J. and A. Somwangthanaroj, "Intercalated polypropylene nanocomposites," *Dekker Encyclopedia of Nanoscience and Nanotechnology*, edited by J.A. Schwarz, I. Contescu and K. Putyer, Marcel Dekker, 1483-1490 (2004).

22) Almusallam, A.S., R.G. Larson and M.J. Solomon, "A comprehensive constitutive model for immiscible blends of Newtonian polymers," *Journal of Rheology*, **48**(2) 319-348 (2004).

21) Islam, M, S.A. Vanapalli and MJ. Solomon, "Inertial Effects on Polymer Chain Scission in Planar Elongational Cross-Slot Flow," *Macromolecules*, **37**(3) 1023-1030 (2004).

20) Varadan, P. and M.J. Solomon, "Direct visualization of flow-induced microstructure in dense colloidal gels by confocal laser scanning microscopy," *Journal of Rheology* **47**(4) 943-968 (2003).

19) Almusallam, A.S., R.G. Larson and M.J. Solomon, "A constitutive model for breakup of extended droplets," *Journal of Non-Newtonian Fluid Mechanics* **113**(1) 29-48 (2003).

18) Seefeldt, K.F. and M.J. Solomon, "Self-diffusion in dilute colloidal suspensions with attractive potential interactions," *Physical Review E* **67**, art no 050402(R) (2003).

17) Somwangthanaroj, A., E.C. Lee and M.J. Solomon, "Early stage quiescent and flow-induced crystallization of intercalated polypropylene nanocomposites by depolarized light scattering," *Macromolecules* **36** 2333-2342 (2003).

16) Lerdwijitjarud, W., R.G. Larson, A. Sirivat and M.J. Solomon, "Influence of Weak Elasticity of Dispersed Phase on Droplet Behavior for Polybutadiene/Poly(dimethyl siloxane) Blends," *Journal of Rheology*. **47**(1) 37-58 (2003).

15) Varadan, P. and M.J. Solomon, "Direct visualization of long-range heterogeneous structure in dense colloidal gels," *Langmuir* **19**(3) 509-512 (2003).

14) Lu, Q. and M.J. Solomon, "Probe size effects on the microrheology of associating polymer solutions," *Physical Review E* **66** art no 061504 (2002).

13) Solomon, M.J. and Q. Lu, "Rheology and dynamics of particles in viscoelastic media," *Current Opinion in Colloid and Interface Science* **6**(5) 430-437 (2001).

12) Varadan, P. and M.J. Solomon, "Shear-Induced Microstructural Evolution of a Thermoreversible Gel," *Langmuir* **17** 2918-2929 (2001). **DOI:** 10.1021/la001504d

11) Solomon, M.J., A.S. Almusallam, K.F. Seefeldt, A. Somwangthanaroj and P. Varadan, "Rheology of Polypropylene/Clay Hybrid Materials", *Macromolecules* **34**(6) 1864-1872 (2001).

10) Solomon, M.J. and P. Varadan, "Dynamic structure of thermoreversible colloidal gels of adhesive spheres," *Phys. Rev. E* **63** art no 051402 (2001).

9) Almusallam, A.S., R.G. Larson and M.J. Solomon, "A constrained volume model for the prediction of droplet shapes and stresses in immiscible blends," *J. Rheology* **44**(5) 1055-1083 (2000).

8) Solomon, M.J., T. Saeki, M. Wan, P.J. Scales, D.V. Boger and H. Usui, "The Effect of Adsorbed Surfactants on the Rheology of Colloidal Zirconia Suspensions," *Langmuir* **15**(1) 20-26 (1999). DOI: 10.1021/la9706577

7) Zhou, Z., M.J. Solomon, P.J. Scales and D.V. Boger, "The yield stress of concentrated flocculated suspensions of size distributed particles," *J. Rheology* **43**(3) 651-672 (1999).

6) Solomon, M.J. and D.V. Boger, "The rheology of aqueous dispersions of spindle-type colloidal hematite rods," *J. Rheology* **42**(4), 929-949 (1998).

5) Boger, D.V. and M.J. Solomon, "Newtonian Elastic Liquids – A Paradox!," in *Theoretical and Applied Mechanics* 1996, (eds. T. Tatsumi, E. Watanabe and T. Kambe) Elsevier Science, Amsterdam, 139-154 (1997).

4) Lee, E.C., M.J. Solomon and S.J. Muller, "Molecular Orientation and Deformation of Polymer Solutions Under Shear: A Flow Light Scattering Study," *Macromolecules*, **30** 7313-21 (1997).

3) Solomon, M.J. and Muller, S.J. "Study of mixed solvent quality in a polystyrene - dioctyl phthalate - polystyrene system." *Journal of Polymer Science: B, Polymer Physics*, **34**, 181-192 (1996).

2) Solomon, M.J. and Muller, S.J. "Flow past a sphere in polystyrene-based Boger fluids: the effect on the drag coefficient of finite extensibility, solvent quality and polymer molecular weight," *Journal of Non-Newtonian Fluid Mechanics*, **62**, 81-94 (1996).

1) Solomon, M.J. and Muller. S.J. "The transient extensional behavior of polystyrene-based Boger fluids of varying solvent quality and molecular weight," *J. Rheology*, **40**(5) 837-856 (1996).

PROFESSIONAL SERVICE

2025	Chair-elect, Board of Directors, Council of Graduate Schools
2023 – 2025	Elected Member at Large, Board of Directors, Council of Graduate Schools
2023 – 2025	Executive Committee, Graduate Deans of the Big Ten Academic Alliance (BTAA)
2022	Member, External Visiting Committee for the Graduate School, University of Texas at Austin (December 1-2, 2022)
2021 – 2027	Member, Global Advisory Committee for the Innovation of Graduate Education, Yonsei University, South Korea.
2021	Member, Provost External Review Committee of the Office of the Vice Provost for Graduate Education and Faculty Development, Georgia Technological University. (April 27-28, 2021)
2020 – 2022	Member, Advancement and Development Committee. Council of Graduate Schools.
2020 – present	Member, Visiting Committee, Department of Chemical and Biological Engineering, University of Wisconsin Madison.
2018 – 2020	Financial Advisement Committee, Society of Rheology (Chair 2020).
2016 – 2018	AIChE representative, Programming Committee for USNC/TAM 2018 Chicago, USA, the 18th U.S. National Congress on Theoretical and Applied Mechanics; also session chair, Complex Fluids & Soft Matter, at USNC/TAM meeting.

2015 – 2017	Member-at-Large, Executive Committee of the Society of Rheology (Elected)
2015	NSF Site Review, MRSEC Program
2014 – present	Editorial Board Member, *Rheologica Acta*. Springer.
2013	Session co-chair, Particulate and Multiphase Flow Session, Area 1j, American Institute of Chemical Engineers.
2012	Rheology and Dynamics Session Co-Chair, ACS Colloids and Surface Science Division Summer Meeting; Johns Hopkins University
2012	Co-organizer, Engineering Conferences International Symposium on Biological and Pharmaceutical Complex Fluids, Tomar, Portugal. 30 July – 3 August, 2012.
2012 – 2014	Editorial Advisory Board Member, *Langmuir*. American Chemical Society
2011 – 2015	External member, Review Board, European Soft Matter Infrastructure (ESMI) TransNational Access Programme. The Review Panel evaluates proposals for access to ESMI instrumentation. I review proposals for access to advanced imaging instrumentation.
2009	Meeting Organizer, International Fine Particles Research Institute Annual General Meeting
2009	Session chair, Suspensions and Colloids, Society of Rheology meeting, Madison
2008	ACS Colloids and Surface Science Meeting Co-Chair: Rheology
2008 – 2011	Metzner Award Selection Committee, Soc. of Rheology (Chair, 2010-2011)
2007	ACS National Meeting Session Co-Chair: Colloidal atoms and molecules
2007	ACS Colloids and Surface Science Meeting Co-Chair: Gels and glasses
2007	Guest lecturer, Rheological Measurements Short Course, U-Minnesota
2007	Invited participant, ONR Workshop on Polymer Drag Reduction for Surface Ships; 6-7 September 2007
2006 – 2010	Vice-chair and Chair, Area 1j AIChE Fluid Dynamics Program Committee
2005	Meeting Program Chair, Area 1j, AIChE National Meeting: Cincinnati.
2005	ACS National Meeting Session Co-Chair: Dynamics in Complex Fluids
2005	Short Course Co-Instructor, Society of Rheology Vancouver Meeting
2005	Session Chair, Fifth World Congress on Particle Technology, Orlando, FL
2005 – 2010	Chair, Educational Committee, Society of Rheology
2004 – 2013	Fluids Programming Committee, Area 1j AIChE
2004	Particulate and Multiphase Flows Session Chair, AIChE Nat'l Mtg Austin
2003	Multiphase Fluids Session Chair, Society of Rheology meeting Pittsburgh
2002	Vice Chair, Mixing Forum Session, AIChE Indianapolis National Meeting
2002	Session Chair, 76th ACS Colloid and Surface Science Symposium
2001	Session Chair, Fluid Mechanics Division, AIChE, Reno National Meeting
2000	New Century Scholar; Teaching Workshop, Stanford University, 7/30 – 8/4.
1999, 2000	Program Committee and Session Chair, Society of Rheology

INSTITUTIONAL SERVICE (At University of Michigan)

2024	Member, Law School Dean Search Advisory Committee, University of Michigan
2022 – 2023	Chair, Initiative Planning Group on Student Academic Success. Provost charged faculty and staff committee.
2022	Member, Presidential Search Advisory Committee, University of Michigan
2022 – present	Member, Steering Committee, Well-Being Collective, University of Michigan
2022 – present	Member, Advisory Committee, Well-Being Collective, University of Michigan
2021	Member, Student Mental Health Innovation Approaches Review Committee, University of Michigan
2021	Member, Commission on Policing and Public Safety, University of Michigan

2021	Selection Committee Member, University of Michigan Anti-Racism Faculty Hiring Initiative
2019 – present	Institutional Lead for Higher Learning Commission Accreditation, including 10-year reaffirmation of accreditation, University of Michigan Ann Arbor
2019 – 2023	Member, ADVANCE Program Steering Committee
2016 – present	Promotion and Tenure Review, Office of the Provost
2015 – 2019	Member, Faculty Advisory Board, RELATE. RELATE is a community engagement and community engagement program designed to improve the dialogue between researchers and different public audiences.
2015 – 2016	Member, College of Engineering Diversity, Equity, and Inclusion Strategic Planning, Subcommittee for Graduate Students and Post-doctoral Fellows
2015 – 2016	Convener, ADVANCE LAUNCH Committee (CSE)
2015 – 2016	Search Committee, College of Engineering, Tenure-track faculty with scholarship in Engineering Education Research
2014 – 2015	Convener, ADVANCE LAUNCH Committee (AERO)
2013	COE Committee on the Classroom of the Future
2013 – 2014	Convener, ADVANCE LAUNCH Committee (AOSS)
2013 – 2016	Chemical Engineering Department Executive Committee (ChEAC)
2013 – 2017	Member, ADVANCE College of Engineering Advisory Board
2012 – 2013	Member, ADVANCE Launch Committee (ChE)
2012 – 2013	Undergraduate Committee, Department of Chemical Engineering
2012	CRLT Engineering Teaching Circle on Large Engineering Courses (Fall)
2011	Chair, Seminar Committee, ChE Department
2011 - 2014	Faculty Advisor, LIFT program, University of Michigan. Leadership and Integration in Faculty Transitions (LIFT) is a U-M program for career development as faculty transition from assistant professor to associate professor, and from associate professor to full professor ranks.
2011 – 2017	MORE Committee, Rackham Graduate School, University of Michigan. The Mentoring Others in Excellence (MORE) committee is Rackham Graduate School's faculty committee on graduate student mentoring. It is a cross-campus group of faculty who provide tools and best practices to for faculty mentoring of graduate students. (December 2012 – June 2017, Committee Chair.)
2010 – 2011	College of Engineering ABET Liaison to LSA
2009 – 2012	Faculty Recognition Award Selection Committee, Rackham Graduate School
2009	Promotion and Tenure Committee, College of Engineering (BME)
2009 - present	Focus Group Leader, UM Girls in Science and Engineering Program.
2009 – 2011	Member, ChE Departmental Seminar Committee
2009 – 2011	Chair, ChE Faculty Search Committee
2008 – 2012	Rules Committee, College of Engineering (Chair, 2010-2011)
2007	Chemical Engineering Strategic Planning Committee
2007	Chair, Promotion and Tenure Committee, College of Engineering (ChE)
2007 – 2011	McIvor Award Selection Committee, College of Engineering
2007 – 2008	Co-leader, Advance STEP program, Dept of Chemical Engineering
2007 – 2008	Chemical Engineering Chair Search Advisory Committee
2006	Organizing Committee, Macro Science and Engineering Symposium
2006	Promotion and tenure committee, College of Engineering (BME)
2005 – 2009	Chair, ChE Undergraduate Program Committee
2005 – 2007	College of Engineering Curriculum Committee.
2005 – 2008	Chemical Engineering Department Advisory Committee (ChEAC)
2002	COE Department of Chemical Engineering Internal Review Committee
2001 – 2002	Departmental Seminar Organizer

2001 – 2004	Departmental Graduate Admissions Committee
2001 – 2006	Focus Group Leader, UM Girls in Science and Engineering Program (w/ J.M. Millunchick).
2000 – 2002	Faculty Search Committees
2000 – 2004	Department of Chemical Engineering Undergraduate Committee
2000 – 2001	Macromolecular Science and Engineering Program Executive Committee
2000	Organizing Committee, Macro Science and Engineering Symposium
1999 – 2000	Chemical Engineering Chair Search Advisory Committee.
1999 – 2003	Faculty advisor, Chemical Engineering spring DAPCEP program.
1998	College of Engineering 1998 Martin Luther King Day program committee

COURSES TAUGHT

ChE 341	Fluid Mechanics	Winter 1998	~ 80 students
ChE 472	Polymer Sci & Eng.**	Winter 1999	33 students
ChE 230	Thermodynamics I*	Fall 1999	139 students
ChE 472	Polymer Sci & Eng.	Winter 2000	23 students
ChE 341	Fluid Mechanics*	Winter 2000	120 students
ChE 230	Thermodynamics I	Fall 2000	134 students
ChE 696	Scattering Methods**	Winter 2001	14 students
ChE 230	Thermodynamics I	Fall 2001	125 students
ChE 472	Polymer Sci & Eng.	Winter 2002	44 students
ChE 230	Thermodynamics I	Fall 2002	116 students
ChE 696	Scattering and CLSM	Winter 2003	24 students
ChE 527	Grad Fluid Dynamics	Fall 2003	29 students
ChE 472	Polymer Sci & Eng	Winter 2004	14 students
ChE 360	Chem Eng Lab I*	Fall 2005	44 students
ChE 496	Molecular Engin*,**	Winter 2006	17 students
ChE 360	Chem Eng Lab I*	Fall 2006	34 students
ChE 230	Thermo I*	Fall 2006	111 students
ChE 496	Molecular Engin*	Winter 2007	9 students
ChE 360	Chem Eng Lab I*	Fall 2007	50 students
ChE 472	Polymer Sci & Eng	Winter 2008	10 students
ChE 360	Chem Eng Lab I*	Fall 2008	62 students
ChE 696	Colloidal Assembly	Winter 2009	20 students
ChE 343	Chem Eng Separations	Fall 2009	155 students
ChE 485	Chem Eng Process Econ**	Winter 2010	89 students
ChE 343	Chem Eng Separations	Fall 2010	151 students
ChE 485	Chem Eng Process Econ	Winter 2011	49 students
ChE 343	Chem Eng Separations	Fall 2011	134 students
ChE 343	Chem Eng Separations	Fall 2012	133 students
ChE 696	Soft Microbial Matter*,**	Fall 2013	12 students
ChE 696+	Adv Topics in Soft Matter*,**	Winter 2015	17 students
MSE 696+	Adv Topics in Soft Matter*,**	Winter 2015	13 students
ChE 485	Chem Eng Process Econ	Fall 2015	13 students
ChE 485	Chem Eng Process Econ	Fall 2016	11 students

* team taught; ** new course; + taught together as a single course

PH.D. STUDENT ALUMS

1) *Priya Varadan*, Defended dissertation Summer 2002.
2) *Almusallam, Wahab*, (co-advised with R. Larson). Defended dissertation Summer 2002
3) *Seefeldt, Kurt*, Defended dissertation Summer 2002.
4) *Somwangthanaroj, Anongnat,* Defended dissertation, summer 2003. (Macro Science and Eng Program).
5) *Lu, Qiang*, Defended dissertation, Summer 2003.
6) *Mohraz, Ali,* Defended dissertation, Fall 2004.
7) *Wu, Kahn*. (Joint with J. Halloran.) Defended dissertation: Fall, 2005.
8) *Vanapalli, Siva*. Defended dissertation: January 2006.
9) *Solomon, Tesfu*. Defended dissertation: February 2006.
10) *Dibble, Clare*. Defended dissertation: January 2007.
11) *Kogan, Michael*. Defended dissertation: January 2007.
12) *Yin, Guangjun*. Defended dissertation: January 2007.
13) *Poeckh, Tyson*. (Joint with R. Larson.) Defended dissertation: April, 2007.
14) *Danial Hohne*, Defended dissertation: July, 2008.
15) *Deshpremy Mukhija*. Defended dissertation: March, 2009.
16) *Reginald Rodgers*, Defended dissertation: January, 2010.
17) *Laura Shereda*, (Joint with R. Larson.) Defended dissertation: January, 2010.
18) *Abhi Shetty*, Defended dissertation: April, 2010.
19) *Aayush Shah*, Defended Dissertation: January, 2014.
20) *Lilian Hsiao*, Defended Dissertation: May, 2014.
21) *Leo Pavlovsky*, Defended Dissertation: August, 2014.
22) *Elizabeth Stewart*, Defended Dissertation: January, 2015.
23) *Mahesh Ganesan*, Defended Dissertation: January, 2015.
24) *Youngri Kim*. Defended Dissertation: October, 2015.
25) *Laura del Mar Colón-Meléndez*. Completed degree: August, 2016.
26) *Onajite Shemi*. Defended dissertation on September 6, 2016.
27) *Joseph Ferrar*. Defended dissertation: January 18, 2017.
28) *McCarroll, Louise Lu*. (Primary advisor: William Schultz.) Defended dissertation: January 17, 2017.
29) *Megan Szakasits*. Defended dissertation: September 13, 2018.
30) *Abdulrazaq Adams*. Defended dissertation: April 19, 2018.
31) *Gasbarro, Nina*. Defended dissertation: January 6, 2020.
32) *Ma, Tianhui* (Maria). (Joint with Scott VanEpps.) Defended dissertation: September 28, 2018.
33) *Wei, Yufei*. (Joint with R. Larson.) Defended dissertation: April 19, 2019.
34) *Beckwith, Joanne*. Defended Dissertation: October 7, 2021.
35) *Kao, Peng-Kai*. Defended dissertation: May 20, 2021.
36) *Liu, Tianyu*. Defended dissertation: June 9, 2021.
37) *Saud, Keara*. Defended dissertation on September 9, 2022.

<u>MASTER'S DEGREE ALUMS</u>

1) Yanling Liu (Macro)
2) Alice Sneha George (ChE)

3) Hamilton, Rachael (ChE)

POST-DOCTORAL FELLOWS

1) *Mohammad Islam*, July 2001 – August 2003.
2) *Georgina Wilkins*, April 2007 – April 2009.
3) *Michael Kogan*, May 2010 – April 2011.
4) *Mahesh Ganesan*, March 2015 – February 2016.
5) *Carlos Silvera Batista*, March 2015 – June 2017.
6) *Sepideh Razavi*, September 2015 – December 2017.
7) *Abriat, Clémence*, October 2021 – November 2024.

UNDERGRADUATE RESEARCHERS

Celia Chen, 4/98 – 9/98; *Kristin Rorick,* 4/99 – 9/99; *Catherine Ehehalt,* 9/99 – 4/00; 4/02 – 4/03; *Mark Elsesser,* 1/00 – 4/01; *Amy Herzog,* 4/01 – 4/02; 9/02 – 4/03; *R. Vishnubhotla,* 4/02 – 12/02; *Paul Albertus,* 4/03 – 9/03; *Tim Lewer,* 4/03 – 4/04; *Dean Malmgren,* 1/04 – 4/04; *Rima Patel,* 1/04 – 4/04; *Bobby Glied,* 4/04 – 5/05; *Katy Hoffee,* 4/04 – 5/05; *Hagar Zohar,* 4/04 – 9/05; *Zachary Zell,* 4/06 – 8/07; *Matt Russel,* 1/07 – 4/07; *Danesh Deonarian,* 1/07 – 4/07; *Eric Miller,* 4/07 – 8/07; *Kathryn Siuniak,* 9/07 – 12/08; 5/09 – 8/09; *Courtney Howder,* 9/07 – 5/08; *Margaux Baker,* 1/08 – 9/08; *Jessica Rilly,* 5/08 – 12/08; *Anthony March,* 5/08 – 12/08; *Stephen Dzul,* 5/08 – 8/10; *Jennifer Dolan,* 9/08 – 4/08; *Gary Hildebrand,* 5/09 – 12/09; *Michael Workman,* 6/09 – 12/09; *Ahmad Afif,* 9/09 – 12/09; *Meredith Bailey,* 5/10 – 8/10; *Jeremy Shum,* 5/10 – 8/10; *Rhonda Jack,* 5/10 – 7/10; *Andy Poplawski,* 5/10 – 12/10; *Nicholas Clay,* 5/10 – 8/10; *Mathias Chong,* 1/11 – 4/11; *Anna Liang,* 5/11 – 10/11; *Sophia Orbach,* 5/11 – 8/11; *Lun Guo,* 1/12 – 7/12; *Wenjia Zhang,* 1/12 – 12/13; *Jennifer Jocz,* 2/12 – 9/13; *Jiwoo Jeon,* 9/12 – 12/12; *Geetika Bhatia,* 1/13 – 4/13; *Richard Johnson,* 1/13 – 4/13; *Steven Knier,* 5/13 – 8/13; *Catherine Hu,* 9/13 – 12/13; *Cathleen Chong,* 7/14 – 8/14; *Harold Owens III,* 6/14 – 8/14; *Wenxuan Zhang,* 9/14; *Yiming Li,* 9/14 – 5/15; *Raymond Ching,* 7/15 – 5/17; *Harrison Hou,* 9/15 – 5/16; *Janice Sim,* 5/16 – 5/17; *Zachary Drees,* 5/16 – 4/17; *Jeremy Carroll,* 5/16 – 8/16; *Elizabeth Mathews,* 5/17 – 8/17; *Michael Durkin,* 5/17 – 12//17; *Andrew Ostoin,* 5/17 – 12/17; *Sarika Mahimkar,* 5/18 - 12/18; *Archan Vyas,* 5/18 – 8/18; *Ashley Sin,* 5/18 - 8/19; *Jacob Keating,* 5/18 - 8/19; *Julia Roarty,* 5/18 - 8/19; *Sayed Ahmad Almohri,* 6/20 – 8/20; *Galvan, Angelica,* 1/21 – 5/21; *LaCascia, Max,* 5/21 – 8/21.

INVITED KEYNOTE/PLENARY PRESENTATIONS

1) Solomon, M.J., "Coincidence of structural and dynamical transitions in depletion gelation of colloidal particles" Invited keynote at EU Softcomp Workshop, Venice, Italy May 2-3 2006.
2) Solomon, M.J., "Design, control and direct visualization of heterogeneous structure in colloidal aggregates and gels," Fifth World Congress on Particle Technology. Presentation in plenary session "Particle Design by Self-Assembly," 23-27 April, 2006
3) Solomon, M.J., "Rod dispersion rheology, microstructure and dynamics characterization," Invited Keynote, Global SWT (Thixcin) Symposium, Procter & Gamble, 22-23 May, 2007.
4) Solomon, M.J., "Assembly and Dynamics of Anisotropic Colloids" invited lecture at the Gordon Research Conference on Colloidal, Macromolecular and Polyelectrolyte Solutions, Ventura, CA February 3-8, 2008.
5) Solomon, M.J., "Effect of applied fields on the structure of colloidal rod suspensions" Invited keynote at EU Softcomp/Cosines Gels and Glasses Topical Meeting, Crete, Greece. 13 June 2008.
6) Solomon, M.J., "Direct visualization of the structural and dynamical heterogeneity of colloidal gels by confocal microscopy" Keynote Lecture for Supercooled Liquids, Glasses and Gels Session. International Liquid Matter Conference. Lund, Sweden. 26 June – 1 July, 2008.
7) Solomon, M.J., "Role of interparticle forces, applied fields and particle shape on the assembly of colloids," 4-lecture series, Mexican Summer School on Complex Fluids, Universidad Autonoma de San Luis Potosi, 11-15 August, 2008.

8) Solomon, M.J., "Microdynamics and flow-induced structure in colloidal particle gels," Keynote at the Colloid Rheology and Microrheology Minisymposium at the 13th International Association of Colloidal and Interface Scientists (IACIS) Meeting, Columbia University, New York City, 14-19 June 2009.
9) Solomon, M.J., "Designed anisotropic particles, assemblies and clusters by microfluidic confinement," Keynote at the Symposium on Clustering at the 13th International Association of Colloidal and Interface Scientists (IACIS) Meeting, Columbia University, New York City, 14-19 June 2009.
10) Solomon, M.J., "Colloidal crystallization in complex and step strain flows," One of five invited lectures at International Symposium on Applied Rheology, Seoul, Korea. 3 June 2010.
11) Solomon, M.J., "Toward Tailored Elasticity of Particulate Soft Matter by Control of Structural Rigidity," Keynote lecture for the Particulate and Multiphase Session of AIChE fluid mechanics division, AIChE National Meeting, Pittsburg 29 October, 2012.
12) Solomon, M.J., "Self-assembly of Janus ellipsoids" invited lecture at the Gordon Research Conference on Self-Assembly & Supramolecular Chemistry, Tuscany Italy May 17, 2015.
13) Solomon, M.J. "Structure and dynamics of colloidal assembly by applied and induced electric fields." Invited Keynote, Session on Structure and Dynamics of Suspensions, Emulsions, and Foams. 89th American Chemical Society Colloid and Surface Science Symposium, 15-17 June 2015.
14) Solomon, M.J., "What is Soft Matter Anyway?" Keynote, College of Engineering Graduate Symposium, University of Michigan, October 30. 2015.
15) Stewart, E.J., M. Ganesan, J.G. Younger, M.J. Solomon, "Associations in bacterial exo-polysaccharides determine the microrheology of staphylococcal biofilms," Keynote in the Heterogeneous and Self-Assembling Polymeric Systems session at the International Congress on Rheology, August, 2016, Kyoto Japan.
16) Solomon, M.J. "Rheology of colloidal gels with embedded active matter" UK Colloids 2021, July 19-21, 2021. Invited keynote.
17) Solomon, M.J. "Structural Color of Self-Assembled Colloidal Crystals: Role of Defects, Anisotropy, and Annealing," 15th Northeast Complex Fluids and Soft Matter Workshop, August 20, 2021. Invited keynote.
18) Solomon, M.J. "Manipulating the rheology of colloidal gels with embedded active matter" Plenary at 92nd Annual Meeting of the Society of Rheology, October 10-14 2021, Bangor ME. Invited Plenary.