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PERSONAL Born November 23, 1959, Married, 2 Children

EDUCATION

- **Doctor of Philosophy**, March, 1986
Chemical Engineering, Stanford University; Thesis Advisor: Prof. A. Acrivos
- **Master of Science**, June, 1982
Chemical Engineering, Stanford University
- **Bachelor of Science, summa cum laude**, June, 1981
Chemical Engineering, Princeton University; (also **Engineering Physics Program**)

EXPERIENCE

- **Professor** —Dept. of Chemical Engineering, 9/1/99—present, Stanford University;
Associate Department Chair, 9/1/2001 – 1/1/2005; **Department Chair**, 7/2011 – present
- **Professor** — Institute of Computational and Mathematical Engineering, Stanford University, 11/2004 — present
- **Professor** — Dept. of Mechanical Engineering, Stanford University, 1/1/2001— present
- **Associate Professor** (w/ tenure)—Dept. of Chemical Engineering, 1/1/95—8/31/99, Stanford University
- **Assistant Professor**—Dept. of Chemical Engineering, 1/90—1/95, Stanford University
- **Member of Technical Staff**—AT&T Bell Laboratories, 1/87—1/90
Department: Lithography and Chemical Engineering, 11543; Supervisor: L. F. Thompson
- **Postdoctoral Research**—Dept. of Applied Math. & Theor. Physics, Cambridge, England, 3/86—12/86;
Advisors: Prof. G. K. Batchelor and Dr. E. J. Hinch
- **Research Engineer**—Shell Development Co. Westhollow Research Center, Houston, Tex., Summer 1981
- **Research Engineer**—Dupont Chemical Co. Experimental Station, Wilmington, Del., Summer 1980

HONORS, AWARDS, EDITORSHIPS

1. National Academy of Engineering, 2013
2. Lester Levi Carter Endowed Professorship, Stanford, 2011
3. E. C. Bingham Medal (for Outstanding Contributions to Rheology), Society of Rheology, 2011
4. Ronald Probstein Lecturer in Engineering Science, MIT, March, 2011
5. Editorial Board, *Polymers*. June 2009 — present
6. Editorial Board, *Chemical Engineering Communications*. September 2008 — present
7. Editorial Board, *Korea-Australia Rheology Journal*, January, 2008 – present
8. College of Engineering Distinguished Lecturer, University of Tennessee at Knoxville, October 29, 2007
9. Associate Editor of *Physics of Fluids*, January, 2006 — present
10. Stanley Katz Lecturer, Chemical Engineering Department, City College of New York, NY NY, February, 2004
11. Hougén Professor, Department of Chemical Engineering, University of Wisconsin, Madison, January - June, 2004
12. Stanley Corrsin Lectureship, Department of Chemical and Biomolecular Engineering, The Johns Hopkins University, Baltimore, Md., October, 2003
13. Merck Distinguished Lecturer, Department of Chemical Engineering, Rutgers, March, 2003
14. 2001 Van Ness Lectureship, Department of Chemical Engineering, Rensselaer Polytechnic Institute, October, 2001
15. Fellow of the American Physical Society, September, 2000
16. 1999 Thiele Lectureship, Department of Chemical Engineering, Notre Dame University, South Bend, IN

17. 1998 Curtis W. McGraw Research Award from the American Society of Engineering Education
18. Editor's Choice Award and Second Prize, 1997 National Library of Poetry North American Poetry Competition
19. W.M. Keck Foundation Engineering Teaching Excellence Award, 6/94
20. Camille and Henry Dreyfus Teacher-Scholar Award, 5/94
21. David and Lucile Packard Fellow in Science and Engineering, 10/91—10/96
22. NSF Presidential Young Investigator 9/90—9/95
23. Francois N. Frenkiel Award 1989, Division of Fluid Dynamics, American Physical Society
24. NATO Postdoctoral Fellowship (for study in Cambridge, Eng.), 1986
25. Teaching Assistant of the Year, Chemical Eng. Department, Stanford, 1982
26. Stanford Dean's Fellowship, 1981
27. Xerox Award for the Best Undergraduate Chemical Engineering Thesis, Princeton University, 1981
28. Phi Beta Kappa, 1981—present
29. Tau Beta Pi, 1980—present
30. Princeton Academic Scholarship, 1977—81

PRIMARY PRESENT PROFESSIONAL ACTIVITIES

1. Department Chair of Chemical Engineering, Stanford
2. Associate Editor, *Physics of Fluids*
3. Young Faculty Mentor in Chemical and Mechanical Engineering, Stanford
4. Technical Lead, Technical Area 2, Nano- and Bio- Computations, Army High Performance Computing Research Center (AHPCRC), Stanford, 4/1/2007 – present
5. Fluid Mechanics Programming Committee, AIChE
6. Advisory Board, School of Chemical and Biomolecular Engineering, Cornell University, Ithaca
7. Advisory Board, Department of Chemical Engineering, University of Tennessee at Knoxville
8. USNCTAM Representative for the Society of Rheology, 2008-2012, renewed 2012-2016; AmeriMech Symposium subcommittee co-Chair, 2013 – present
9. Art Metzner Award Committee, Society of Rheology, 2010-2013; Chair, 2013.
10. Facilities Planning Committee, Bldg. 4, Chemical Engineering, September, 2010 – present
11. Congress Committee, International Union of Theoretical and Applied Mechanics, November, 1, 2012 – present (4 year term)

ARCHIVAL JOURNAL PUBLICATIONS

1. Prud'homme, R.K. and Shaqfeh, E.S.G., "Effect of Elasticity on the Mixing Torque Requirements for Rushton Turbine Impellers", *A.I.Ch.E. J.* **30**, 485,(1984)
2. Shaqfeh, E.S.G. and Acrivos, A., "The Effects of Inertia on the Buoyancy-Driven Convection Flow in Settling Vessels Having Inclined Walls", *Phys. Fluids* **29**, 3935,(1986)
3. Shaqfeh, E.S.G. and Acrivos, A., "The Effects of Inertia on the Stability of the Convective Flow in Inclined Particle Settlers", *Phys. Fluids* **30**, 960,(1987)
4. Shaqfeh, E.S.G. and Acrivos, A., "Enhanced Sedimentation in Vessels with Inclined Walls: Experimental Observations", *Phys. Fluids* **30**, 1905,(1987)
5. Shaqfeh, E.S.G. and Koch, Donald L., "The Effects of Hydrodynamic Interactions on the Orientation of Axisymmetric Particles Flowing Through a Fixed Bed of Spheres or Fibers", *Phys. Fluids* **31**, 728 (1988)
6. Shaqfeh, E.S.G. and Koch, Donald L., "The Combined Effects of Hydrodynamic Interactions and Brownian Motion on the Orientation of Axisymmetric Particles Flowing Through Fixed Beds", *Phys. Fluids* **31**, 2769 (1988)
7. Acrivos, A. and Shaqfeh, E.S.G., "The Effective Thermal Conductivity and Elongational Viscosity of a Non-Dilute Suspension of Aligned Slender Rods", *Phys. Fluids* **31**, 1841 (1988)
8. Shaqfeh, E.S.G., "A Non-Local Theory for the Heat Transport in Composites Containing Highly Conducting Fibrous Inclusions", *Phys. Fluids* **31**, 2405 (1988)

9. Shaqfeh, E.S.G., Larson, R.G., and Fredrickson, G.H., "The Stability of a Falling Viscoelastic Film at Low to Moderate Reynolds Numbers", *J. Non-Newtonian Fluid Mech.* **31**, 87 (1989)
10. Koch, D.L. and Shaqfeh, E.S.G., "The Instability of a Dispersion of Sedimenting Spheroids", *J. Fluid Mech.* **209**, 521 (1989)
11. Jurgensen, C.W. and Shaqfeh, E.S.G., "Nonlocal Transport Models of the Self-Consistent Potential Distribution in a Plasma Sheath with Charge Transfer Collisions", *J. Appl. Phys.* **64**, 6200 (1988)
12. Koch, D.L. and Shaqfeh, E.S.G., "Screening in Sedimenting Suspensions", *J. Fluid Mech.* **224**, 275–303 (1991)
13. Fredrickson, G.H. and Shaqfeh, E.S.G., "Heat and Mass Transport in Composites of Aligned Slender Fibers", *Phys. Fluids* **1**(1), 3 (1989)
14. Shaqfeh, E.S.G. and Jurgensen, C.W., "Simulation of Reactive Ion Etching Pattern Transfer", *J. Appl. Phys.* **66**(10), 4664 (1989)
15. Jurgensen, C.W. and Shaqfeh, E.S.G. "A Kinetic Theory of Bombardment-Induced Interface Evolution", *J. Vac. Sci. Tech. B* **7**(6), 1488 (1989)
16. Jurgensen, C.W. and Shaqfeh, E.S.G., "Factors Controlling the Etching Rate and Process Latitudes of the O₂ Reactive Ion Etching Pattern Transfer Step in Multilevel Lithography", *Polymer Eng. Sci.* **29**(13), 878 (1989)
17. Shaqfeh, E.S.G. and G.H. Fredrickson, "The Hydrodynamic Stress in a Suspension of Rods", *Phys. Fluids A* **2**(1), 7 (1990)
18. Muller, S.J., R.G. Larson, and E.S.G. Shaqfeh, "A Purely Elastic Transition in Taylor-Couette Flow", *Rheol. Acta* **28**, 499 (1989)
19. R.G. Larson, E.S.G. Shaqfeh, and S.J. Muller, "A Purely Elastic Instability in Taylor-Couette Flow", *J. Fluid Mech.* **218**, 573-600 (1990)
20. Shaqfeh, E.S.G. and D.L. Koch, "Orientational Dispersion of Fibers in Extensional Flows", *Phys. Fluids A* **2**(7) 1077 (1990)
21. Frattini, P.L., E.S.G. Shaqfeh, J.L. Levy, and D.L. Koch, "Observations of Axisymmetric Tracer Particle Orientation During Flow Through a Dilute Fixed Bed of Fibers", *Phys. Fluids A* **3**(11), 2516 (1991)
22. Koch, D.L. and E.S.G. Shaqfeh, "The Average Rotation Rate of a Fiber in the Linear Flow of a Semi-Dilute Suspension", *Phys. Fluids A* **2**(12) 2093, (1990)
23. Joo, Y.L. and E.S.G. Shaqfeh, "Viscoelastic Poiseuille Flow Through a Curved Channel: A New Elastic Instability", *Physics of Fluids A* **3**(7), 1691 (1991)
24. Joo, Y.L. and E.S.G. Shaqfeh, "A Purely Elastic Instability in Dean and Taylor-Dean Flow", *Physics of Fluids A* **4**(3), 524 (1992)
25. Shaqfeh, E.S.G., S.J. Muller, and R.G. Larson, "The Effects Finite Gap and Dilute Solution Properties on the Viscoelastic Instability in Taylor-Couette Flow", *J. Fluid Mech.* **235** 285-317 (1992) [Abstracted in *Applied Mechanics Reviews* **45**(5) 477 (1992)]
26. Koch, D.L. and E.S.G. Shaqfeh, "Averaged Equation and Diagrammatic Approximations to the Average Concentration of a Tracer Dispersed by a Gaussian Random Velocity Field", *Physics of Fluids A* **4**(5), 887 (1992)
27. Singh, V.K., E.S.G. Shaqfeh, and J. McVittie, "Simulation of Profile Evolution in Silicon RIE with Re-emission and Surface Diffusion", *J. Vac. Sci. Techn. B* **10**(3), 1091 (1992)
28. Shaqfeh, E.S.G. and D.L. Koch, "Polymer Stretch in Dilute Fixed Beds of Spheres or Fibers", *J. Fluid Mech.* **224**, 17–54 (1992)
29. Joo, Y.L. and E.S.G. Shaqfeh, "The Effects of Inertia on the Viscoelastic Dean and Taylor-Couette Flow Instabilities with Application to Coating Flows", *Physics of Fluids A* **4**(11) 2415–2431 (1992)
30. Singh, V. K and E.S.G. Shaqfeh, "Effect of Surface Re-emission on the Surface Roughness of Film Growth in Low Pressure Chemical Vapor Deposition", *J. Vac. Sci. Techn. A* **11** (3) May/June 557–568 (1993)
31. Muller, S.J., E.S.G. Shaqfeh and R.G. Larson, "Experimental Studies of the Onset of Oscillatory Instability in Viscoelastic Taylor-Couette Flow", *J. Non-Newt. Fluid Mech.*, **46**(2+3), 315–330 (1993)
32. R.R. Sundararajkumar, Koch, D.L., and E.S.G. Shaqfeh, "The Extensional Viscosity and Effective Thermal Conductivity of a Dispersion of Aligned Disks", *Phys. of Fluids*, **6** (6) June 1955-62 (1994)
33. Larson, R.G., S.J. Muller and E.S.G. Shaqfeh, "The Effects of Fluid Rheology on the Elastic Taylor-Couette Instability", *J. Non-Newtonian Fluid Mech.* **51**, 195-225 (1994)

34. Joo, Y.L. and E.S.G. Shaqfeh, "Observations of Purely Elastic Instabilities in the Taylor-Dean Flow of a Boger Fluid", *J. Fluid Mech.* **262**, 27-73 (1994)
35. Singh, V.K., E.S.G. Shaqfeh, and J. P. McVittie, "A Study of Silicon Etching in CF_4 / O_2 to Establish Surface Re-emission as the Dominant Transport Mechanism", *J. Vac. Sci. Tech. B* **12**(5) Sep/Oct 2952-2962 (1994)
36. Evans, A.R., E.S.G. Shaqfeh, and P. L. Frattini, "Observations of Polymer Conformation During Flow Through a Fixed Fiber Bed", *J. Fluid Mech.* **281** pp 319-356 (1994)
37. Mackaplow, M., E.S.G. Shaqfeh and R. Schiek, "A Numerical Study of Heat and Mass Transport in Fiber Suspensions", *Proc. Roy. Soc. London A* **447** pp 77-110 (1994)
38. Rahnema, M., D.L. Koch, and E.S.G. Shaqfeh, "The Effect of Hydrodynamic Interactions on the Orientation Distribution of Fiber Suspensions Subject to Simple Shear Flow", *Physics of Fluids A* **7**(3) pp 487-506 (1995)
39. Dris, I.M. and E.S.G. Shaqfeh, "On Purely Elastic Instabilities in Eccentric Cylinder Flows", *Journal of Non-Newt. Fluid Mech* **56** pp. 349-360 (1995)
40. Shaqfeh, E.S.G., "Purely Elastic Instabilities in Viscometric Flows", *Ann. Rev. Fluid Mech.* **28**: 129-185 (1996)
41. Schiek, R. and E.S.G. Shaqfeh, "A Nonlocal Theory for Stress in Bound, Brownian Suspensions of Slender, Rigid Fibers" *J. Fluid Mech.* **296**, pp 271-324 (1995)
42. Mackaplow, M. and E.S.G. Shaqfeh, "A Numerical Study of the Rheological Properties of Suspensions of Rigid, Non-Brownian Fibers", *J. Fluid Mech.* **329**, 155-186 (1996)
43. Mosler, A. and E.S.G. Shaqfeh, "The Conformation Change of Model Polymers in Stochastic Flow Fields: Flow Through Fixed Beds", *Physics of Fluids* **9**(5), 1222-1234 (1997)
44. Evans, A.R. and E.S.G. Shaqfeh, "The Conformation of Semi-Rigid Polymers During Flow Through a Fixed Fiber Bed", *J. Non-Newtonian Fluid Mech.* **64** pp. 95-140 (1996)
45. Grillet, A.M. and E.S.G. Shaqfeh, "Viscoelastic instabilities in recirculation flows of Boger fluids", *J. Non-Newtonian Fluid Mech.* **64** pp. 141-155 (1996)
46. Doyle, P., E.S.G. Shaqfeh, and A.P. Gast, "Dynamic simulation of freely draining, flexible polymers in steady linear flows", *J. Fluid Mech* **334** pp 251-291 (1997)
47. Schiek, R.L. and E.S.G. Shaqfeh, "Cross streamline migration of slender, Brownian fibers in plane Poiseuille flow", *J. Fluid Mech.* **332** pp. 23-39 (1997)
48. Herzhaft, B., Guazzelli, E., Mackaplow, M.B., and Shaqfeh, E.S.G., "An experimental investigation of the sedimentation of a dilute fiber suspension", *Phys. Rev. Lett.* **77**(2) pp. 290-293 (1996)
49. Schiek, R. L. and E.S.G. Shaqfeh, "Oscillatory shear of a confined fiber suspension", *J. Rheol.* **41**(2) pp. 445-466 (1997)
50. Mosler, A.B. and E.S.G. Shaqfeh, "Drop breakup in flow through fixed beds", *Phys. Fluids* **9**(11) pp. 3209-3226 (1997)
51. Dris, I. M. and E.S.G. Shaqfeh, "Flow of a viscoelastic fluid between eccentric cylinders: Impact on flow stability", *J. NonNewtonian Fluid Mech.* **80**(1) pp. 1-58 (1998)
52. Dris, I. M. and E.S.G. Shaqfeh, "Experimental and Theoretical Observations of Elastic Instabilities in Eccentric Cylinder Flows: Local versus Global Stability", *J. NonNewtonian Fluid Mech.* **80**(1) pp. 59-87 (1998)
53. Doyle, P.S., E.S.G. Shaqfeh and A.P. Gast, "The rheology of 'wet' polymer brushes via Brownian dynamics simulation: steady vs. oscillatory shear", *Phys. Rev. Lett.* 2/10/97 **78**(6) pp. 1182-1185
54. Levinson, J.A., E.S.G. Shaqfeh, M. Balooch, and A.V. Hamza, "The Ion-assisted Etching and Profile Development of Silicon in Chlorine", *J. Vac. Sci. Technol. A* **15**(4) pp. 1902-1912 (1997)
55. Mackaplow, M. and E.S.G. Shaqfeh, "A numerical study of the sedimentation of fiber suspensions", *J. Fluid Mech.* **376** pp. 149-182 (1998)
56. Levinson, J.A., A. V. Hamza, E.S.G. Shaqfeh, and M. Balooch, "The growth of SiC films via C_{60} precursors and a model for the profile development of the silicon underlayer", *JVST A* **16**(4) Jul/Aug pp. 2385-2394 (1998)
57. Doyle, P., E.S.G. Shaqfeh, "Dynamic simulation of freely draining, flexible bead-rod chains: Start-up of Extensional and Shear flow" *J. NonNewt. Fluid. Mech.* **76** pp. 43-78 (1998) Erratum *J. NonNewt. Fluid Mech.* **92** pp. 275-278 (2000)

58. Doyle, P., E.S.G. Shaqfeh, G.H. McKinley, S.H. Spiegelberg, "Relaxation of Dilute Polymer Solutions in Extensional flow" *J. NonNewt. Fluid. Mech.* **76** pp. 79-110 (1998)
59. Doyle, P., E.S.G. Shaqfeh, A.P. Gast "Rheology of Polymer Brushes: A Brownian Dynamics Study" *Macromolecules* **31** (16), pp. 5474-5486 (1998)
60. Grillet, A., A.G. Lee, and E.S.G. Shaqfeh, "Observations of ribbing instabilities in elastic fluid flows with gravity stabilization" *J. Fluid Mech.* **399** pp. 49-83 (1999)
61. Kwan, T.C.B. and E.S.G. Shaqfeh, "Brownian dynamics simulations of the stress and molecular configuration of polymers in exponential and linearly-ramped shear flow" *J. NonNewtonian Fluid Mech.* **82** pp. 139-165 (1999)
62. E.S.G. Shaqfeh, "Report on the IUTAM symposium on viscoelastic fluid mechanics: effects of molecular modeling", *J. NonNewtonian Fluid Mech.* **82** pp. 127-134 (1999)
63. Grillet, A., B. Yang, B. Khomami, and E.S.G. Shaqfeh, "The modelling of viscoelastic lid-driven cavity flows using finite element simulations" *J. NonNewtonian Fluid Mech.* **88** pp. 99-131 (1999)
64. Levinson, J.A., E.S.G. Shaqfeh, A.V. Hamza and M. Balooch, "The Ion-assisted Etching and Profile Development of Silicon in Molecular and Atomic Chlorine", *J. Vac. Sci. Technol. B***18**(1) Jan/Feb pp. 172-190 (2000)
65. Hur, J., E.S.G. Shaqfeh and R.G. Larson, "Brownian dynamics simulations of single DNA molecules in shear flow", *J. Rheol.***44**(4) July/August 713-742 (2000)
66. Grillet, A.M., E.S.G. Shaqfeh, and B. Khomami, "Observations of the Viscoelastic Instabilities in Lid Driven Cavity Flow", *J. NonNewtonian Fluid Mech.*, **94**, 15 (2000)
67. Babcock, H., D. Smith, J. Hur, E.S.G. Shaqfeh, S. Chu, "Relating the Microscopic and Macroscopic Response of a Polymeric Fluid in a Shearing Flow", *Phys. Rev. Lett.* **85**, 2018-2021, (2000)
68. Hur, J., E.S.G. Shaqfeh, H. Babcock, D. Smith, S. Chu, "The dynamics of dilute and semidilute DNA solutions in the startup of shear flow", *Journal of Rheology* **45**, 421-450, (2001)
69. Kwan T., Woo, N., and E.S.G. Shaqfeh, "An Experimental and Simulation Study of Dilute Polymer Solutions in Exponential Shear Flow: Comparison to Uniaxial and Planar Extensional Flows", *Journal of Rheology*, **45**, 321-349 (2001)
70. Somasi, M., Komami, B., Woo, N., Hur, J. and E.S.G. Shaqfeh, "Brownian Dynamics Simulations of Bead-Rod and Bead-Spring Chains: Numerical Algorithms and Coarse Graining Issues", *J. NonNewtonian Fluid Mech.*, **108**, pp. 227-255 (2002)
71. Butler, J. and E.S.G. Shaqfeh, "Dynamic simulations of the inhomogeneous sedimentation of rigid fibers", *J. Fluid Mech.* **468** pp. 205-237 (2002)
72. Babcock, H., R. Teixeira, J. Hur, E.S.G. Shaqfeh, and S. Chu, "Visualization of molecular fluctuations near the critical point of the coil-stretch transition in polymer elongation", *Macromolecules* **36**(12) pp. 4544-4548 (2003)
73. Hur, J., E.S.G. Shaqfeh, H. Babcock, S. Chu, "Dynamics and Configurational Fluctuations of Single DNA Molecules in Linear Mixed Flows", *Phys. Rev. E* **66**, 011915, (2002)
74. Schorr, P.A., T.C.B. Kwan, S.M. Kilbey II, E.S.G. Shaqfeh, M. Tirrell, "Shear forces between tethered polymer chains as a function of compression, sliding velocity, and solvent quality", *Macromolecules*, **36**(2) 389-398 (2003)
75. Olson, D.J., J.M. Johnson, P.D. Patel, E.S.G. Shaqfeh, S.G. Boxer, and G.G. Fuller, "Electrophoresis of DNA Adsorbed to a Cationic Supported Bilayer", *Langmuir*, **17**, 7396-7401 (2001)
76. Lee, A., E.S.G. Shaqfeh, B. Khomami, "A study of viscoelastic free surface flows by the finite element method: Hele-Shaw and slot coating flows", *J. NonNewtonian Fluid Mech.*, **108**, pp. 327-362 (2002)
77. Patel, P., E.S.G. Shaqfeh, J. Butler, V. Christini, J. Blawdewicz, M. Loewenberg, "Drop breakup in the flow through fixed fiber beds: An experimental and computational investigation", *Phys. Fluids*, **15**(5), pp. 1146-1157 (2003)
78. Patel, P., E.S.G. Shaqfeh, "A computational study of DNA separations in sparse disordered and periodic arrays of posts", *J. Chem. Phys.* **118**(6) pp. 2941-2951 (2003)
79. Shaqfeh, E.S.G., G. H. McKinley, N. Woo, D. A. Nguyen, T. Sridhar, "On the polymer entropic force singularity and its relation to extensional stress relaxation and filament recoil", *Journal of Rheology* **48**(1) 209-221 (2004)
80. Woo, N., E.S.G. Shaqfeh, B. Khomami "Effect of confinement on the dynamics and rheology of dilute DNA solutions. I. Entropic spring force under confinement and numerical algorithm", *Journal of Rheology* **48**(2) 281-298 (2004)

81. Woo, N., E.S.G. Shaqfeh, B. Khomami " Effect of confinement on the dynamics and rheology of dilute DNA solutions. II. Effective rheology and single chain dynamics", *J. Journal of Rheology* **48**(2) 299-318 (2004)
82. Lee, A.G., E.S.G. Shaqfeh, "Viscoelastic Effects on Interfacial Dynamics in Air-Fluid Displacement under Gravity Stabilization", *J. Fluid Mechanics* **531**, pp. 59-83 (2005)
83. Butler, J.E., E.S.G. Shaqfeh, "Brownian dynamics simulations of a flexible polymer chain which includes continuous resistance and multi-body hydrodynamic interactions", *J. Chem. Phys.* **122**, 014901 (2005)
84. Woo, N.J., E.S.G. Shaqfeh, "The Configurational Phase Transitions of Flexible Polymers In Mixed Flows", *J. Chem. Phys.* **119**(5) pp. 2908-2914 (2003)
85. Schroeder, C.M., H. Babcock, E.S.G. Shaqfeh, S. Chu, "Observation of Polymer Configuration Hysteresis in Extensional Flow", *Science*, 9/12/2003, **301**, Issue 5639 pp. 1515-1519
86. Paschkewitz, J.S., Y. Dubief, E.S.G. Shaqfeh and P. Moin, "Numerical simulation of turbulent drag reduction using rigid fibres", *J. Fluid Mech.* **518** pp. 281-317 (2004)
87. Dubief, Y., V.E. Terrapon, C.M. White, E.S.G. Shaqfeh, P. Moin, and S. K. Lele, "New answers on the interaction between polymers and vortices in turbulent flows", *Flow, Turbulence and Combustion*, **74** pp. 311-329 (2005)
88. Terrapon, V.E., Y. DuBief, P. Moin, E.S.G. Shaqfeh, and S.K. Lele, "Simulated polymer stretch in a turbulent flow using Brownian dynamics", *J. Fluid Mech.* **504**, pp. 61-71 (2004)
89. Dubief, Y., C.M. White, V.E. Terrapon, E.S.G. Shaqfeh, P. Moin, and S. K. Lele, "On the coherent drag reducing and turbulence enhancing behavior of polymers in wall flows", *J. Fluid Mech* **514**, pp. 271-280 (2004)
90. Teixeira, R., H.P. Babcock, E.S.G. Shaqfeh, and S. Chu, "Shear thinning and tumbling dynamics of single polymers in the flow-gradient plane", *Macromolecules*, **38**(2), pp. 581-592 (2005) (also see *Macromolecules*, cover, April 5, 2005 **38** (7))
91. Schroeder, C., E.S.G. Shaqfeh, and S.Chu, "The Effect of Hydrodynamic Interactions on the Dynamics of DNA in Extensional Flow: Simulation and Single Molecule Experiment", *Macromolecules*, **37**, pp. 9242-9256 (2004)
92. Bhatara, G., E.S.G. Shaqfeh, and B. Khomami, "Influence of viscoelasticity on the interfacial dynamics of air displacing fluid flows – A computational study", *J. NonNewtonian Fluid Mech.* **122** pp.313-332 (2004)
93. Shaqfeh, E.S.G, "The Dynamics of Single-Molecule DNA in Flow", *J. NonNewtonian Fluid Mechanics* **130**, pp. 1-28 (2005)
94. Saintillan, D., E. Darve, E.S.G. Shaqfeh, "A Smooth Particle-Mesh Ewald Algorithm for Stokes' Suspension Simulations: The Sedimentation of Fibers", *Phys. Fluids.* **17** 033301 (2005)
95. Schroeder, C., R. Teixeira, E.S.G. Shaqfeh, and S.Chu, "Dynamics of DNA in the flow-gradient plane of steady shear flow: Observations and simulations", *Macromolecules*, **38**(5) 1967-1978 (2005)
96. Dimitropoulos C.D., Y. Dubief, E.S.G. Shaqfeh, P. Moin, S.K. Lele, "Direct numerical simulation of polymer-induced drag reduction in turbulent boundary layer flow", *Phys. Fluids.* **17** 011705 (2005)
97. Schroeder, C., R. Teixeira, E.S.G. Shaqfeh, and S.Chu, "Characteristic periodic motion of polymers in shear flow", *Phys. Rev. Lett.* **95**, 018301 (2005)
98. Bhatara, G., E.S.G. Shaqfeh, B. Khomami, "The influence of polymer concentration and chain architecture on free surface displacement flows of polymeric fluids", *J. Rheology* **49**(5) pp. 929-962 (2005)
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2. Shaqfeh, E.S.G., "Low Pressure Transport in Silicon RIE: Pattern Transfer and Surface Roughness", Invited Talk, 1992 Annual American Vacuum Society Meeting, Chicago, Ill. Plasma Science: Pattern Transfer Session, 11/11/92
3. Shaqfeh, E.S.G., "Purely Elastic Instabilities in Eccentric Cylinder Flows", Keynote Address, Session on Linear Stability, Eighth International Workshop on Numerical Methods in Non-Newtonian Flows, Cape Cod, Massachussets, 11/21-24/93

4. Shaqfeh, E.S.G., *Oriental and Configurational Diffusion in the Slow Flows of Particles and Polymers* (Invited Leadoff Speaker) IUTAM Symposium on Hydrodynamic Diffusion of Suspended Particles, Session 4, Estes Park, Colorado, Organizer: Prof. Rob Davis, University of Boulder, Boulder, Co. 22-25, July, 1995.
5. Shaqfeh, E.S.G. *The fluid mechanical properties of fiber suspensions: Local and nonlocal transport*, NATO ASI Mobile Particulate Systems, Cargese, Corsica, (2 Invited Lectures), 7/14-15/94.
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7. E.S.G. Shaqfeh, "Developing constitutive equations using Brownian dynamics simulations: viscous versus Brownian stresses", Isaac Newton Institute Programme on Dynamics of Complex Fluids – Workshop on Constitutive Relations and Their Application to Complex Flows, April 15-19, 1996 (Invited Contribution)
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14. Shaqfeh, E.S.G., "Brownian Dynamics Simulations of DNA Molecules in Shear Flow", Thiele Lecture, Dept. of Chem. Engineering, Univ. of Notre Dame, South Bend, Ind. September 28, 1999.
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19. E.S.G. Shaqfeh, "Purely Elastic Instabilities in Bulk and Interfacial Flows", Second Biannual Chemical Engineering Conference for Collaborative Research in the Eastern Mediterranean, Ankara, Turkey, May 20-24, 2001
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26. E.S.G. Shaqfeh, Plenary Lecture, "Progress and Prospects in Single Molecule Dynamics Studies", Fundamental Research in Fluid Mechanics Group, Annual Meeting of the AIChE, Indianapolis, Ind., Nov. 3-8, 2002, Minneapolis, MN.
27. E.S.G. Shaqfeh, Plenary Lecture, "The Fast Flow Dynamics of Polymer Solutions as Calculated Using Implicit Configurational Time Stepping Schemes", 2003 SIAM Conference on Computational Science and Engineering, Feb. 10-13, 2003, Hyatt Regency Islandia Hotel and Marina, San Diego, CA.
28. E.S.G. Shaqfeh, Merck Distinguished Lectureship, "Progress and Prospects in Flow Dynamics Studies of Single Molecule DNA", Department of Chemical Engineering, Rutgers University, March 20, 2003
29. E.S.G. Shaqfeh, "Large-Scale Simulation of Viscoelastic Effects in Coating Flows and Comparison to Experiments", Gordon Research Conference: CAE in Polymer Processing, Holiday Inn, Ventura, CA March 2-7, 2003 (Invited Presentation)
30. E.S.G. Shaqfeh, "The Dynamics of Single Molecule DNA in Shear, Mixed, and Extensional Flows", Stanley Corrsin Lectureship, Department of Chemical and Biomolecular Engineering, The Johns Hopkins University, Baltimore, Md., October 9, 2003
31. E.S.G. Shaqfeh, "Progress and Prospects in Understanding the Dynamics of DNA in Flow", Olav V. Hougen Lecture, Department of Chemical and Biological Engineering, The University of Wisconsin at Madison, January 22, 2004
32. E.S.G. Shaqfeh, "The Mechanisms of Turbulent Drag Reduction by Polymer Additives Determined from Numerical Simulation", Olav V. Hougen Lecture, Department of Chemical and Biological Engineering, The University of Wisconsin at Madison, March 8, 2004
33. E.S.G. Shaqfeh, "Progress and Prospects in Understanding the Dynamics of DNA in Flow", Stanley Katz Lectureship, Department of Chemical Engineering, The City College of New York, Ny, NY, February, 9, 2004
34. E.S.G. Shaqfeh, "Polymer-Induced Turbulent Drag Reduction and the Concept of Stochastic Strong Flows", American Physical Society, Annual Meeting, March 22-26, 2004 Montreal, CANADA. Invited Talk in Statistical and Nonlinear Physics Topical Group Session on "Shear-induced transitions and turbulence in complex fluids".
35. Eric S.G. Shaqfeh, "Solution rheology and its role in the mechanisms of turbulent drag reduction", Keynote address, XIVth International Congress on Rheology, Aug. 22-27, 2004, Seoul, Korea.
36. Eric S.G. Shaqfeh, "Ergodicity-Breaking and Conformational Hysteresis in the Stretching Dynamics of Polymers in Flow", Plenary Lecture, Australian-Korean Rheology Conference 2005, Cairns, Australia.
37. Eric S.G. Shaqfeh, "Issues in the Microfluidic Flows of Complex Fluids", Keynote Lecture, Australian-Korean Rheology Conference 2007, Jeju Island, Korea. Sept 17, 2007
38. Eric S.G. Shaqfeh, "Unique phenomena in the Microfluidic Flows of Polymers or Particles", Keynote Lecture, International Soft Matter Conference, Eurogress Aachen, Germany, Oct. 1-4, 2007
39. Eric S.G. Shaqfeh, "Progress and Prospects in Understanding Single Molecule Polymer Dynamics in Flow", College of Engineering Distinguished Lectureship, University of Tennessee at Knoxville, October 29, 2007
40. Eric S.G. Shaqfeh, "The Coil-Stretch Transition after More than Thirty Years", Invited Talk at the APS Division of Polymer Physics Symposium "Simple Views on Polymer Physics" at the American Physical Society Meeting in New Orleans, Louisiana (March 10 - 14, 2008) honoring P. G. de Gennes' contributions to the field of polymer physics
41. Eric S.G. Shaqfeh, "Simulating the Microfluidics of Nonspherical Particulate Suspensions", 2009 Conference on Computational Science and Engineering (CSE09), Invited Minisymposium: Multiscale Methods for Hydrodynamics at the Micro and Nano-scales: Fluid-Structure Interaction, Miami Hilton Hotel, Miami, Fla. March 2-6, 2009.
42. Eric S.G. Shaqfeh, "The Dynamics and Stability of the Microflows of Polarizable, Colloidal Rod Suspensions", 7th New York Complex Matter Workshop, Cornell University, December 8, 2008. (Keynote Speaker)
43. Eric S.G. Shaqfeh, "The Microfluidics of NonSpherical Particulate Suspensions", The Physics and Chemistry of Microfluidics, Gordon Research Conference, Il Ciocco Hotel and Resort, Lucca, Italy, June 28, 2009 (Invited Leadoff Speaker).
44. Eric S.G. Shaqfeh, David H. Richter, Gianluca Iaccarino, "Wake stabilization in viscoelastic flow past a cylinder", Workshop on *Flow instabilities and turbulence in viscoelastic fluids*, Lorentz Center International Center for workshops in the Sciences, Leiden, Netherlands, 19 Jul 2010 through 23 Jul 2010 (Invited Keynote Speaker)

45. Eric S. G. Shaqfeh, H. Zhao, A. Spann, "Platelet Margination in the Microvasculature", Ronald Probstein Lecture, Department of Mechanical Engineering, Massachusetts Institute of Technology, Cambridge, MA, March 10, 2011.
46. Eric S. G. Shaqfeh, "The local and nonlocal rheology of vesicle and capsule suspensions", The Bingham Lecture, Annual Society of Rheology Meeting, Cleveland, OH, October 11, 2011.
47. Eric S.G. Shaqfeh "Computer Simulation of Vesicles and Vesicle Suspensions in Flow", Invited Lecture, Biological Complex Fluids – Softflow 2012, Cargese, France (Corsica Island), July 2, 2012

OTHER AFFILIATIONS AND PROFESSIONAL ACTIVITIES

1. American Institute of Chemical Engineers, 1979—present
2. American Physical Society, 1987—present
3. Society of Rheology, 1992—present
4. Adjunct Professor, Chem. Eng. Department, Cornell University 9/88—12/91
5. Affiliated Faculty Member of Center for Integrated Systems, Stanford, 1/90—present
6. Member of Fluid Mechanics Programming Committee, A. I. Ch. E. Annual Meeting, 5 year term, 11/90—11/95 re-elected to second 5 year term, 11/95 — 11/2000; Elected Vice-Chairman, 1996 — 1998, Chairman, 1998 — 11/2000. Re-elected to third 5 year term, 11/2003 — 11/2008 Re-Elected to fourth 5 year term, 11/2008 — 11/2013.
7. Co-Chair Viscous Flows Session, A. I. Ch. E. Annual Meeting, 11/90
8. Panelist, NASA Microgravity Program Fluid Mechanics Panel Review, Microgravity Science and Applications Division, NASA 4/18-20/91
9. Co-Chair Linear and Non-Linear Stability Session, A. I. Ch. E. Annual Meeting, 11/91
10. Chair, Multiphase and Particulate Flow Session, A. I. Ch. E. Annual Meeting, 11/92
11. Chair, Suspensions Symposia, Soc. Rheology Annual Meeting, 10/93
12. Lecturer, NATO Advanced Institute on "Mobile Particulate Systems", Cargese, Corsica, July, 1994
13. Chair, Rheology session, 68th Colloid and Surface Science Symposium,(Also Local Advisory Committee Member) Stanford University, June 19-22, 1994
14. Meeting Program Coordinator, Fundamental Research in Fluid Mechanics Sessions, A.I.Ch.E. Annual Meeting, Miami Beach, Fla. November, 1995
15. Panelist, NASA Microgravity Program Panel Review of "The Extensional Rheology of Non-Newtonian Materials", by G. McKinley and S. Spiegelberg NASA Lewis Research Center, 5/6/94,also 7/17/96
16. Consultant
 - Biometrics Imaging Corporation (1025 Terra Bella Avenue, Mountain View, CA 94043-1829), 4/94 - 6/95
 - Covington and Burling Law Firm, 1999 - present
 - Sterne - Kessler Law Firm, 5/2002 - present
 - EnQuest Co., 6/2005 – 2/2006
 - PARC, 11/2006 – present
17. National Advisory Committee, IUTAM Symposium on Hydrodynamic Diffusion of Suspended Particles, 22-25 July 1995, Estes Park, Co.
18. Chair, Non-Newtonian Flows: Viscoelastic Instabilities Session, 66th Annual Meeting of the Society of Rheology, Philadelphia, PA October 2-6, 1994
19. Visiting Professor (Professeur Associe), Ecole Superieure de Physique et de Chimie Industrielles del la Ville de Paris, Paris, France, Host: E. Guazzelli, 3/95
20. Nominating Committee for Officers in the Soc. Rheology, 1/95
21. Bingham Awards Committee, Society of Rheology, 10/95, Chairman, 1997.
22. Chair, Multiphase and Particulate Flow Session, A. I. Ch. E. Annual Meeting, 11/96
23. Chair, Suspensions Session, International Congress on Rheology, Quebec City, Quebec, 8/19/96
24. Co-Chair, Session on "Novel Physical Phenomena" in the Fundamental Research in Fluid Mechanics, A. I. Ch. E. Annual Meeting, 11/97
25. Co-Chair, Session on "Viscous Flow Theory" in the Fundamental Research in Fluid Mechanics, A. I. Ch. E. Annual Meeting, 11/97

26. Lecturer, Advanced Institute on "Elasticity and Viscoelasticity: non-linear instabilities in fluids and solids" Cargese, Corsica, July, 1997
27. Panelist, NASA Microgravity Program Panel Review on Complex Fluids Proposals. Offices of IMI, Washington, DC. 6/18-20/97
28. Chair, IUTAM symposium on "Viscoelastic Fluid Mechanics: Effects of Molecular Modelling", June 21-25, 1998. Stanford University
29. Co-Coordinator, IRGA, Center for Polymer Interfaces and Molecular Assemblages, Stanford University, Stanford, CA, Nov. 1998 — 1999.
30. Chair, Session on "Dilute Solutions and Coating Flows", 1998 Society of Rheology Meeting, October, Monterey, CA.
31. Chair, Faculty Search Committee, Department of Chemical Engineering, Stanford University, Stanford, CA, 1997-1998.
32. Committee for the Office of Technology and Licensing Research Incentive Grants, 1995, 1998, Stanford University
33. Chair, Session on "Novel Physical Phenomena" in the Fundamental Research in Fluid Mechanics, A. I. Ch. E. Annual Meeting, 11/99
34. Chair, Session on "Complex and Smart Fluids", 20th International Congress of Theoretical and Applied Mechanics, Chicago, Ill., August 27-Sept. 2, 2000.
35. Conference Organizing Committee and Chair, Session on "Micro-Modelling", 3rd Pacific Rim Conference on Rheology, Vancouver, British Columbia, Canada, July 8-13, 2001
36. Stanford Mentor for Young Faculty, 1996-present
37. Stanford Committee on the Development of Computational and Mathematical Engineering, 1999-present
38. Stanford ABET committee and Chair of Accreditation Committee of Stanford Chemical Engineering, 1999-present
39. Chair, NonNewtonian Fluid Mechanics Session, International Congress of Rheology, Cambridge, England, August 20-25, 2000
40. Chair and Co-Organizer, International Workshop on Numerical Methods in Viscoelastic Flows, Seascape Resort, Aptos, California, July 15-17, 2001
41. Chair, Session on "Microscopic Rheology: Experiment and Analysis", 72nd Annual Meeting of the Society of Rheology, February 11-15, 2001, Hilton Head, South Carolina
42. APS Division of Fluid Dynamics Fellowship Committee, 12/2000 - 12/2002
43. Colburn Award Committee, AIChE, 2001
44. Coordinator, IRG-2, Center for Polymer Interfaces and Molecular Assemblages, Stanford University, Stanford, CA, Sept. 2001 - 8/2005; Co-Coordinator, 8/2005 – present.
45. APS Division of Fluid Dynamics Otto Laporte Award Committee, 1/2002 - present
46. Organizer, Meeting of the American Physical Society, March 18, 2002, Indianapolis, Indiana, Session B2 (Single Molecule DNA and Complex Fluid Dynamics)
47. Visiting Professor, Department of Chemical Engineering, Monash University, Clayton Campus, Victoria, 3800 Australia 6/2002
48. Member, Ad Hoc Committee to Review Physics of Fluids, Oct. 10-11, 2002, UCLA, California
49. Walker Award Committee, AIChE, 2003
50. Flow Physics and Computation Division Representative to Executive Committee — Dept. of Mechanical Engineering, Stanford University, 9/1/2001 — 2/2003
51. Chair, NonNewtonian flows Session, APS-DFD Annual Meeting, Sheraton Meadowlands, NJ, November 23-25, 2003.
52. Chair, Turbulent Flows Session, AIChE Annual Meeting, Austin Texas, November, 2004
53. Organizing Committee, International Congress on Rheology, Seoul, Korea, August 2004; Chair of Stability Session, ICR2004, Chair of NonNewtonian Flows Session, ICR2004
54. Technical Program Chair, Annual Society of Rheology Meeting, Victoria, British Columbia, Canada. October, 2005.
55. Local Organizing Committee, International Congress on Rheology, Monterey, CA, August 2008
56. Meetings Policy Committee, Society of Rheology, 2005 — present
57. Co-organizer of The International Workshop on Mesoscale and Multiscale Description of Complex Fluids, Prato-Monash Center, Prato, Italy, July 5-8, 2006.

OTHER SEMINARS AND PRESENTATIONS

1. Shaqfeh, E.S.G. (speaker) and Acrivos, A., "*The Boycott Effect Revisited: The Influence of Inertia*", Annual A.I.Ch.E. Conference, San Francisco, CA, Fluid Mechanics Section, 11/25/84
2. Shaqfeh, E.S.G., "*The Effects of Inertia on Inclined Gravity Sedimentation*", Joint Fluid Mechanics Forum, U.C. Berkeley, Berkeley, CA, 7/19/85
3. Shaqfeh, E.S.G. (speaker) and Acrivos, A., "*The Effects of Inertia on Inclined Gravity Sedimentation*", A.P.S. Division of Fluid Mechanics Conference, Tucson, AZ, 11/24-26/85
4. Shaqfeh, E.S.G. (speaker) and Acrivos, A., "*The Boycott Effect*", IUTAM Symposium, *Fluid Mechanics in the Spirit of G.I. Taylor*, D.A.M.T.P., Cambridge, Eng., 3/24-28/86
5. Shaqfeh, E.S.G., "*The Effects of Inertia on Inclined Gravity Sedimentation*", D.A.M.T.P., Cambridge, Eng., Fluid Mechanics Seminar, 4/15/86
6. Shaqfeh, E.S.G., "*The Effects of Inertia on Inclined Gravity Sedimentation*", Institut fur Stromungslehre and Wärmeübertragung, Technische Universität, Wien, Austria, Department Seminar, 10/10/86
7. Shaqfeh, E.S.G., "*The Effects of Inertia on Inclined Gravity Sedimentation*", Department of Mathematics, University College London, London, Eng., Department Seminar, 11/10/86
8. Shaqfeh, E.S.G., "*The Effects of Hydrodynamic Interactions on the Orientation of Axisymmetric Particles in Two Simple Flows*", Department of Chem. Eng., Stanford University, Stanford, CA, Department Seminar, 5/6/87
9. Shaqfeh, E.S.G., "*The Effects of Hydrodynamic Interactions on the Orientation of Axisymmetric Particles in Two Simple Flows*", Department of Chem. Eng., Calif. Inst. of Tech., Pasadena, CA, Department Seminar, 5/7/87
10. Shaqfeh, E.S.G., "*The Effects of Hydrodynamic Interactions on the Orientation of Axisymmetric Particles Flowing Through Fixed Beds*", School of Chem. Eng., Cornell University, Ithaca, NY, Department Seminar 9/29/87
11. Shaqfeh, E.S.G., "*The Effects of Hydrodynamic Interactions on the Orientation of Axisymmetric Particles Flowing Through Fixed Beds or Sedimenting*", Department of Applied Mathematics, Harvard University, Cambridge, Mass. Department Seminar 10/7/87
12. Shaqfeh, E.S.G.(speaker) and D.L. Koch, "*The Effects of Hydrodynamic Interactions on the Orientation of Axisymmetric Particles Flowing Through a Fixed Bed of Spheres of Fibers*", 1987 Annual AIChE Meeting, NY, NY, 11/15—20/87
13. Shaqfeh, E.S.G., "*A Non-Local Theory of Heat Conduction in Dilute and Semi-Dilute Composites of Highly Conducting Fibrous Inclusions*", 1987 Annual AIChE Meeting, NY, NY, 11/15—20/87
14. Koch, Donald L. (speaker) and E.S.G. Shaqfeh, "*Structure and Its Effects on the Transport Properties of Sedimenting Suspensions*", 1987 Annual AIChE Meeting, NY, NY, 11/15—20/87
15. Koch, Donald L. (speaker) and E.S.G. Shaqfeh, "*Structure and Its Effects on the Transport Properties of Sedimenting Suspensions*", 40th Anniversary Meeting of the Division of Fluid Dynamics, American Physical Society, Eugene, Ore., 11/22—24/87
16. Shaqfeh, E.S.G. (speaker), R.G. Larson and G.H. Fredrickson, "*The Stability of a Falling Viscoelastic Film at Low to Moderate Reynolds Numbers*", 40th Anniversary Meeting of the Division of Fluid Dynamics, American Physical Society, Eugene, Ore., 11/22—24/87
17. Frattini, P.L. (speaker), S.R. Galante, C.A. Sharpe, E.S.G. Shaqfeh, and D.L. Koch, "*On the Orientation of Axisymmetric Particles Flowing Through a Bed of Fixed Fibers*" 40th Anniversary Meeting of the Division of Fluid Dynamics, American Physical Society, Eugene, Ore., 11/22—24/87
18. Shaqfeh, E.S.G., "*A Non-Local Theory of Heat Conduction in Dilute and Semi-Dilute Fibrous Composites*", Department of Chemical Engineering, Carnegie Mellon University, Pittsburgh, PA, Department Seminar, 4/19/88
19. Shaqfeh, E.S.G., "*Fundamental Problems Related to Determining the Properties of Fibrous Composites*", Department of Chemical Engineering and Materials Science, University of Minnesota, Minneapolis, Minn., Department Seminar, 4/26/88
20. Shaqfeh, E.S.G., "*Fundamental Problems Related to Determining the Properties of Fibrous Composites*", Department of Chemical Engineering, University of Wisconsin, Madison, Wisconsin, Department Seminar 4/20/88
21. C.W. Jurgensen(speaker) and E.S.G. Shaqfeh, "*Factors Controlling the Etching Rate and Process Latitude of the O₂ Reactive Ion Etching Pattern Transfer Step in Multilevel Lithography*", Eighth International Conference on Photopolymers, The Society of Plastics Engineers, Nevele Country Club, Ellenville, NY 10/30-11/2/88

22. Shaqfeh, E.S.G., "*Nonlocal Effective Medium Theory in the Description of Fibrous Composites*", Acivos 60th Birthday Symposium, Pajaro Dunes, CA. 6/13/88
23. Shaqfeh, E.S.G., "*Interactions in Fibrous Dispersions*", Fluid Mechanics Group, Department of Chemical Engineering, Princeton University, Princeton, NJ, 7/29/88
24. Shaqfeh, E.S.G.(speaker) and G.H. Fredrickson, "*A Nonlocal Theory of Transport in Fibrous Dispersions*", Paper No. 152g, 1988 Annual AIChE Meeting, Washington, D.C., 12/1/88
25. Shaqfeh, E.S.G.(speaker) and G.H. Fredrickson, "*Heat and Mass Transport in Dispersions of Aligned Slender Fibers*", 41st Annual Meeting of the Fluid Dynamics Division of the American Physical Society, SUNY, Buffalo, NY., 11/20—22/88
26. Shaqfeh, E.S.G.(speaker) and G.H. Fredrickson, "*Diagrammatic Methods in Transport in Fibrous Dispersions*", Fluid Mechanics and Suspensions Seminars, Dept. of Chemical Engineering, Cornell University, Ithaca, NY 9/7/88
27. Shaqfeh, E.S.G. (speaker) and G.H. Fredrickson, "*Nonlocal Heat and Momentum Transfer in Fibrous Dispersions*", Fluid Mechanics and Suspensions Seminars, Dept. of Chemical Engineering, Cornell University, Ithaca, NY 9/8/88
28. Jurgensen, C.W.(speaker) and E.S.G. Shaqfeh, "*Simulation of Etching Profiles and Process Latitudes for the O₂ Reactive Ion Etching Pattern Transfer Step in Multilevel Lithography*", SPIE's 1989 Symposium on Microlithography, San Jose, CA 2/27/89—3/3/89
29. Jurgensen, C.W.(speaker) and E.S.G. Shaqfeh, "*Simulation of Etching Profiles and Process Latitudes for the O₂ Reactive Ion Etching Pattern Transfer Step in Multilevel Lithography*", American Chemical Society Polymers in Microlithography Symposium, Dallas, TX 4/9—14/89
30. Shaqfeh, E.S.G., "*Fundamental Problems in Predicting the Properties of Short Fiber Composites*", Department of Chem. Eng., Northwestern Univ., Evanston, Ill. 2/23/89
31. Shaqfeh, E.S.G., "*Fundamental Problems in Predicting the Properties of Short Fiber Composites*", Department of Chem. Eng., Princeton University, Princeton, NJ 3/31/89
32. Shaqfeh, E.S.G., "*Fundamental Problems in Predicting the Properties of Short Fiber Composites*", Department of Mech. Eng., Cornell University, Ithaca, NY 4/4/89
33. Shaqfeh, E.S.G., "*Fundamental Problems in Predicting the Properties of Short Fiber Composites*", Department of Chem. Eng., Syracuse University, Syracuse, NY 4/11/89
34. Shaqfeh, E.S.G., "*Two Purely Elastic Instabilities*", Department of Chem. Eng., Notre Dame, Notre Dame, Ind. 5/2/89
35. Jurgensen, C.W. (speaker) and E.S.G. Shaqfeh, "*A Kinetic Theory of Bombardment Induced Interface Evolution*", 33rd International Symposium on Electron, Ion, and Photon Beams, Monterey, CA 5/30/89
36. Koch, D.L.(speaker) and E.S.G. Shaqfeh, "*Orientation in Dilute and Semi-dilute Suspensions of Non-Brownian Fibers Subject to Uniaxial Extensional Flows*", 61st Annual Meeting of the Society of Rheology, Montreal, Canada 10/24/89
37. Shaqfeh, E.S.G. and D.L. Koch, "*Hydrodynamic Orientation Dispersion in Extensional Flows of Slender Fibers*", 1989 Annual AIChE Meeting, Paper 12d, San Francisco, CA.
38. Muller, S.J. (speaker), R. G. Larson and E.S.G. Shaqfeh, "*A Purely Elastic Instability in Taylor-Couette Flow*", 61st Annual Meeting of the Society of Rheology, Montreal, Canada, 10/24/89
39. Larson, R.G.(speaker), E.S.G. Shaqfeh, and S.J. Muller, "*A Purely Elastic Instability in Taylor-Couette Flow*", 1989 Annual AIChE Meeting, San Francisco, CA, 11/5/89
40. Shaqfeh, E.S.G.(speaker), S.J. Muller, and R.G. Larson, "*A Purely Elastic Instability in Taylor-Couette Flow*", 42nd Annual Meeting of the Division of Fluid Dynamics of the American Physical Society, Palo Alto, CA 11/19/89
41. Shaqfeh, E.S.G., "*Problems in the Kinetic Theory of Viscous Suspensions*", The Levich Institute, City College of New York, NY, NY, Department Colloquium 1/30/90
42. Shaqfeh, E.S.G., "*A Purely Elastic Instability in Taylor-Couette Flow*", Fluid Mechanics Group, California Institute of Technology, Pasadena, CA. 4/18/90
43. Shaqfeh, E.S.G.(speaker) and A. Sangani, "*Simulation and Theory in the Study of Fiber Dispersions*" Annual Fine Particle Society Meeting, San Diego, CA. 8/21—25/90
44. Shaqfeh, E.S.G., "*The Configuration of Particles and Polymers in Flow Through Fixed Beds*", Department Colloquium, Univ. of CA at Santa Barbara, CA. 11/8/90

45. Shaqfeh, E.S.G. (speaker), S.J. Muller and R.G. Larson, "*The Effect of Finite Gap, Inertia and Dilute Solution Properties on the Viscoelastic Taylor-Couette Instability*", Annual AIChE Meeting, Chicago, IL. 11/14/90
46. Shaqfeh, E.S.G. and D.L. Koch (speaker), "*Polymer Stretch in Fixed Beds*", Annual AIChE Meeting, Chicago, IL. 11/14/90
47. Shaqfeh, E.S.G. (speaker) and D.L. Koch, "*The Configuration of Particles and Polymers in Flow Through Fixed Beds*", APS Division of Fluid Dynamics Annual Meeting, Cornell University, Ithaca, NY 11/21/90
48. Shaqfeh, E.S.G., "*A Purely Viscoelastic Instability in Taylor-Couette Flow*", Fluid Mechanics Seminar, Department of Mechanical Engineering, Stanford University, 12/90
49. Shaqfeh, E.S.G., "*Purely Elastic Instabilities in Simple Viscometric Flows*", Department Colloquium, Chemical Engineering Department, Univ. of California at Davis, 4/8/91
50. Shaqfeh, E.S.G., "*Purely Elastic Instabilities in Simple Viscometric Flows*", Fluid Mechanics Colloquium, E.S.P.C.I., Paris, France 6/17/91
51. Shaqfeh, E.S.G., "*Purely Elastic Instabilities in Simple Viscometric Flows*", Department Colloquium, Chemical Engineering Department, University of Colorado, Boulder, Co. 10/24/91
52. Shaqfeh, E.S.G. (speaker), V.K. Singh, and J.P. McVittie, "*Simulation and Experiment in Plasma RIE with Surface Reemission*", SEMATECH Expert Panel on Plasma Enhanced Processing, Dallas, Texas 9/16/91
53. V.K. Singh (speaker), E.S.G. Shaqfeh, and J.P. McVittie, "*Simulation of Reactive Ion Etching with Surface Re-emission*", Annual Meeting of the Electrochemical Society, Phoenix, AZ. October, 1991
54. V.K. Singh (speaker), E.S.G. Shaqfeh and J.P. McVittie, "*Simulation of Profile Evolution in Plasma Etching Using a Surface Re-emission Model*", American Institute of Chemical Engineers 1991 Annual Meeting, Los Angeles, CA. November, 1991. Paper No. 28b
55. Joo, Y.L. (speaker), and E.S.G. Shaqfeh, "*Purely Elastic Instabilities in Dean and Taylor Dean Flows*", American Institute of Chemical Engineers 1991 Annual Meeting, Los Angeles, CA November, 1991 Paper No. 112f
56. Larson, R.G. (speaker), S.J. Muller, and E.S.G. Shaqfeh, "*The Elastic Taylor-Couette Instability for Rheologically Complex Fluids*", American Institute of Chemical Engineers 1991 Annual Meeting, Los Angeles, CA. November, 1991 Paper No. 24b
57. Shaqfeh, E.S.G., "*Microstructural Configuration in Flow Through Fixed Beds*", 3M Research Center, Minneapolis, Minn. 3/18/92
58. Shaqfeh, E.S.G. (speaker) and Anthony R. Evans, "*Microstructural Configuration in Flow Through Fixed Beds*", 23rd Annual Meeting of the Fine Particle Society, Symposium on Multiphase Flow, Riviera Hotel, Las Vegas, 7/14/92
59. Shaqfeh, E.S.G. (speaker), A.R. Evans, and P.L. Frattini, "*Polymer Configuration During Flow Through a Fixed Bed of Fibers*", XIth International Congress on Rheology, Brussels Convention Hall, Brussels, Belgium (Session on Composite Materials) 8/17—21/92
60. Shaqfeh, E.S.G. "*Purely Elastic Instabilities in Viscometric and Nearly Viscometric Flows*", 1992 Packard Fellowship Meeting, Monterey Bay Aquarium, Monterey, CA 9/10/92
61. Shaqfeh, E.S.G. "*Purely Elastic Instabilities in Viscometric and Nearly Viscometric Flows*", Department of Chem. Eng., Univ. of Minnesota, Department Colloquium, 9/29/92
62. Shaqfeh, E.S.G. "*Purely Elastic Instabilities in Viscometric and Nearly Viscometric Flows*", Department of Chem. Eng., Northwestern University, Department Colloquium, 10/1/92
63. Shaqfeh, E.S.G. "*Simulation of Profile Evolution in Plasma RIE with Surface Transport*", Engineering Research Center for Plasma-Aided Manufacturing, University of Wisconsin, Fall Colloquium Series, 10/2/92
64. Mackaplow, M. (speaker) and E.S.G. Shaqfeh, "*Numerical Simulation of Transport Properties in Fiber Dispersions*", 1992 Annual AIChE Meeting, Miami Beach, Fla. Fundamental Research in Fluid Mechanics: Particulate and Multiphase Flows I Session, Paper 78c, 11/2/92
65. Evans, A.R. (speaker), E.S.G. Shaqfeh, and P.L. Frattini, "*Polymer Stretch in Fixed Fiber Beds as a Stochastic Strong Flow*", 1992 Annual AIChE Meeting, Miami Beach, Fla., Fundamental Research in Fluid Mechanics: Non-Newtonian Flows Session, 11/3/92
66. Joo, Y.L. (speaker) and E.S.G. Shaqfeh, "*Observations of Purely Elastic Instability in the Taylor-Dean Flows of a Polyisobutylene Boger Fluid*", 1992 Annual AIChE Meeting, Miami Beach, Fla., Fundamental Research in Fluid Mechanics: Stability and Non-Linear Hydrodynamics Session, 11/4/92
67. Singh, V.K. (speaker) and E.S.G. Shaqfeh, "*Time Evolution of Surface Roughness in LPCVD*" Paper 202c, 1992 Annual AIChE Meeting, Miami Beach, Fla., 11/4/92

68. Shaqfeh, E.S.G. "Purely Elastic Instabilities in Viscometric and Nearly Viscometric Flows", Department of Chem. Eng., California Institute of Technology, Department Colloquium, 1/12/93
69. Shaqfeh, E.S.G. "Simulation and Experiment in Silicon RIE Profile Evolution", Lawrence Livermore Laboratories, 1/29/93
70. Joo, Y.L., I.Dris, and E.S.G. Shaqfeh (speaker), "A Theoretical and Experimental Study of Viscoelastic Instabilities in Taylor-Dean Flows and Eccentric Cylinder Flows", 65th Annual Society of Rheology Meeting, Non-Newtonian Fluid Mechanics, Paper C, Santa Barbara, 2/8/93
71. Koch, D.L. (speaker), R.R. Sundararajkumar, and E.S.G. Shaqfeh, "Effective Thermal Conductivity and Extensional Viscosity of Semi-Dilute Dispersions of Disks", 65th Annual Society of Rheology Meeting, Complex Fluids: Non-Brownian Systems, Paper D30, Santa Barbara, 2/10/93
72. Shaqfeh, E.S.G., "The Transport Properties of Short Fiber Dispersions: Simulation and Theory", Applied Mathematics Seminar, Stanford University, Stanford, CA, 5/13/93
73. Shaqfeh, E.S.G., "Purely Elastic Instabilities in Viscometric and Nearly Viscometric Flows", Department of Chemical and Nuclear Engineering, Univ. of Calif. at Santa Barbara, Santa Barbara, CA, Department Colloquium, 5/25/93
74. Shaqfeh, E.S.G., "Particle Configuration and Polymer Stretch in Flow Through Fixed Beds", Department of Chemical Engineering, Univ. of Calif. at Berkeley, Berkeley, CA, Department Colloquium, 10/11/93
75. Schiek, R. and E.S.G. Shaqfeh, "The Nonlocal Stress of a Bound, Brownian Suspension of Slender Fibers", Suspensions Symposium, Society of Rheology Meeting, Boston, MA 11/17-21/93
76. Mackaplow, M. (speaker) and E.S.G. Shaqfeh, "Simulations of the Sedimentation of a Fiber Suspension", Particulate and Multiphase Flow Session, Fluid Mechanics Section, AIChE National Meeting, St. Louis, MO 11/16-19/93
77. Joo, Y.L. (speaker) and E.S.G. Shaqfeh, "An Elastic Instability in the Flow Near a Meridional Block in a Taylor-Couette Cell", Pattern Formation and Non-linear Stability Session, AIChE National Meeting, St. Louis MO 11/16-19/93
78. Schiek, R. L. (speaker) and E.S.G. Shaqfeh, "The Non-Local Stress of a Bound, Brownian Suspension of Slender Fibers", Suspensions Section, APS-DFD Meeting, Albuquerque, NM 11/21-23/93
79. Dris, I.R. (speaker), Y.L. Joo, and E.S.G. Shaqfeh, "On Purely Elastic Cylinders in Eccentric Cylinder Flows", Non-Newtonian Flows Section, APS-DFD Meeting, Albuquerque, NM 11/21-23/93
80. Doyle, P., E.S.G. Shaqfeh, and A.P. Gast, (poster) "Brownian Dynamics Simulations of Flexible Fibers in Shear Flow", Gordon Conference on Macromolecular Polyelectrolyte Solutions, Chair : Robert Pecora, Oxnard, CA, 2/11/94
81. Shaqfeh, E.S.G. "Transport in Fiber Suspensions – the Local and NonLocal Problem", Washington University at St. Louis, Department Colloquium, St. Louis, MO 3/21/94
82. Schiek, R. and E.S.G. Shaqfeh "The Non-Local Stress of a Bound, Brownian Suspension of Slender Fibers", 68th ACS Colloids and Surface Science Symposium, Rheology Symposium, June 22, 1994
83. Doyle, P., E.S.G. Shaqfeh, and A.P. Gast "Dynamic Simulation of Polymer Chains Near and Tethered to Impermeable Interfaces", 68th ACS Colloids and Surface Science Symposium, Rheology Symposium, June 22, 1994
84. Frattini, P. (speaker), A.R. Evans and E.S.G. Shaqfeh, "Polymer Stretch During Flow Through a Random Fibrous Media", Golden Gate Polymer Forum, Dinner Meeting, July 21, 1994
85. Doyle, P., E.S.G. Shaqfeh, and A.P. Gast "Brownian Dynamics of Flexible Polymers Near Interfaces" Fundamental Research in Fluid Mechanics: Interfacial Flows, Annual AIChE Meeting, Nov. 13-18, 1994, San Francisco.
86. Shaqfeh, E.S.G., A.R. Evans and A.B. Mosler, "The Flow of Semi-Rigid Polymers through a Dilute Porous Bed" Fundamental Research in Fluid Mechanics: Multiphase and Particulate Flows, Annual AIChE Meeting, Nov. 13-18, 1994, San Francisco.
87. Dris, I and E.S.G. Shaqfeh, "Purely Elastic Instabilities in Eccentric Cylinder Flows: Global versus Local Stability, 66th Annual Meeting of the Society of Rheology, Non-Newtonian Flows Session: Viscoelastic Instabilities, October 2-6, 1994
88. Mackaplow, M. and E.S.G. Shaqfeh, "A Numerical Study of the Rheological Properties of Suspensions of Rigid, Non-Brownian Fibers, 66th Annual Meeting of the Society of Rheology, Microscopic Analysis of Rheological Behavior Session, Session M, Paper M4, October 2-6, 1994
89. Shaqfeh, E.S.G. *Polymer Stretch in Disordered Fixed Beds: Stochastic Strong Flows ?* Chemical Engineering Department Colloquium, Massachusetts Institute of Technology, Cambridge, MA, Sept. 9, 1994

90. Shaqfeh, E.S.G. *Purely Elastic Instabilities in Viscometric and Nearly Viscometric Flows* Chemical Engineering Department Colloquium, City College of New York, NY, NY, Sept. 12, 1994
91. Shaqfeh, E.S.G. *Dynamic Simulations of the Sedimentation of Fiber Suspensions*, 26th Annual Meeting of the Fine Particle Society, Symposium on Multiphase Flow, Hyatt Regency, Chicago, 8/22-25/95 (Invited Lecture)
92. Shaqfeh, E.S.G. *Numerical Simulations of the Rheology and Sedimentation of Fiber Suspensions*, Ecole Superieure De Physique et de Chimie Industrielle, Physique et Mecanique des Milieux Heterogenes, Paris, France 3/8/95
93. Shaqfeh, E.S.G. *Polymer Stretch in Disordered Fixed Beds: Stochastic Strong Flows*, Ecole Superieure De Physique et de Chimie Industrielle, Physique et Mecanique des Milieux Heterogenes, Paris, France 3/16/95
94. Shaqfeh, E.S.G. *Purely Elastic Instabilities in Taylor-Dean and Eccentric Cylinder Flow*, Ecole Superieure De Physique et de Chimie Industrielle, Physique et Mecanique des Milieux Heterogenes, Paris, France 3/22/95
95. Shaqfeh, E.S.G. *The elastic stability of journal bearing flows and related recirculated flows*, Ninth International Workshop on Numerical Methods in Non-Newtonian Flows, Llyndir Hall, Rossett, Wales, 19-22 April, 1995
96. Schiek, R.L. and E.S.G. Shaqfeh (speaker) *Non-local stress of a bound, Brownian suspension of slender, rigid fibers*, Applied Mathematics Seminar, Stanford University, 27, April, 1995.
97. Shaqfeh, E.S.G. (speaker), M. Mackaplow, B. Herzhaft, E. Guazzelli, and D. L. Koch "The Sedimentation of Fiber Suspensions", Annual AIChE meeting, Miami Beach, Fla., Fundamental Research in Fluid Mechanics: Multiphase and Particulate Flow I, 12-19 November 1995
98. Doyle, P. (speaker), E.S.G. Shaqfeh, and A.P. Gast, "Dynamic simulation and the rheology of semi-flexible polymers in linear flows", Annual AIChE meeting, Miami Beach, Fla., Fundamental Research in Fluid Mechanics: Non-Newtonian Flow, 12-19 November 1995
99. E.S.G. Shaqfeh (speaker), P. Doyle, and A.P. Gast "Dynamic simulation and the rheology of semi-flexible polymers in linear flows", 67th Society of Rheology Meeting, Sacramento, Oct. 8-12, 1995 Numerical simulations and Methods session.
100. A. Grillet and E.S.G. Shaqfeh "Viscoelastic instabilities of recirculation flows", 67th Society of Rheology Meeting, Sacramento, Oct. 8-12, 1995 Numerical simulations and Methods session.
101. A. Mosler and E.S.G. Shaqfeh "The conformation change of model polymers in stochastic flow fields" 67th Society of Rheology Meeting, Sacramento, Oct. 8-12, 1995 Polymer processing, Mixing and Dispersions session.
102. R.L. Schiek and E.S.G. Shaqfeh "Cross streamline migration of rigid, Brownian fibers experiencing plane Poiseuille flow in a narrow gap" 67th Society of Rheology Meeting, Sacramento, Oct. 8-12, 1995 Suspensions, Colloids and Granular Materials.
103. M.B. Mackaplow (speaker) and E.S.G. Shaqfeh, "Numerical Simulation of the rheology and sedimentation of fiber suspensions", University of Manchester Institute of Science and Technology - Department of Chemical Engineering, Manchester, 4/95
104. M.B. Mackaplow (speaker) and E.S.G. Shaqfeh, "Numerical Simulation of the rheology and sedimentation of fiber suspensions", GDR Physique des Milieux Heterogenes Complexes - Reunion Suspensions, FAST (Orsay, France), 3/23/95
105. P. Doyle (speaker), E.S.G. Shaqfeh, A.P. Gast – Invited Lecture – "Stochastic Simulation of Polymers" – Poster – "Dynamic Simulation of Tethered Polymers in Shear Flow" NATO ASI 940496 (Solvents and Self-Organization in Polymers) 8/1-8/11/95 Antalya, Turkey
106. M. Balooch (speaker), M. Moalem, W.E. Wang, A.V. Hamza, J. Levinson, and E.S.G. Shaqfeh, "Low-Energy Ar⁺ and Chlorine Ion Etching of Silicon", 48th Gaseous Electronics Conference, Berkeley, CA. October 9-13, 1995.
107. "Low energy Ar ion-induced and chlorine ion etching of silicon," M. Balooch, M. Moalem, Wei-E. Wang, A. V. Hamza, J. Levinson, and E. S. G. Shaqfeh, 42nd National Symposium of the American Vacuum Society, October 16-20, 1995, Minneapolis, MN.
108. P.S. Doyle, E.S.G. Shaqfeh (speaker), B. Yang, and B. Khomami, "The nonlocal rheology of polymer layers via a combined Brownian dynamics/finite elements approach", XIXth International Congress of Theoretical and Applied Mechanics, Kyoto, Japan, August 25-31, 1996 (Mini-symposium MF2 on nonNewtonian Fluid Flow)
109. P.S. Doyle (speaker), E.S.G. Shaqfeh and A. P. Gast, "The rheology of nondilute films of flexible, tethered chains by direct simulation," XIIth International Congress on Rheology, Quebec City, Quebec, Canada, Aug. 18-23, 1996

110. I. M. Dris (speaker) and E.S.G. Shaqfeh, "A theoretical and experimental study of purely elastic instabilities in eccentric cylinder flows" XIth International Congress on Rheology, Quebec City, Quebec, Canada, Aug. 18-23, 1996
111. E.S.G. Shaqfeh (speaker), I. Dris, A. Grillet, "Purely elastic instabilities in viscometric and nonviscometric flows", 3M Research Center, Minneapolis, Minnesota, Feb. 21-22, 1996
112. E.S.G. Shaqfeh(speaker), P. Doyle, A.P. Gast, "Brownian dynamics simulations of polymer rheology: local and nonlocal problems" School of Chemical Engineering, Cornell University, Ithaca, NY, Feb. 27 1996
113. E.S.G. Shaqfeh(speaker), P. Doyle, A.P. Gast, "Brownian dynamics simulations of polymer rheology: local and nonlocal problems" Special Seminar, Rheology Group, Mass. Inst. of Tech., Cambridge, Mass. Feb. 26 1996
114. E.S.G. Shaqfeh(speaker), P. Doyle, A.P. Gast, "Brownian dynamics simulations of tethered polymer layers", Center for Polymer Interfaces and Molecular Assemblages, Monthly Meeting, Stanford University, Feb. 29, 1996.
115. E.S.G. Shaqfeh(speaker), V. Singh, J. Levinson, "Profile simulation as a tool to understand plasma etching processes," Department of Mechanical Engineering, The University of Vermont, Feb. 23, 1996
116. E.S.G. Shaqfeh(speaker), V. Singh, J. Levinson, "Profile simulation as a tool to understand plasma etching processes," Intel Co., Bowers Ave., Santa Clara, CA 3/26/96 (Seminar to plasma etching and topography group)
117. E.S.G. Shaqfeh(speaker), P. Doyle, A.P. Gast, "Brownian dynamics simulations of tethered polymer layers", Sunrise club, Chemical Engineering Gazebo, Stanford University, 4/4/96 (Part of presentation for the Center for Polymers at Interfaces and Molecular Assemblages)
118. P.S. Doyle, E.S.G. Shaqfeh, and A.P.Gast, Poster Presented - "Stochastic Simulations of Polymers in Unbound Flows and Tethered to Interfaces," Gordon Research Conference Colloidal, Macromolecular and Polyelectrolyte Solutions Ventura, CA 2-11-96 to 2-16-96
119. J.A. Levinson, E.S.G. Shaqfeh, A. Hamza and M. Balooch, "The Ion-Assisted Etching and Profile Development of Silicon in Chlorine Plasmas", Poster presented at the annual SRC project review (topography session), Albuquerque, NM, April 1, 1996
120. J.A. Levinson, E.S.G. Shaqfeh, A.Hamza and M. Balooch, "Ion-assisted etching and profile development of Si in Cl_2 " Plasma Etch Users Group, Monthly Meeting, Northern California Chapter, American Vacuum Society Topic: Applications of Plasma Models to IC Processing Thursday, June 13, 1996 National Semiconductor Corporation, 955 Kifer Rd, Santa Clara, CA 95051
121. J.A. Levinson(speaker), E.S.G. Shaqfeh, A.Hamza and M. Balooch, "The Ion-assisted Etching and Profile Development of Silicon in Chlorine" Abstract Number: 602 Program Number: PS1-TuM8 Session Title: Etch I AVS 43rd National Symposium, October 14-18, 1996, Philadelphia, PA
122. E.S.G. Shaqfeh, "The Dynamic Simulations of Ultrathin Polymer Brushes", Packard Fellows Annual Meeting, Sept. 4-7, 1996, Monterey Bay Aquarium, Monterey, CA
123. A.B. Mosler (speaker) and E.S.G. Shaqfeh, "Drop Break-Up in the Flow Through Fixed Beds", Particulate and Multiphase Flows Session, Annual Meeting of the American Institute of Chemical Engineers, Nov. 10-15, 1996, Chicago.
124. P.S.Doyle (speaker), E.S.G. Shaqfeh, and A.P. Gast, "Stochastic Simulation Of The Rheology Of Flexible, Tethered Chains" Interfacial Flows Session, Annual Meeting of the American Institute of Chemical Engineers, Nov. 10-15, 1996, Chicago.
125. A.B. Mosler (speaker) and E.S.G. Shaqfeh, "Drop Breakup in the Flow through Fixed Beds", The American Physical Society Division of Fluids Dynamics Annual Meeting, Syracuse, NY November 24, 1996, Suspensions Session.
126. E.S.G. Shaqfeh, "Kinetic Studies in Plasma Etching Simulations: Si Etching with Cl_2 " The Northern California Chapter of the American Vacuum Society, PLASMA ETCH '96 SYMPOSIUM, Le Baron Hotel, San Jose, California
127. J. A. Levinson (speaker), E.S.G. Shaqfeh, M. Balooch and A.V. Hamza, "The ion-assisted etching and profile development of silicon in chlorine", 19th Surface/Interface Research Meeting of the NCCA/V, SLAC, Sept. 17, 1996.
128. E.S.G. Shaqfeh (speaker), G.M .Homsy, and C.R. Robertson, "Novel Computer Based Demonstrations in Teaching Applied Mathematics and Transport Phenomena", Computers in the Curriculum Session, Annual Meeting of the American Institute of Chemical Engineers, Nov. 10-15, 1996, Chicago.
129. E.S.G. Shaqfeh, G.M .Homsy (speaker), and C.R. Robertson, "Novel Computer Based Demonstrations in Teaching Applied Mathematics and Transport Phenomena", 1997 ASEE/PSW Conference, *Emerging Classroom Technologies in Engineering Education*, Mar. 14-15, 1997, San Luis Obispo.

130. E.S.G. Shaqfeh, "Purely elastic instabilities in viscometric and related non-viscometric flows", Fluid mechanics seminar, Skilling Auditorium, Stanford University, Dec. 3, 1996
131. P.S.Doyle (speaker), T. Kwan, E.S.G. Shaqfeh, G. McKinley, and S.Spiegelberg, "Brownian dynamics simulations of polymers in transient extensional flows: Extensional relaxation and solvent quality", 68th Annual Meeting of the Soc. of Rheol., Galveston, Texas, Paper NS11, Numerical Simulations session. Feb 19, 1997.
132. P.S.Doyle, E.S.G. Shaqfeh, H.K. Ganpule and B. Khomami, "The rheology of confined polymer solutions in pressure driven flow: a numerical study", 68th Annual Meeting of the Soc. of Rheol., Galveston, Texas, Paper NS14, Numerical Simulations session. Feb 20, 1997.
133. E.S.G. Shaqfeh, "Brownian Dynamics Simulations of Confined Polymer Layers", Stat. Mech Seminar, Department of Chemistry, Berkeley, CA, 3/7/97
134. E.S.G. Shaqfeh, "Elastic Instabilities in Free Surface Displacement Flows" Polymer seminar, Department of Chemical Engineering, Univ. Cal at Berkeley, 4/2/97
135. E.S.G. Shaqfeh, "The Role of Brownian Dynamics Simulations in the Study of Polymer Rheology", Department Colloquium, Department of Chemical Engineering, Univ. Cal at Berkeley, 4/14/97
136. E.S.G. Shaqfeh, " The role of Brownian dynamics simulations in the study of polymer rheology", Department Colloquium, Department of Chemical Engineering, Stanford University, Stanford CA., 4/9/97
137. E.S.G. Shaqfeh, " The role of Brownian dynamics simulations in the study of polymer rheology", Department Colloquium, Department of Chemical Engineering, University of Illinois,Urbana, Ill ., 4/22/97
138. P.S. Doyle, T. Kwan, E.S.G. Shaqfeh and A. P. Gast, " Brownian Dynamics simulations of sheared "wet" polymer brushes ", Annual ACS meeting, Paper # 480 Session: Organic Thin Films: Grafting and Surface Segregation. 4/16/97
139. A.B. Mosler and E.S.G. Shaqfeh (speaker), "Drop Breakup in the Flow through Fixed Beds", NASA Lewis Air Force Base, NASA Microgravity Program, Department and Area Seminar, Cleveland, OH, 4/25/97 November 24, 1996, Suspensions Session.
140. J. A. Levinson (speaker), A.V. Hamza, E.S.G. Shaqfeh, and M. Balooch "The Selective Growth of SiC Films Via C60 Precursors and the Profile Development of the Silicon Underlayer" Session 08e07, paper 2478, Etching and Deposition in Electronic Materials Processing, Nov. 1997, Annual AIChE Meeting, Los Angeles, CA.
141. Joshua A. Levinson, Alex V. Hamza , Eric S.G. Shaqfeh, and Mehdi Balooch "Selective Growth of SiC Films Via C60 Precursors and the Profile Development of the Silicon Underlayer", 20th Surface/Interface Research Meeting, Northern California Chapter of the American Vacuum Society, Thursday, June 19, 1997, Lawrence Livermore National Laboratory, Livermore, CA.
142. Anne Grillet, Alex Lee, and Eric S.G. Shaqfeh (speaker), "Viscoelastic instabilities in coating and injection flows", IUTAM symposium on Rheology and Complex Fluids, Sydney, Australia 7/20-25/97
143. A.B. Mosler (speaker) and E.S.G. Shaqfeh, "An Experimental Investigation of Drop Break-Up in the Flow Through Fixed Beds", Fundamental Research in Fluid Mechanics: Particulate and Multiphase Flows Session, Annual Meeting of the American Institute of Chemical Engineers, Nov. 16-21, 1997, Los Angeles.
144. A. Grillet (speaker) and E.S.G. Shaqfeh "Investigation of the Stability of Elastic Fluid Interfaces in Fluid-Fluid Displacement", Annual Meeting of the American Institute of Chemical Engineers, Nov. 16-21, 1997, Los Angeles, Fundamental Research in Fluid Mechanics: Stability Session Thursday Nov 20, 3:50pm
145. E.S.G. Shaqfeh (speaker), Anne Grillet and Alex Lee, "Viscoelastic Instabilities of recirculation flows near solid surfaces and interfaces" Annual Society of Rheology Meeting, Oct 20-25, 1997, Columbus, OH. Non-Newtonian Fluid Mechanics session. Thursday Oct 23, 8:05am
146. Anne Grillet, Bin Yang, Bamin Khomami, and E.S.G. Shaqfeh, "A Numerical Study of Viscoelastic Flow in the Lid-Driven Cavity" Annual Society of Rheology Meeting, Oct 20-25, 1997, Columbus, OH.
147. Thomas Kwan (speaker) and E.S.G. Shaqfeh "A Brownian dynamics study on the effect of solvent quality on the rheology of polymer solutions" Annual Society of Rheology Meeting, Oct 20-25, 1997, Columbus, OH.
148. Joshua A. Levinson (speaker), Alex V. Hamza, Eric S.G. Shaqfeh, and Mehdi Balooch "The Selective Growth of SiC Films Via C60 Precursors and the Profile Development of the Silicon Underlayer" Annual Meeting of the American Institute of Chemical Engineers, Nov. 16-21, 1997, Los Angeles, Etching and Deposition in Electronic Materials Processing Session 08e07, Paper 2478
149. Elizabeth Kilkenny Wheeler(Speaker) Peter Fischer Gerald G. Fuller Eric S.G. Shaqfeh "Flow-Induced Structures and Instabilities in Viscoelastic Micellar Solutions", Annual Meeting of the American Institute of Chemical Engineers, Fundamental Research in Fluid Mechanics: Non-Newtonian Flows Nov. 16-21. 1997, Los Angeles

150. J. A. Levinson , E.S.G. Shaqfeh (speaker), M. Balooch and A.V. Hamza, "The ion-assisted etching and profile development of silicon in chlorine", CSMS TAB Meeting, University Affiliates Grant Review, Nov. 3, 1997, Ocracoke Room, Brighton Hall, Semiconductor Research Corporation.
151. E.S.G. Shaqfeh (speaker), A. Grillet, A. Lee, "Purely Elastic Instabilities in Bulk and Interfacial Flows", University of Wisconsin, Rheology Research Center, March 27, 1998.
152. E.S.G. Shaqfeh (speaker), A. Grillet, A. Lee, "Purely Elastic Instabilities in Bulk and Interfacial Flows", University of Delaware, Department of Chemical Engineering, April 17, 1998.
153. E.S.G. Shaqfeh (speaker), A. Grillet, A. Lee, "Purely Elastic Instabilities in Bulk and Interfacial Flows", Northwestern University, Department of Chemical Engineering, Feb. 27, 1998.
154. A. Grillet(speaker), B. Khomami, E.S.G. Shaqfeh, "Computational and Experimental Investigation of Lid Driven Cavity Flows", Annual AIChE National Meeting, NonNewtonian Flows Sessions, Miami Beach, Fla. Nov. 15-20, 1998
155. A. Grillet(speaker), E.S.G. Shaqfeh, B. Khomami, "Experimental Investigation of Lid Driven Cavity Flows", Annual Society of Rheology Meeting, Viscoelastic Processing Flows Session, Monterey, CA. Oct. 4-8, 1998
156. J. Levinson(speaker), E.S.G. Shaqfeh, M. Balooch, A. Hamza, "The Ion-assisted Etching and Profile Development of Silicon in Molecular and Atomic Chlorine: Experiment, Modelling, and Simulation" American Vacuum Society 45th International Symp, Plasma Surface Interactions Sessions, Baltimore, MD., Nov. 2-6, 1998
157. J. Levinson(speaker), E.S.G. Shaqfeh, M. Balooch, A. Hamza, "The Ion-assisted Etching and Profile Development of Silicon in Molecular and Atomic Chlorine: Experiment, Modelling, and Simulation" Annual AIChE National Meeting, Plasma Etching of Materials Sessions, Miami Beach, Fla. Nov. 15-20, 1998
158. A.G. Lee (speaker), E.S.G. Shaqfeh, "Elastic Instabilities in Free Surface Displacement Flows", Annual Society of Rheology Meeting, Solutions and Coating Rheology Session, Monterey, CA. Oct. 4-8, 1998
159. E.S.G. Shaqfeh and A.G. Lee, "Fingering in Fluid-Fluid Displacement of Highly Elastic Fluids", Annual AIChE National Meeting, Session Honoring the 70th Birthday of Andreas Acrivos, Miami Beach, Fla. Nov. 15-20, 1998
160. Thomas Kwan and E.S.G. Shaqfeh "A Brownian Dynamics Study of the Stress and Molecular Configuration of Single Polymer Chains in Exponential and Linearly-Ramped Shear Flow" Annual Society of Rheology Meeting, Extensional and Elongational Flows, Monterey, CA. Oct. 4-8, 1998 (poster)
161. Thomas Kwan and E.S.G. Shaqfeh "A Brownian Dynamics Study of the Solvent Quality Effects on Polymer Brushes" Annual Society of Rheology Meeting, Polymer Friction, Slippage, and Dynamics Near Interfaces Session, Paper FS8, Monterey, CA. Oct. 4-8, 1998
162. Thomas Kwan (speaker), E.S.G. Shaqfeh, P. Schorr, M. Tirrell, "A Brownian Dynamics Study of Solvent Quality Effects in Polymer Brush Lubrication and Dynamics" Annual AIChE National Meeting, Polymer Friction, Slippage and Dynamics Near Surfaces Session, Miami Beach, Fla. Nov. 15-20, 1998
163. E.S.G. Shaqfeh(speaker), A.B. Mosler, and P. Patel, "Drop Breakup in Fixed Bed Flows as Model Stochastic Flow Fields", 4th Microgravity Fluid Physics & Transport Phenomena Conference, Sponsored by NASA Microgravity, Aug. 12-14, 1998, Cleveland, Ohio
164. E.S.G. Shaqfeh(speaker), Joe S. Hur, T. Kwan, and A.P. Gast, "A Brownian Dynamics Study of Biaxial Extension and Exponential Shear Flow of Single Polymer Chains", IUTAM Symposium on Viscoelastic Fluid Mechanics: Effects of Molecular Modelling, Stanford, CA, June 21-25, 1998
165. E.S.G. Shaqfeh(speaker), A.G. Lee, Y. Kim and A.M. Grillet, "Elastic Instabilities in Coating Flows", I.U.S.T.I., Universitaire de Provence, Marseille, July 17, 1998.
166. E.S.G. Shaqfeh and A.G. Lee, "Fingering in the Fluid-Fluid Displacement and Coating of Highly Elastic Fluids", General Electric Corporation, Research Center, Schenectady, N.Y., 10/13-14/98
167. J.A. Levinson (speaker), E.S.G. Shaqfeh, M. Balooch, and A.V. Hamza, "Argon-ion induced etching and profile development of silicon in molecular and atomic chlorine", Oral and poster presentations at the 21st Surface/Interface Research Meeting, sponsored by the Surface/Interface Users Group of the Northern California Chapter of the American Vacuum Society, University of California at Davis, September 23, 1998.
168. E.S.G. Shaqfeh (speaker), P. Patel, A.B. Mosler, V. Cristini, J. Blawdziewicz, and M. Loewenberg, "Mechanisms of Drop Breakup in Flow Through Fixed Beds via Numerical Simulation", paper 123e, Fundamental Research in Fluid Mechanics: Interfacial Flows Session, AIChE Annual Meeting, Miami Beach, Fla. November 17, 1998
169. E.S.G. Shaqfeh (speaker), A.G. Lee, A. Grillet, and I. Dris, "Elastic ribbing instabilities in fluid-fluid displacement flows", Department of Chemical Engineering, University of California at Santa Barbara, March 4, 1999

170. E.S.G. Shaqfeh (speaker), A.G. Lee, A. Grillet, and I. Dris, "Elastic ribbing instabilities in fluid-fluid displacement flows", Department of Chemical Engineering, University of California at Los Angeles, March 5, 1999
171. E.S.G. Shaqfeh (speaker), A.G. Lee, A. Grillet, and I. Dris, "Elastic ribbing instabilities in fluid-fluid displacement flows", Department of Chemical Engineering, Iowa State University (of Science and Technology), March 11, 1999
172. E.S.G. Shaqfeh (speaker), A.G. Lee, A. Grillet, and I. Dris, "Purely elastic instabilities in bulk and interfacial flows: part 1"" Department of Chemical Engineering, Virginia Polytechnic Institute, Blacksburg, VA. April 15, 1999
173. E.S.G. Shaqfeh (speaker), A.G. Lee, A. Grillet, and I. Dris, "Purely elastic instabilities in bulk and interfacial flows: part 2"" Department of Mathematics, Virginia Polytechnic Institute, Blacksburg, VA. April 16, 1999
174. J. Hur, E.S.G. Shaqfeh (speaker), R.G. Larson, "Brownian dynamics simulations of single DNA chains in shear flow", 01j06 Fundamental Research in Fluid Mechanics: NonNewtonian Flows, Annual AICHE Meeting, Dallas, Texas, 11/3/99
175. T. Kwan and E.S.G. Shaqfeh (speaker), "Brownian dynamics simulations of single polymer chains in exponential and linearly-ramped shear flow", 01j10 Fundamental Research in Fluid Mechanics: General Papers, Annual AICHE Meeting, Dallas, Texas, 11/1/99
176. J. Hur (speaker), E.S.G. Shaqfeh, R.G. Larson, "Brownian dynamics simulations of single DNA chains in steady and transient shear flow", Rheology of polymer melts and solutions, 71st Society of Rheology Meeting, Madison, WI, 10/18/99
177. T. Kwan and E.S.G. Shaqfeh (speaker), "An experimental and simulation study of the behavior of single polymer chains in exponential and linearly-ramped shear flow", NonNewtonian fluid mechanics, 71st Society of Rheology Meeting, Madison, WI, 10/19/99
178. A.G. Lee and E.S.G. Shaqfeh (speaker), "Ribbing in the fluid-fluid displacement of highly elastic fluids", IUTAM Symposium on Nonlinear Wave Behavior in Multi-Phase Flow, Univ. of Notre Dame, Notre Dame, Indiana, Session IV: Advancing Fingers, Waves, Bubbles, 7/8/99
179. J.S. Hur, T. Kwan, E.S.G. Shaqfeh (speaker) and R.G. Larson, "Brownian dynamics simulations of single polymer chains in steady and time-varying shear flows", XIth International Workshop on Numerical Methods in Viscoelastic Flows, Vaals, The Netherlands, Aug. 25-28, 1999
180. J.S. Hur, T. Kwan, E.S.G. Shaqfeh (speaker) and R.G. Larson, "Brownian dynamics simulations of single polymer chains in steady and time-varying shear flows", Department Colloquium, Department of Chemical Engineering, Purdue University, Lafayette, Ind., Sept. 30, 1999
181. Patel, P., E.S.G. Shaqfeh, "Drop Dynamics in Flows through Fixed Fiber Beds", APS-DFD Annual Meeting, November 21, 1999 New Orleans, Session DK -Drops II.
182. E.S.G. Shaqfeh, "The Dynamics of DNA in Shear Flow", Fluid Mechanics Seminar, Stanford University, Stanford, January 24, 2000
183. E.S.G. Shaqfeh, "The Dynamics of DNA in Shear Flow", Department Colloquium, Washington University at St. Louis, St. Louis, MO, March 20, 2000
184. E.S.G. Shaqfeh, J.S. Hur, H.P. Babcock, D.E. Smith, and S. Chu, "The dynamics of dilute and semi-dilute dna solutions in shear flow", ICTAM 2000 Meeting, Chicago, Ill. Aug. 27-Sept. 2, 2000
185. J.S. Hur, E.S.G. Shaqfeh, H.P. Babcock, D.E. Smith, and S. Chu, "Brownian dynamics simulations of DNA chains with hydrodynamic interaction", XIIIth International Congress on Rheology, Cambridge, UK, Aug. 20-25, 2000
186. A. Lee, E.S.G. Shaqfeh, B. Khomami, "An experimental/theoretical study of elastic instabilities in free surface displacement flows", XIIIth International Congress on Rheology, Cambridge, UK, Aug. 20-25, 2000
187. N. Woo, E.S.G. Shaqfeh, "The rheology of polymer solutions in ultrathin films", ICTAM 2000 Meeting, Chicago, Ill. Aug. 27-Sept. 2, 2000
188. N. Woo and E.S.G. Shaqfeh, "Interfacial rheology of flexible polymers near and between impermeable boundaries", Fundamental Research in Fluid Mechanics: Non-Newtonian Flows, Annual AICHE Meeting, Los Angeles, Nov. 12-17, 2000
189. J. Butler and E.S.G. Shaqfeh, "Dynamic simulations of sedimenting, rigid fibers", Fundamental Research in Fluid Mechanics: Particulate and Multiphase Flows I, Annual AICHE Meeting, Los Angeles, Nov. 12-17, 2000
190. E.S.G. Shaqfeh, " An experimental and computational study of elastic fluid coating and coating instabilities", 3M Corporations, Minneapolis, Minnesota, June 29, 2000
191. A. Lee, E.S.G. Shaqfeh, and B. Khomami, "Viscoelastic free surface displacement flows: An experimental and computational study", 10th International Coating Process Science and Technology Symposium, Sept. 25-27, 2000, Scottsdale Radisson Resort Hotel in Scottsdale, AZ. Session TS7

192. E.S.G. Shaqfeh, "The dynamics of DNA in a shear flow", Special Seminar, Department of Chemical Engineering, Univ. of Calif. at Berkeley, Berkeley, CA. 8:00 am, 9/20/2000
193. E.S.G. Shaqfeh, "Computer Simulation of Stochastic Strong Flows", Invited Contribution, Annual AIChE Meeting, Los Angeles, CA, 11/13/2000, Paper 268i, Novel Numerical Methods in Fluid Mechanics Session
194. Nathan Woo and E.S.G. Shaqfeh, "Interfacial Rheology of Flexible Polymers Near and Between Impermeable Boundaries" Annual AIChE Meeting, Los Angeles, CA, 11/15/2000, Paper 135c, General Papers Session
195. Jason Butler and E.S.G. Shaqfeh, "Dynamic simulations of sedimenting Rigid Fibers", Annual AIChE Meeting, Los Angeles, CA, 11/14/2000, Paper 132j, Fundamental Research in Fluid Mechanics: Particulate and Multiphase Flows II
196. Charles M. Schroeder, Hazen Babcock, Joe S. Hur, Steve Chu, and Eric S. G. Shaqfeh, "Polymer dynamics in semi-dilute DNA solutions in a planar extensional flow" 72nd Annual Society of Rheology Meeting, Hilton Head, S. Carolina, Paper EF6, Monday, Feb. 12, 2001
197. Joe S. Hur and Eric S. G. Shaqfeh, "Brownian dynamics simulations of single DNA molecules in steady and transient mixed flow", 72nd Annual Society of Rheology Meeting, Hilton Head, S. Carolina, Paper MR4, Thursday, Feb. 15, 2001
198. Hazen Babcock, Rodrigo Teixeira, Eric S. G. Shaqfeh, and Steve Chu, "Single-polymer dynamics in steady mixed flows", 72nd Annual Society of Rheology Meeting, Hilton Head, S. Carolina, Paper MR5, Thursday, Feb. 15, 2001
199. David J. Olson, Prateek D. Patel, Eric S. G. Shaqfeh, Steven G. Boxer, and Gerald G. Fuller, "Fluorescence microscopy experiments and Brownian dynamics simulations of flow behavior of DNA molecules confined to two dimensions", 72nd Annual Society of Rheology Meeting, Hilton Head, S. Carolina, Paper MR6, Thursday, Feb. 15, 2001
200. Eric S.G. Shaqfeh, "The Dynamics Of DNA in Flow", Northwestern University, Applied Mathematics Seminar, Evanston, Ill., Jan. 29, 2001
201. Alex Lee, Eric S.G. Shaqfeh, Bamin Khomami, "The free surface displacement and coating of a polymeric solution- A combined finite element and experimental study", 3rd Pacific Rim Conference on Rheology, July 10, 2001, NonNewtonian Fluid Mechanics Session
202. Hazen Babcock, Rodrigo Teixeira, Eric S. G. Shaqfeh, and Steve Chu, "The dynamics of DNA in planar mixed flows", 3rd Pacific Rim Conference on Rheology, July 10, 2001, Extensional Rheology
203. Eric S.G. Shaqfeh, Nathan Woo, "The Rheology of Flexible Polymer Solutions in Thin Gap Flows via Brownian Dynamics", XIIth International Workshop on Numerical Methods in NonNewtonian Flows, Seascape Resort, Aptos, California, July 15-17, 2001
204. E. Shaqfeh, B. Khomami, Madan Somasi, Nathan Woo, Joe Hur, Jason Butler, "New Brownian Dynamics Algorithms for Bead-Rod and Bead-Spring Chains" XIIth International Workshop on Numerical Methods in NonNewtonian Flows, Seascape Resort, Aptos, California, July 15-17, 2001
205. Alex Lee, E. Shaqfeh, B. Khomami, "A Computational Study of Viscoelastic Fluid-Fluid Displacement and Related Coating Flows", XIIth International Workshop on Numerical Methods in NonNewtonian Flows, Seascape Resort, Aptos, California, July 15-17, 2001
206. E.S.G. Shaqfeh, Chemical Engineering Department Colloquium, "The Dynamics of DNA in Flow", Princeton University, October 17, 2001
207. E.S.G. Shaqfeh, School of Chemical Engineering, "The Dynamics of DNA in Flow", Cornell University, October 29, 2001
208. E.S.G. Shaqfeh, School of Engineering, "The Dynamics of DNA in Flow", Brown University, October 30, 2001
209. J. Butler and E.S.G. Shaqfeh, "Hydrodynamic Interactions in the Brownian Dynamics of a Polymer Chain", NonNewtonian Flows Session, Annual AIChE Meeting, Reno, Nevada, November 6, 2001
210. P. Patel and E.S.G. Shaqfeh, "A computational study of DNA chains in random arrays of obstacles", Dynamics of Complex and Biological Fluids, Annual AIChE Meeting, Reno, Nevada, November 4, 2001
211. E.S.G. Shaqfeh (speaker), P. Moin, S. Lele, "The molecular mechanism of turbulent drag reduction by polymer additives", DARPA Review Meeting, May 30-31, 2002 Westin Westminster, Westminster, Colorado
212. E.S.G. Shaqfeh (speaker), P. Moin, S. Lele, "The molecular mechanism of turbulent drag reduction by polymer additives", Department of Chemical Engineering, Monash University, Clayton, Victoria, Australia, June 20, 2002 (invited)
213. E.S.G. Shaqfeh, "The Dynamics of DNA in Shear and Mixed Flows with Application to Scission in Contraction Flow", Department of Chemical Engineering, Monash University, Clayton, Victoria, Australia, June 17, 2002 (invited)

214. E.S.G. Shaqfeh, "Do we really understand the coil-stretch transition and extensional stresses in polymer solutions?", Materials Institute, University of California at Santa Barbara, Oct. 9-11, 2002 (invited presentation)
215. Yves Dubief, Vince Terrapon, John Paschkewitz Eric S.G. Shaqfeh(speaker), Sanjiva Lele, "Turbulent drag reduction mechanisms as determined from large scale numerical simulation", Session 95 Fundamental Research in Fluid Mechanics: Turbulent Drag Reduction by Macromolecular Additives, Annual AIChE meeting, Indianapolis, IN., Nov. 6, 2002
216. Yves Dubief (speaker), Chris White, Eric S.G. Shaqfeh, Parviz Moin, Sanjiva Lele, " Modification of near wall coherent structures in polymer drag reduced flow: Simulation", Session EM, Paper EM03, Non-Newtonian Flows II, Monday, Nov. 25, 2002, APS-DFD Meeting, Univ. of Texas at Austin, Austin, Texas.
217. Vincent Terrapon (speaker), Parviz Moin, Eric S.G. Shaqfeh, "Brownian Dynamics in a Turbulent Channel Flow", Session EM, Paper EM05, Non-Newtonian Flows II, Monday, Nov. 25, 2002, APS-DFD Meeting, Univ. of Texas at Austin, Austin, Texas.
218. Rodrigo Teixeira, Hazen P. Babcock, Eric S.G. Shaqfeh, Steve Chu, "Flow-Gradient Plane Observation of Single Polymers in Steady Shear Flow", Session EM.009, NonNewtonian Flows II, APS Division of Fluid Dynamics 55th Annual Meeting, University of Texas at Austin, Austin, TX, Nov. 24-26, 2002
219. Eric S.G. Shaqfeh (speaker), Gandharv Bhatara, Alex Lee and Bamin Khomami, "A Study of Viscoelastic Hele-Shaw Cell Flow Using the Finite Element Method", XIIIth Annual Workshop on Numerical Methods in NonNewtonian Fluid Mechanics, June 5, 2003
220. Eric S.G. Shaqfeh, "Understanding Polymer Rheology by Examining Single DNA Molecules", Department Colloquium, Univ. of Texas at Austin, Sept. 16, 2003
221. Gandharv Bhatara, Bamin Khomami (speaker), Eric S.G. Shaqfeh, "A numerical study of viscoelastic free surface flows using the finite element method– Hele Shaw flows", 75th Annual Society of Rheology Meeting. Pittsburgh, PA Oct. 14, 2003
222. Charles Schroeder (speaker), Hazen Babcock, Eric S.G. Shaqfeh, Steven Chu "Influence of hydrodynamic interactions on the coil-stretch transition of polymers in extensional and mixed flows", 75th Annual Society of Rheology Meeting. Pittsburgh, PA Oct. 16, 2003
223. Rodrigo Teixeira(speaker), Hazen Babcock, Eric S.G. Shaqfeh, Steven Chu "Direct visualization of polymer tumbling in steady shear flow", 75th Annual Society of Rheology Meeting. Pittsburgh, PA Oct. 16, 2003
224. Costas Dimitropoulos(speaker), Eric Shaqfeh, Sanjiva K. Lele, and Parviz Moin, "Direct Numerical Simulation of Viscoelastic Boundary Layer Flow", AIChE Annual Meeting, San Francisco, CA; Paper 458a, Session 458, Novel Numerical Methods in Fluid Mechanics, Wednesday, Nov. 19, 2003 12:30pm
225. Rodrigo Teixeira, Hazen Babcock, Eric S.G. Shaqfeh, and Steve Chu, "Observations of Polymer Tumbling in Steady Shear Flows", AIChE Annual Meeting, San Francisco, CA; Session 86 Polymer Processing and Rheology I, AIChE Annual Meeting, Monday, Nov. 17, 2003 8:00 am
226. John Paschkewitz, Yves DuBief, Eric S.G. Shaqfeh, and Parviz Moin, "Direct Numerical Simulation of Polymer Drag Reduction in Viscoelastic Turbulent Channel Flow", Session 293 Turbulent Flows of Complex Fluids, AIChE Annual Meeting, Monday, Nov. 17, 2003, 5:15 pm.
227. Gandharv Bhatara, Eric S.G. Shaqfeh, Bamin Khomami, "A Study of Viscoelastic Free-Surface Flows Using the Finite Element Method– Hele Shaw Cell Flows", AIChE Annual Meeting, San Francisco, CA; Session 458, Novel Numerical Methods in Fluid Mechanics, Wednesday, Nov. 19, 2003 1:00pm
228. Charles Schroeder, Hazen Babcock, Eric S.G. Shaqfeh, Steve Chu, "Polymer Configuration Hysteresis in Extensional Flow: A Single Molecule Study", AIChE Annual Meeting, San Francisco CA. ; Session 302, Complex and Biofluid Dynamics, Wednesday, November 19, 2003 4:30 pm.
229. Eric S.G. Shaqfeh, Costas Dimitropoulos, John Paschkewitz, Yves DuBief, Parviz Moin, "On the mechanisms of turbulent drag reduction by fiber and polymer additives", NonNewtonian Flows Session, APS-DFD Meeting, Sheraton Meadowlands, November 23-25, 2003.
230. Yves DuBief, Chris White, Parviz Moin, Eric S.G. Shaqfeh, "Energy transfer mechanisms in the turbulent drag reduction by flexible polymer additives, NonNewtonian Flows Session, APS-DFD Meeting, Sheraton Meadowlands, November 23-25, 2003.
231. Vincent Terrapon, Yves Dubief, Parviz Moin, Eric S.G. Shaqfeh, "Brownian dynamics simulations of polymer stretch in turbulent channel flows", NonNewtonian Flows Session, APS-DFD Meeting, Sheraton Meadowlands, November 23-25, 2003.
232. E.S.G. Shaqfeh, "Progress and Prospects in Understanding the Dynamics of DNA in Flow", Department of Mechanical Engineering, The University of Michigan, January 23, 2004
233. E.S.G. Shaqfeh, "Progress and Prospects in Understanding the Dynamics of DNA in Flow", Department of Mechanical Engineering, The University of California at San Diego, January 26, 2004

234. E.S.G. Shaqfeh, "Progress and Prospects in Understanding the Dynamics of DNA in Flow", Department of Chemical Engineering, The University of Monash, Clayton, Australia, June 8, 2004
235. E.S.G. Shaqfeh, "Progress and Prospects in Understanding the Dynamics of DNA in Flow", Departamento de Fisica Fundamental, Universidad Nacional de Educacion a Distancia, Madrid, Spain, July 14, 2004
236. David Saintillan (speaker), Eric Darve, Eric S. G. Shaqfeh, "Dynamic simulations of the instability of sedimenting fibers", 21st International Congress of Theoretical and Applied Mechanics, August 15-21 2004, Warsaw, Poland.
237. E.S.G. Shaqfeh, "Progress and Prospects in Understanding the Dynamics of DNA in Flow", Institute for Computational and Mathematical Engineering, Stanford University, Oct. 14, 2004
238. E.S.G. Shaqfeh, "Progress and Prospects in Understanding Single Molecule DNA Flow Dynamics", Department of Chemical Engineering, The University of Houston, November 5, 2004.
239. E.S.G. Shaqfeh, "Progress and Prospects in Understanding Single Molecule DNA Flow Dynamics", Department of Mechanical Engineering, The University of California at Berkeley, Berkeley, CA, November 15, 2004.
240. E.S.G. Shaqfeh (speaker), Charles Schroeder, Rodrigo Teixeira, Steven Chu. "The Effects of Hydrodynamic Interactions in Shear and Linear Mixed Flows: Single Molecule DNA Experiments and Brownian Dynamics Simulation", Annual AIChE Meeting, Austin, TX, Nov. 8, 2004
241. Costas Dimitropoulos, E.S.G. Shaqfeh (speaker), P. Moin, S.K. Lele, "Skin Friction Drag Reduction in Turbulent Boundary Layers Using Polymer Additives", Annual AIChE Meeting, Austin, TX, Nov. 9, 2004
242. G. Bhatara, E.S.G. Shaqfeh, B. Khomami (speaker), "Effects of elasticity on free surface displacement flows with and without gravity: A computational study", Annual AIChE Meeting, Austin, TX, Nov. 9, 2004
243. D. Saintillan (speaker), E. Darve, E.S.G. Shaqfeh, "Pattern formation in sedimenting suspensions of spheroids", APS-DFD Annual Meeting, Session FN: Sedimentation. Westin Seattle, 11/21/04
244. V. Terrapon, Y. DuBief, P. Moin, E.S.G. Shaqfeh, "Lagrangian simulations of polymer drag reduction", APS-DFD Annual Meeting, Session GL: NonNewtonian Flows I. Westin Seattle, 11/22/04
245. Y. DuBief, V. Terrapon, S. Lele, E.S.G. Shaqfeh, P. Moin "On the dynamics of turbulent polymer flows at high drag reduction", APS-DFD Annual Meeting, Session GL: NonNewtonian Flows I. Westin Seattle, 11/22/04
246. Costas Dimitropoulos, E.S.G. Shaqfeh (speaker), Y. DuBief, P. Moin, S.K. Lele, "Skin Friction Drag Reduction in Turbulent Boundary Layers Using Polymer Additives", APS-DFD Annual Meeting, Session JD: Session Honoring William Reynolds II. Westin Seattle, 11/22/04
247. E.S.G. Shaqfeh (speaker), David Saintillan, Eric Darve, "On the growth of concentration fluctuations in the sedimentation of orientable and deformable particles", Department of Chemical Engineering, Monash University, Clayton, Victoria, Australia. 16 March 2005
248. D. Saintillan, Eric S.G. Shaqfeh, Eric Darve, "Concentration fluctuations in dilute suspensions of orientable and deformable particles under sedimentation", Annual AIChE meeting, Cincinnati, OH, Nov. 1 2005, paper 253a, Particulate and Multiphase Flows Session.
249. D. Saintillan, Eric Darve, Eric S.G. Shaqfeh, "Hydrodynamic interactions in colloidal dispersions of conducting rods under induced-charge electrophoresis", Annual AIChE meeting, Cincinnati, OH, Monday, Oct. 31, 2005, paper 55a, Interfacial phenomena/Colloidal dispersions Session.
250. V. Beck, Eric S.G. Shaqfeh, "Ergodicity-Breaking and conformational hysteresis in polymer dynamics near a surface stagnation point", Annual AIChE meeting, Cincinnati, OH Monday, Oct. 31, 2005, paper 129A, NonNewtonian Flows
251. V.A. Beck, Eric S.G. Shaqfeh, N.P. Tecler, S.J. Muller, "Polymer chain dynamics in viscous flow through ordered arrays of posts", Annual AIChE meeting, Cincinnati, OH, Nov. 1 2005, paper 221a, Microscale Flows
252. V. Beck, Eric S.G. Shaqfeh, "Ergodicity-Breaking and conformational hysteresis in polymer dynamics near a surface stagnation point", 77th Annual Meeting of the Society of Rheology, Vancouver, Canada. Paper FS 28. October 18, 2005.
253. N.P. Tecler, S.J. Muller, V.A. Beck, Eric S.G. Shaqfeh, "Controlling dynamics and conformations of DNA in flow through post arrays", 77th Annual Meeting of the Society of Rheology, Vancouver, Canada. Paper MR 8. October 19, 2005.
254. V.A. Beck, Eric S.G. Shaqfeh, N.P. Tecler, S.J. Muller, "Polymer chain dynamics in viscous flow through ordered arrays of posts", 77th Annual Meeting of the Society of Rheology, Vancouver, Canada. Paper MR 9. October 19, 2005.
255. R.A. Teixeira, Eric S.G. Shaqfeh (speaker), S. Chu "The shear rheology and single molecule fluorescence microscopy of entangled DNA in solution", 77th Annual Meeting of the Society of Rheology, Vancouver, Canada. Paper SM7. October 18, 2005.

256. D. Saintillan, Eric Darve, Eric S.G. Shaqfeh, "Hydrodynamic interactions in colloidal dispersions of conducting rods under induced-charge electrophoresis", 77th Annual Meeting of the Society of Rheology, Vancouver, Canada. Paper SC7. October 19, 2005.
257. C. F. Li, R. Sureshkumar, B. Khomami, Y. Dubief, P. Moin and E.S.G. Shaqfeh. "Direct Numerical Simulation of Polymer-Induced Turbulent Drag Reduction: Comparison of Spectral and Compact Finite Difference Schemes", XIVth International Workshop on Numerical Methods for Viscoelastic Flows, Santa Fe, New Mexico, June (2005)
258. E.S.G. Shaqfeh, "DNA Dynamics in Flow: Periodic Tumbling, Conformational Hysteresis, and Ergodicity Breaking", Applied Biosystems, Co., Foster City, August 29, 2005.
259. E.S.G. Shaqfeh, "Ergodicity Breaking and Conformational Hysteresis in the Stretching Dynamics of Polymers in Flow", Department of Chemical Engineering, University of Florida, Gainesville, FL Nov. 7, 2005
260. E.S.G. Shaqfeh, "The sedimentation of rod-like particles in bulk and microfluidic flows", Fluid Mechanics Seminar, Stanford University, Stanford, CA. January 10, 2006.
261. E.S.G. Shaqfeh, "Progress and prospects in the dynamics of DNA in flow", Golden Gate Polymer Forum, Michael's Restaurant, Mountain View, CA. January, 17, 2006.
262. E.S.G. Shaqfeh, "The dynamics of rod-like particles under sedimentation and induced-charge electrophoresis", IUTAM Symposium, *Interactions for Dispersed Systems in Newtonian and Viscoelastic Fluids*, Guanajuato, Mexico, March 26-30, 2006.
263. D. Saintillan (speaker), E.S.G. Shaqfeh, E. Darve, "Hydrodynamic interactions in induced-charge electrophoresis of colloidal rod dispersions", Session: Microfluidics – Electrophoresis and Electro-osmosis, APS-DFD Annual Meeting, Chicago, IL Nov. 22, 2005 (w/ contribution to the Gallery of Fluid Motion: "Sedimentation of a dilute suspension of fibers at low Reynolds number")
264. E.S.G. Shaqfeh, "Ergodicity breaking and Glassy Dynamics in the Stretching Flows of Single Polymer Molecules", Department of Chemical Engineering, Monash University, Clayton, Victoria, Australia. August 27, 2006
265. E.S.G. Shaqfeh, G. Iaccarino, M. Shin, "A RANS model for turbulent drag reduction by polymer injection and comparison to DNS, 78th Annual Soc. of Rheology meeting, Portland, Maine, Oct. 8-12, 2006, Paper FM2
266. E.S.G. Shaqfeh, D. Saintillan, E. Darve, "Effect of flexibility on the shear-induced migration of short polymers in parabolic channel flow", 78th Annual Soc. of Rheology meeting, Portland, Maine, Oct. 8-12, 2006, Paper MF16
267. E.S.G. Shaqfeh, V. Beck, B. Hoffman, "Ergodicity-breaking and glassy dynamics in the mixed flows of single polymer molecules", 78th Annual Soc. of Rheology meeting, Portland, Maine, Oct. 8-12, 2006, Paper PS4
268. E.S.G. Shaqfeh, D. Saintillan, E. Darve, "The dynamics of rodlike particles under sedimentation and induced-charge electrophoresis", 78th Annual Soc. of Rheology meeting, Portland, Maine, Oct. 8-12, 2006, Paper SC13
269. E.S.G. Shaqfeh, G. Iaccarino, M. Shin, "A RANS model for turbulent drag reduction by polymer injection and comparison to DNS, 2006 Annual AIChE Meeting, November 14, San Francisco Hilton, San Francisco, CA, Paper 312c
270. E.S.G. Shaqfeh, D. Saintillan, E. Darve, "Effect of flexibility on the shear-induced migration of short polymers in parabolic channel flow", 2006 Annual AIChE Meeting, November 14, San Francisco Hilton, San Francisco, CA, Paper 247g
271. E.S.G. Shaqfeh, V. Beck, B. Hoffman, "Ergodicity-breaking and glassy dynamics in the stretching flows of single polymer molecules", 2006 Annual AIChE Meeting, November 14, San Francisco Hilton, San Francisco, CA, Paper 179e
272. E.S.G. Shaqfeh, D. Saintillan, E. Darve, "The dynamics of rodlike particles under sedimentation and induced-charge electrophoresis", 2006 Annual AIChE Meeting, November 13, San Francisco Hilton, San Francisco, CA, Paper 89a
273. D. Saintillan, E.S.G. Shaqfeh, E. Darve, "Concentration Fluctuations in the Dilute Sedimentation of Anisotropic Particles", 15th U.S. National Congress on Theoretical and Applied Mechanics, June 25-30, 2006, Boulder, CO
274. E.S.G. Shaqfeh, V. Beck, B. Hoffman, "Ergodicity-breaking and glassy dynamics in the stretching flows of single polymer molecules", The International Workshop on Mesoscale and Multiscale Description of Complex Fluids, Paper R12 Prato-Monash Center, Prato, Italy, July 5-8, 2006.
275. E.S.G. Shaqfeh, G. Bhatara, A. Lee, B. Khomami, "The Effect of Fluid Elasticity on Free Surface Displacement and Coating Flows", Palo Alto Research Center, 3333 Coyote Hill Road, Palo Alto, CA, January 8, 2007.

276. E.S.G. Shaqfeh, D. Saintillan, B. Hoffman, E. Darve, "The dynamics of colloidal rod suspensions under induced-charge electrophoresis.", Symposium honoring 2007 ACS Colloid and Surface Chemistry Award Winner – William B. Russel, 233rd ACS National Meeting, Chicago, IL, March 26, 2007
277. E.S.G. Shaqfeh, "The dynamics of rod-like particles under sedimentation and induced-charge electrophoresis", School of Chemical and Biomolecular Engineering, Cornell University, April 30, 2007
278. E.S.G. Shaqfeh, "The dynamics of single polymer molecules in stretching flows – the end of a thirty year debate", Department of Mechanical Engineering, UC Santa Barbara, April 23, 2007.
279. E.S.G. Shaqfeh, "The numerical simulation of turbulent drag reduction by fiber and polymer additives (for internal and external flow applications)", Office of Naval Research Workshop on Polymer Drag Reduction for Surface Ships, One Virginia Square, Arlington, VA, Sept 6, 2007
280. C. Lueth, E.S.G. Shaqfeh, "The shear flow processing of DNA scaffolds for molecular wires", AICHE Annual Meeting, (Session #182 Microfluidics and Small-Scale Flows) Salt Lake City, Utah, Nov. 4-8. 2007
281. A. Dambal, E.S.G. Shaqfeh, "The equilibrium conformation dynamics of λ DNA in the ABEL trap", AICHE Annual Meeting, (Session #313 NonNewtonian Flows), Salt Lake City, Utah, Nov. 4-8. 2007
282. B. Hoffman, E.S.G. Shaqfeh, "The dynamics of the coil-stretch transition in long, flexible polymers subjected to mixed linear flow fields", Society of Rheology Annual Meeting, (Session on Polymer Solutions – PS12) Salt Lake City, Utah, Oct. 8, 2007
283. E.S.G. Shaqfeh, "Single molecule studies of the effect of flow type on the dynamics of polymer solutions", 60th Annual Meeting of the APS Division of Fluid Dynamics, Salt Lake City, Utah (Invited Minisymposium on Deformable Particle Suspensions and Solutions), Nov. 18-20, 2007
284. O. Marxen, G. Iaccarino, E.S.G. Shaqfeh, "Influence of a Localized Roughness Element on Disturbance Amplification in a Laminar Boundary Layer at $Ma=4.8$ ", 60th Annual Meeting of the APS Division of Fluid Dynamics, Salt Lake City, Utah (Session NN: Supersonic and Hypersonic Flows). Nov. 18-20, 2007
285. O. Marxen, G. Iaccarino, E.S.G. Shaqfeh, "Numerical simulation of the effect of a roughness element on boundary-layer instability, 38th Fluid Dynamics Conference and Exhibit/ 40th Thermophysics Conference, June 2008, Seattle, Washington
286. D. Richter, E.S.G. Shaqfeh, G. Iaccarino, "Numerical investigations of fully 3-D, time-dependent viscoelastic flows past bluff bodies at moderate to high Reynolds numbers" Session: CF-6. Viscoelastic Turbulence, The XVth International Congress on Rheology in Monterey, California August 5, 2008 (Tuesday) 4:10.
287. C. Lueth, E.S.G. Shaqfeh, "Dynamics of Single Tethered DNA in Shear Flow" Session: HP-1. Unentangled Polymers, The XVth International Congress on Rheology in Monterey, California August 4, 2008 (Monday) 9:45.
288. S. Somani, E.S.G. Shaqfeh, R. Prakash "A Brownian dynamics study of the effect of solvent quality on the coil-stretch transition", Session: HP-1. Unentangled Polymers, The XVth International Congress on Rheology in Monterey, California August 4, 2008 (Monday) 10:45.
289. A. Dambal, E.S.G. Shaqfeh, " Slip-link simulations and comparison to single molecule studies of entangled DNA in shear and extensional flow" Session: HP-3. Entangled Polymers I, The XVth International Congress on Rheology in Monterey, California August 4, 2008 (Monday) 2:50.
290. B. Hoffman, E.S.G. Shaqfeh, "Dynamic simulation of colloidal rod suspensions with application to nanobarcodes Session: SC-8. Suspension Hydrodynamics II, The XVth International Congress on Rheology in Monterey, California August 7, 2008 (Thursday) 9:45.
291. E.S.G. Shaqfeh, "The dynamics of single molecule DNA in flow", Department Seminar, Texas Tech University, Lubbock, Texas, February 15, 2008.
292. E.S.G. Shaqfeh, A. Dambal "Slip-Link Simulations and Comparison to Single Molecule Studies of Entangled DNA In Shear Flow", 2008 Annual AICHE Meeting, Nov. 16-18, Philadelphia, PA Session 01j10 NonNewtonian Flows.
293. E.S.G. Shaqfeh, C. Lueth "Dynamics of Single Tethered DNA In Shear Flow at High Weissenberg Numbers", 2008 Annual AICHE Meeting, Philadelphia, PA Session 01j04 Complex-Fluid and Bio-Fluid Dynamics I
294. E.S.G. Shaqfeh, B. Hoffman "The Dynamics and Stability of Polarizeable, Brownian Rod Suspensions Under Flow", 2008 Annual AICHE Meeting, Philadelphia, PA Session 01j03 In Honor of Bud Homsy III: Stability and Nonlinear Hydrodynamics
295. E.S.G. Shaqfeh, "The Dynamics and Stability of the Microflows of Polarizeable, Colloidal Rod Suspensions", Department of Chemical and Biological Engineering, Rice University, Department Colloquium, December 4, 2008.
296. D. Richter, G. Iaccarino, E.S.G. Shaqfeh, "Numerical simulations of time-dependent, fully 3-D viscoelastic flows past bluff bodies", APS-DFD Meeting, San Antonio, Texas, November 24, 2008.

297. Marxen, O., E.S.G. Shaqfeh, G. Iaccarino, "High speed boundary layer with roughness", APS-DFD Meeting, San Antonio, Texas, Nov. 24, 2008
298. Marxen, O., G. Iaccarino, E.S.G. Shaqfeh, G. Groskopf, M.J. Kloker, "Boundary layer instability behind a 3-D roughness element at $Ma=4.8$ ", Transition study open forum group, 47th AIAA aerospace Sciences Meeting and Exhibit, Jan. 5-8, 2009, Orlando, FL.
299. E.S.G. Shaqfeh (speaker), B. Hoffman, D. Saintillan, E. Darve, "Simulating the microfluidics of non-spherical particulate suspensions", SIAM Conference on Computational Science and Engineering, MS152: Multiscale Methods for Hydrodynamics at the Micro and Nano-Scales: Fluid-Structure Interaction - Part III of III; March 6, 2009; (Keynote Presentation)
300. E.S.G. Shaqfeh, "Single Molecule DNA Dynamics in Flow", Weizmann Institute of Science, Department of Physics, Department Colloquium, April 2, 2009, Rehovot, Israel.
301. O. Marxen, G. Iaccarino, E.S.G. Shaqfeh, "Linear and non-linear disturbance evolution in a compressible boundary-layer with localized roughness"; Seventh IUTAM Symposium on Laminar-Turbulent Transition, June 26, 2009, KTH Royal Institute of Technology, Stockholm, Sweden, Session: *Transition in High-speed Flows 3*; Paper O-67
302. O. Marxen, E.S.G. Shaqfeh, G. Iaccarino, "Instability of a supersonic boundary-layer with localized roughness" Minnowbrook VI, Workshop on Flow Physics and Control for Internal and External Aerodynamics, Aug. 23-26, 2009; Syracuse, University, Blue Mountain Lake, NY
303. O. Marxen, T. Magin, G. Iaccarino, E.S.G. Shaqfeh, "Hypersonic boundary-layer instability with chemical reactions", Paper # 2010-707 48th AIAA Aerospace Sciences Meeting. 4 – 7 Jan 2010, Orlando, Florida.
304. E.S.G. Shaqfeh, "The Nonlinear Dynamics of DNA/Polymers in Extensional Dominated Flows: Solutions and Melts", Invited talk, IMA Workshop on Complex Fluids, University of Minnesota, Minneapolis, MN, September, 14, 2009.
305. E.S.G. Shaqfeh, Invited Tutorial, "The Rheology of Polymers Solutions: Parts I and II", IMA Workshop on NonNewtonian Fluid Dynamics, University of Minnesota, Minneapolis, MN, October, 11, 2009.
306. E.S.G. Shaqfeh, Shenghan Yan, G. Fuller, "Collective Behavior of Colloidal Particles Trapped at a Fluidic Interface", 81st Annual Meeting of the Society of Rheology, Madison, WI, October 19, 2009.
307. E.S.G. Shaqfeh, Chris Lueth, Guihua Yu, "The Dynamics of Tethered DNA in Shear: Cyclic Dynamics and Processing for Molecular Wire Scaffolds", 81st Annual Meeting of the Society of Rheology, Madison, WI, October 19, 2009.
308. Eric S. G. Shaqfeh, Ajey Dambal and Amit Kushwaha, "Slip-Link Simulations of Entangled DNA with Comparison to Experiments" Complex-Fluid and BioFluid Dynamics Session, Paper 248b, AIChE Annual Meeting, Nashville, TN, November 10, 2009
309. Eric S. G. Shaqfeh, Shikha Somani and Ravi Prakash Jagadeeshan, "A Brownian Dynamics Study of the Effect of Solvent Quality On the Coil-Stretch Transition", NonNewtonian Flows Session, Paper 217a, AIChE Annual Meeting, Nashville, TN, November 10, 2009
310. Hong Zhao, Eric S.G. Shaqfeh, "Numerical simulation of platelet margination in microcirculation", EG.00007, 62nd Annual Meeting of the APS Division of Fluid Dynamics November 22, 2009, Minneapolis, MN
311. A. Saibaba, E.S.G. Shaqfeh, E. Darve, "Concentration distributions of arbitrary shaped particles in microfluidic channel flows", HF.00002, 62nd Annual Meeting of the APS Division of Fluid Dynamics November 23, 2009, Minneapolis, MN
312. O. Marxen, G. Iaccarino, E.S.G. Shaqfeh, "Uncertainty quantification of the instability in a supersonic boundary layer with roughness", AP.00008, 62nd Annual Meeting of the APS Division of Fluid Dynamics November 22, 2009, Minneapolis, MN
313. Guihua Yu, Eric S.G. Shaqfeh, Zhenan Bao; "Controlling the stretching and alignment of tethered DNA with microfluidics for organic molecule electronics" Materials Research Society 2010 Spring meeting, San Francisco, CA (April 5-9) Technical program: KK: Micro- and Nanofluidic Systems for Device Assembly and Bioanalysis
314. E.S.G. Shaqfeh, "The microfluidics of colloidal particle-vesicle-capsule mixtures with application to blood additives", Invited talk, IMA Workshop on Microfluidics: Electrokinetic and Interfacial Phenomena, University of Minnesota, Minneapolis, MN, December 8, 2009.
315. E.S.G. Shaqfeh, "The Microfluidics of NonSpherical Colloidal Particles and Vesicles with Application to Blood Additives", Microfluidic Fundamentals and Inkjet Technology (IJ+BI+MN-WeM), AVS 56th International Symposium & Exhibition, November, 11, 2009, San Jose, CA (Invited Talk)
316. Shirin Ghaffari, Olaf Marxen, Gianluca Iaccarino and Eric S.G. Shaqfeh, "Numerical simulations of hypersonic boundary-layer instability with wall blowing", 48th AIAA Aerospace Sciences Meeting. 4 – 7 Jan 2010, Orlando, Florida.

317. Shikha Somani, R. Prakash, E.S.G. Shaqfeh "Conformational Hysteresis of a Single DNA Molecule in Linear 3D Flows: A Brownian Dynamics Study", MRS Spring 2010 Meet(April 5-9 2010, San Francisco) April 07, 2010
318. Shikha Somani, R. Prakash, E.S.G. Shaqfeh, "Flow controlled coil-to-stretch transition of a single DNA molecule: A Brownian dynamics study", ACS Annual Meeting, March 21-25 2010, San Francisco
319. E.S.G. Shaqfeh, "The Microfluidics of NonSpherical Colloidal Particles and Vesicles with Application to Blood Additives", Invited Speaker, 'Small scale hydrodynamics: microfluidics and thin films; Banff International Research Station Workshop; Feb 7-12, 2010 (Banff, Alberta, CANADA).
320. E.S.G. Shaqfeh, "The Microfluidics of NonSpherical Colloidal Particles and Vesicles with Application to Blood Additives", Department Colloquium, Department of Mechanical Engineering, Drexel University, Philadelphia, PA, February 12, 2009 (Banff, Alberta, CANADA).
321. E.S.G. Shaqfeh, "The Microfluidics of NonSpherical Colloidal Particles and Vesicles with Application to Blood Additives", Chemical Engineering Platinum Colloquium, Department of Chemical Engineering, Monash University, Clayton, Victoria. AUSTRALIA. April 7, 2010
322. E.S.G. Shaqfeh, "The Microfluidics of NonSpherical Colloidal Particles and Vesicles with Application to Platelet Margination", ME 398 Biomechanical Engineering Seminar, Department of Mechanical Engineering, Stanford University, Stanford, CA, May 17, 2010
323. Amit Kushwaha, E.S.G. Shaqfeh, "Slip-link simulations of entangled worm-like and ILC chains in planar extensional flow with comparison to experiments", International Workshop on Numerical Methods in NonNewtonian Fluid Mechanics, June 13-16, 2010; Northhampton, MA
324. David Richter, Gianluca Iaccarino, E.S.G. Shaqfeh, "Simulations of wake stabilization in viscoelastic flow past a cylinder", International Workshop on Numerical Methods in NonNewtonian Fluid Mechanics, June 13-16, 2010; Northhampton, MA
325. Guihua Yu, Eric S. G. Shaqfeh, and Zhenan Bao, " Controlled Tethering and Stretching of DNA Molecules in Shear Flow for Organic Molecule Electronics Wednesday, November 10, 2010, AIChE Annual Meeting, Salt Lake City, Utah
326. Arash Abedijaberi, Eric S. G. Shaqfeh, and Bamin Khomami, " A Computational Study of the Influence of Viscoelasticity On the Interfacial Dynamics of Dip Coating Flows" Tuesday, November 9, 2010, AIChE Annual Meeting, Salt Lake City, Utah
327. Eric S. G. Shaqfeh, and Sean Fitzgibbon, "On the Surface Adsorption of Colloidal Particles in Microfluidic Flows", Tuesday, November 9, 2010, AIChE Annual Meeting, Salt Lake City, Utah
328. Hong Zhao and Eric S. G. Shaqfeh, " Numerical Simulation of Cross-Flow Margination of Platelets in Small Vessels" Tuesday, November 9, 2010, AIChE Annual Meeting, Salt Lake City, Utah
329. Amit Kushwaha and Eric S. G. Shaqfeh, "Slip-Link Simulations of Entangled Polymers in Planar Extensional and Planar Mixed Flows with Comparison to Experiments", Tuesday, November 9, 2010, AIChE Annual Meeting, Salt Lake City, Utah
330. David H. Richter, Gianluca Iaccarino, Eric S. G. Shaqfeh, "Simulations of Wake Stabilization in Viscoelastic Flow Past a Cylinder" , Tuesday, November 9, 2010, AIChE Annual Meeting, Salt Lake City, Utah
331. Guihua Yu, Amit Kushwaha, Eric S.G. Shaqfeh, Zhenan Bao, Paper FD9, "Controlled DNA tethering and stretching with microfluidics for single-molecule electronics", Session: Micro- and Nano-Fluidics, October 25, 2010 (Monday) 2:45, The Society of Rheology 82nd Annual Meeting in Santa Fe, NM
332. Amit Kushwaha, Eric S.G. Shaqfeh, Paper MS5, "Slip-link simulations of Entangled Polymers in Planar Extensional and Planar Mixed Flows with Comparison to Experiments" , Session: Polymer Rheology: Melts, Solutions and Blends, October 25, 2010 (Monday) 3:35, The Society of Rheology 82nd Annual Meeting in Santa Fe, NM
333. Hong Zhao, Eric S.G. Shaqfeh, Paper SC11, "The dynamics of a lipid vesicle in simple shear flow", Session: Suspensions, Colloids and Emulsions, October 25, 2010 (Monday) 4:00, The Society of Rheology 82nd Annual Meeting in Santa Fe, NM
334. David Richter, Gianluca Iaccarino, Eric S.G. Shaqfeh, Paper CR18, "Effects of viscoelasticity on the inertial wake in flow past a circular cylinder" Session: Computational Rheology: Behavior 'in Silico', October 26, 2010 (Tuesday) 11:10, The Society of Rheology 82nd Annual Meeting in Santa Fe, NM
335. Arash Abedijaberi, Bamin Khomami, Eric S.G. Shaqfeh, Paper SI23, "A computational study of the influence of viscoelasticity on the interfacial dynamics of dip coating flows", Session: Surface and Interfacial Rheology, October 26, 2010 (Tuesday) 2:45, The Society of Rheology 82nd Annual Meeting in Santa Fe, NM
336. Amit Kushwaha and Eric S. G. Shaqfeh, "Slip-Link Simulations of Entangled Polymers in Planar Extensional with Comparison to Experiments", 5th Pacific Rim Conference on Rheology, August 1-6, Hokkaido University, Sapporo, Hokkaido, Japan

337. Guihua Yu, Amit Kushwaha, Eric S.G. Shaqfeh, Zhenan Bao, "Controlled DNA tethering and stretching with microfluidics for single-molecule electronics", 5th Pacific Rim Conference on Rheology, August 1-6, Hokkaido University, Sapporo, Hokkaido, Japan
338. Eric S.G. Shaqfeh, David Richter, Gianluca Iaccarino, Paper CR18, "Wake stabilization in viscoelastic flow past a cylinder: Do we understand elastic effects on transition in inertial flows?", ICR International Workshop Unsettled Issues in Rheology and Dynamics of Softmatters, Aug.8-10, 2010, Institute for Chemical Research, Kyoto University Gokasho, Uji, Kyoto 611-0011 Japan
339. Hong Zhao, Eric S.G. Shaqfeh, Paper SC11, "The dynamics and rheology of vesicle suspensions", ICR International Workshop Unsettled Issues in Rheology and Dynamics of Softmatters, Aug.8-10, 2010, Institute for Chemical Research, Kyoto University Gokasho, Uji, Kyoto 611-0011 Japan
340. Olaf Marxen, Gianluca Iaccarino, Eric S.G. Shaqfeh, Paper CE.00002, "Hypersonic boundary-layer instability with localized roughness", Session CE: Instability: Boundary Layers II, 1:00 PM3:10 PM, Sunday, November 21, 2010, 63rd Annual Meeting of the APS Division of Fluid Dynamics
341. Shirin Ghaffari, Olaf Marxen, Gianluca Iaccarino, Eric S.G. Shaqfeh, Thierry Magin Paper CE.00003, "Stability Analysis of a Mach 10 Boundary Layer with Nonequilibrium Chemistry", Session CE: Instability: Boundary Layers II, 1:00 PM3:10 PM, Sunday, November 21, 2010, 63rd Annual Meeting of the APS Division of Fluid Dynamics
342. David Richter, Gianluca Iaccarino, Eric S.G. Shaqfeh, Paper MF.00006, "Simulations of high Reynolds number wake transition in the presence of viscoelasticity", Session MF: Non-Newtonian Flows I 8:00 AM10:10 AM, Tuesday, November 23, 2010, Long Beach Convention Center Room: 103A; 63rd Annual Meeting of the APS Division of Fluid Dynamics
343. Hong Zhao, Eric S.G. Shaqfeh, Paper RK.00002, "The dynamics of a lipid vesicle in shear flow", Session RK: Biofluids: Cellular IV; 3:05 PM4:49 PM, Tuesday, November 23, 2010 Long Beach Convention Center Room: 201B; 63rd Annual Meeting of the APS Division of Fluid Dynamics
344. Eric S.G. Shaqfeh, Hong Zhao, Andrew Spann, "The margination of platelets in the blood microvasculature", Department Seminar, The Levich Institute and Department of Chemical Engineering, City College of New York, New York, NY, Tuesday, November 30, 2010
345. Eric S.G. Shaqfeh, Hong Zhao, Andrew Spann, "The dynamics and rheology of vesicle suspensions: Platelet margination", Fluids group seminar, Department of Chemical Engineering, University of California at Santa Barbara, February, 9, 2011.
346. Eric S.G. Shaqfeh, Hong Zhao, Andrew Spann, "The Microfluidics of Particle/ Vesicle Mixtures in the Microvasculature", SIAM Conference on Computational Science and Engineering, MS85 Computational Algorithms for Simulating Particulate Flows -Part II of III, March 2, 2011, Reno, NV (Invited Talk).
347. Eric S.G. Shaqfeh, Hong Zhao, Andrew Spann, "Platelet Margination in the Microvasculature", Institute for Surgical Research, Brooke Medical Center (ARMY), San Antonio, TX, April 6, 2011.
348. Eric S.G. Shaqfeh, Hong Zhao, Andrew Spann, "Platelet Margination in the Microvasculature", Fluid Mechanics Seminar, University of California at San Diego, April 11, 2011.
349. Eric S.G. Shaqfeh, Hong Zhao, Andrew Spann, "Platelet Margination in the Microvasculature", Department Colloquium, Chemical Engineering Department, Lehigh University, Bethlehem, PA, April 20, 2011.
350. Eric S.G. Shaqfeh, Hong Zhao, Andrew Spann, "The Microfluidics of Particle/ Vesicle Mixtures in the Microvasculature", Department of Chemical Engineering, Penn State University, State College, PA, April 21, 2011.
351. Hong Zhao, Andrew Spann, Eric S.G. Shaqfeh "The rheology of nondilute vesicle suspensions", Paper 282f, 2011 AICHE Annual Meeting, Minneapolis, MN October 16-21, 2011, Area 1-J, Colloidal Hydrodynamics session.
352. Guihua Yu, Melburne C. LeMieux, Benjamin C-K. Tee, Zhenan Bao, Eric S.G. Shaqfeh "Solution-Based Assembly of Large-Scale, Unidirectionally-Aligned Carbon Nanotubes for High-Performance Transistors", 2011 AICHE Annual Meeting, Minneapolis, MN October 16-21, 2011, Session 08E, "Graphene/CNT Based Devices" in Materials Engineering and Sciences Division.
353. Arash Abedijaberi, Bamin Khomami, Eric S.G. Shaqfeh, "Plunging of Solid Surfaces Into the Viscoelastic Fluid: An Experimental/Numerical Study", 2011 AICHE Annual Meeting, Minneapolis, MN October 16-21, 2011, Area 1-J, Complex Fluids
354. Bryan R. Smith, Michael Shu, Eric S. G. Shaqfeh, Sam Gambhir, "Integrated Intravital Microscopy and Mathematical Simulation Approach to Uncover Surprising Differences in Extravasation Between Quantum Dots and Nanotubes in Tumor" 2011 World Molecular Imaging Congress, Sept. 7-10, 2011, San Diego, CA
355. Shenghan Yan, Eric S.G. Shaqfeh, Gerry Fuller, Paper SI7: Porous media model and collective behaviour of colloidal particles trapped at a fluidic interface; Session: Surface and Interfacial Rheology, October 10, 2011 (Monday) 1:55 Society of Rheology Annual Meeting, Cleveland, OH.

356. Amit Kushwaha, Eric S.G. Shaqfeh, Paper MB34: Slip link simulations of entangled polymers under extensional/mixed flow: Dynamics of viscosity thickening; Session: Rheology of Polymer Melts and Blends, October 12, 2011 (Wednesday) 4:00, Society of Rheology Annual Meeting, Cleveland, OH.
357. Sourav Padhy, Eric S.G. Shaqfeh, Gianluca Iaccarino Paper FS22: Simulations of a sphere sedimenting in a viscoelastic fluid under the action of orthogonal shear; Session: NonNewtonian Flows and Stability, October 12, 2011 (Wednesday) 4:50 Society of Rheology Annual Meeting, Cleveland, OH.
358. Travis Walker, Theresa Hsu, Gerry Fuller, Eric S.G. Shaqfeh, Paper FS27: Rinsing flows using non-Newtonian fluids; Session: Non-Newtonian Flows and Stability, October 13, 2011 (Thursday) 10:50 Society of Rheology Annual Meeting, Cleveland, OH.
359. E.S.G. Shaqfeh, "The flow of fiber suspensions and polymer solutions", FLOW Summer school in Micro and Complex flow, August 22-August 25, 2011, KTH Royal Institute of Technology, Stockholm, Sweden, Linn FLOW Centre, KTH Mechanics
360. Eric S.G. Shaqfeh, H. Zhao, A. Spann, V. Narsimhan, "Toward a Computer Simulation of Hemostasis in the Microvasculature", Department Colloquium, Illinois Institute of Technology, Chicago, IL, September 21, 2011.
361. Arash Abedijaberi, Eric S.G. Shaqfeh, Bamin Khomami, "Plunging of Solid Surfaces Into the Viscoelastic Fluid: An Experimental/Numerical Study", Paper 79f, AIChE Annual Meeting, Minneapolis, MN, Area 1J: Complex Fluids, October 18, 2011
362. Hong Zhao, Eric S.G. Shaqfeh, Andrew Spann, "The Rheology of Non-Dilute Vesicle Suspensions", Paper 282f, AIChE Annual Meeting, Minneapolis, MN, Area 1J: Colloidal Hydrodynamics II, October 18, 2011
363. Guihua Yu, M.C. Lemieux, B. C-K. Tee, Eric S.G. Shaqfeh, Zhenan Bao, "Solution-Based Assembly of Large-Scale, Unidirectionally-Aligned Carbon Nanotubes for High-Performance Transistors" Paper 282f, AIChE Annual Meeting, Minneapolis, MN, Area 1J: Graphene and Carbon Nanotube Based Devices, October 18, 2011
364. Eric S.G. Shaqfeh "Part: 1: Polymer length dependence of single molecule extension in shear flow & Part 2: Why does orthogonal shear have such a big effect on particle sedimentation in viscoelastic fluids?", *Polymers in Fluids*, European workshop on complex fluids, Nice, France, 14-15 November, 2011 (Invited, Keynote)
365. Eric S. G. Shaqfeh, "Toward a Computer Simulation of Platelet Margination and Adhesion in the Microcirculation", *The Dynamic Flow Assay Workshop*, Royal College of Surgeons, Dublin Ireland, 16 November, 2011 (Invited Leadoff)
366. L. Guglielmini, N. Autrusson, A. Kushwaha, E.S.G. Shaqfeh, H. Stone, "Buckling transition of a flexible fiber at a surface stagnation point", 64th Annual Meeting of the APS-DFD, November 20-22, 2011, Baltimore, MD. Session E17: Viscous Flows
367. H. Zhao, E.S.G. Shaqfeh, "The Brownian dynamics of a lipid vesicle", 64th Annual Meeting of the APS-DFD, November 20-22, 2011, Baltimore, MD. Session G29: Biofluids: Cellular III: Vesicles
368. A. Spann, H. Zhao, E.S.G. Shaqfeh, "Dynamics and phase diagrams for highly non-spherical vesicles in shear flow computed with Loop subdivision surfaces", 64th Annual Meeting of the APS-DFD, November 20-22, 2011, Baltimore, MD. Session G29: Biofluids: Cellular III: Vesicles
369. Eric S.G. Shaqfeh, "A Computer Simulation of Platelet Margination in the Microcirculation", Department of Chemical Engineering, Columbia University, NY, NY. November 22, 2011.
370. Eric S.G. Shaqfeh "Platelet Margination in the Microcirculation", School of Chemical Engineering, Purdue University, West Lafayette, IN, February 7, 2012.
371. Eric S.G. Shaqfeh, "A Computer Simulation of Platelet Margination and Adsorption in the Microcirculation", Blood Research Institute, the Blood Center of Wisconsin, Milwaukee, WI, February 28, 2012.
372. Eric S.G. Shaqfeh, "DNA in Flow", Department of Mechanical Engineering, Universidade Federal do Rio de Janeiro, Rio de Janeiro, Brazil, March 18, 2012 (Inaugural Lecture)
373. Eric S.G. Shaqfeh, "Platelet Margination in the Microcirculation", Department of Mechanical Engineering, Universidade Federal do Rio de Janeiro, Rio de Janeiro, Brazil, March 19, 2012 (Department Seminar)
374. Eric S.G. Shaqfeh, "Platelet Margination in the Microcirculation", Department of Mechanical Engineering, Pontifcia Universidade Catlica, Rio de Janeiro, Brazil, March 15, 2012 (Department Seminar)
375. Eric S.G. Shaqfeh, "How Erythrocytes Push Platelets Around to Keep Us Alive", Department of Chemical Engineering, University of Colorado at Boulder, Boulder, CO, April 17, 2012 (Department Seminar)
376. Andrew Spann; Hong Zhao; Eric S. G. Shaqfeh, "The Dynamics and Rheology of Lipid Vesicle Suspensions", The XVth International Congress on Rheology - Lisbon, Portugal, Complex Fluids Symposium, Monday, Aug. 6, 2012

377. Sourav Padhy; Travis Walker; Sreenath Krishnan; Mauro Rodriguez; Eric S.G Shaqfeh; Gianluca Iaccarino, "The effect of orthogonal shear on the sedimentation of particles in viscoelastic fluids", The XVIth International Congress on Rheology - Lisbon, Portugal, Complex Fluids Symposium, Monday, Aug. 6, 2012
378. Amit Kushwaha; Eric S. G. Shaqfeh, "On the polymer length dependence of single molecule extension in shear flow", The XVIth International Congress on Rheology - Lisbon, Portugal, Complex Fluids Symposium, Tuesday, Aug. 7, 2012
379. Vivek Narsimhan; Hong Zhao; Eric S. G. Shaqfeh, "Modeling and simulation of red blood cells flowing through small microchannels", The XVIth International Congress on Rheology - Lisbon, Portugal, Complex Fluids Symposium, Thursday, Aug. 9, 2012
380. Eric S.G. Shaqfeh, "Computer Simulation of Vesicle and Capsule Suspensions in Flow", Department of Chemical Engineering, Carnegie Mellon University, October 25, 2012 (Department Seminar)
381. Eric S.G. Shaqfeh, "Computer Simulation of Vesicles and Vesicle Suspensions in Flow", Annual AIChE Meeting, Pittsburgh, PA October 28- November 2, 2012; Keynote Lecture, Complex Fluids Symposium, Area 1J.
382. Sourav Padhy, Sreenath Krishnan, Mauro Rodriguez, Eric S.G. Shaqfeh (speaker), Gianluca Iaccarino, Jeffrey F. Morris, and N. Tonmukayakul, "The Effect of Orthogonal Shear on the Sedimentation of Particles in Viscoelastic Fluids", Annual AIChE Meeting, Pittsburgh, PA October 28- November 2, 2012; Particulate and Multiphase Flows I, Area 1J.
383. Andrew Spann (speaker), Hong Zhao, Eric S.G. Shaqfeh, "Asymmetric Vesicle Instability in Extensional Flow", Session E18: Biofluids: Vesicles, 65th Annual Meeting of the APS Division of Fluid Dynamics, Volume 57, Number 17; SundayTuesday, November 18, 2012; San Diego, California
384. Sean Fitzgibbon (speaker), Hong Zhao, Eric S.G. Shaqfeh, "Simulation of the Effect of Red Blood Cell Collisions on Platelet Adsorption", Session M16: Biofluids: Blood Cells, 65th Annual Meeting of the APS Division of Fluid Dynamics, Volume 57, Number 17; SundayTuesday, November 18, 2012; San Diego, California

Ph. D. Students Supervised

1. Vivek Kumar Singh, Indian Institute of Technology, New Delhi (April, 1990— May, 1993) Thesis Title: "The role of surface transport of reaction precursors in plasma etching and deposition"; *Present Position: Director and Intel Fellow, Intel, Co.*
2. Yong Lak Joo, Seoul National University (April, 1990— April, 1993) Thesis Title: "A theoretical and experimental investigation of viscoelastic instabilities in Taylor-Dean flows" *Present Position: Associate Prof. Cornell University*
3. Anthony Richard Evans, University of Minnesota, (April, 1991—August, 1995) Thesis Title: "An experimental and theoretical investigation of polymer conformation during flow through a dilute fiber bed" *Present Position: Alliance Bernstein, Vice President*
4. Michael Brian Mackaplow, University of California, Davis (April, 1991—October, 1995) Thesis Title: "A study of the transport properties and sedimentation characteristics of fiber suspensions" *Present Position: Associate Research Fellow, Abbot Labs*
5. Richard Louis Schiek, University of Illinois, (April, 1991—November, 1995) Thesis Title: "Nonlocal stress in bound, Brownian suspensions of slender rigid fibers" *Present Position: Research Scientist, Sandia National Labs*
6. Irene Michael Dris, The Cooper Union (April, 1992—November, 1996) Thesis Title: "Purely elastic instabilities in eccentric cylinder flows" *Present Position: Associate Director, Ethicon, Inc.*
7. Alisa Beth Mosler, M. I. T. (April, 1993—August, 1997) Thesis Title: "Microstructure conformation change in stochastic flow fields: Flow through fixed beds" *Present Position: Vice President of Customer Segmentation, Wells Fargo*
8. Patrick Seamus Doyle, Univ. of Pennsylvania, (April, 1993—May, 1997) Thesis Title: "Dynamic simulations of flexible polymer molecules: Rheology of unbound dilute solutions and polymer brushes" (*Thesis won Liebermann award from Stanford for Highest Distinction in Graduate PhD work*) *Present Position: Associate Professor, MIT*
9. Anne Mary Grillet, Tulane University, (April, 1994—February, 1999) Thesis Title: "Viscoelastic instabilities in recirculation flows" *Present Position: Research Scientist, Sandia National Labs*
10. Joshua Aaron Levinson, M. I. T. (April, 1995—March, 1999) Thesis Title: "The ion-assisted etching and profile development of silicon in molecular and atomic chlorine" *Present Position: Assistant Professor, Lafayette College*
11. Thomas C. B. Kwan, California Inst. of Tech., (April, 1996—December, 2000) Thesis Title: "Brownian Dynamics simulations of flexible polymers in exponential shear flow and in the shear flow of brushes" *Present Position: Biophysicist, FFA Sciences, San Diego, CA*

12. Joseph Seok Hur, Seoul Nat'l. University, (April, 1997—July, 2001) Thesis Title: "The dynamics of DNA in the linear flows of dilute and semi-dilute solutions" (Post-Doctoral Student, July 2001 — December, 2001) *Present Position: Senior Manager, New Business Strategy Group, Samsung Electronics, Co.*
13. Alex Gweo-Kai Lee, Univ. of Texas at Austin, (April, 1997—September, 2001) Thesis Title: "Viscoelastic Effects on Free Surface Displacement Flows: A Computational and Experimental Study" *Present Position: Program Leader, Corporate Strategic Research, Exxon-Mobil Research & Engineering*
14. Prateek Dinesh Patel, Washington University at St. Louis, (April, 1998 —August, 2002) Thesis Title: "Drop Breakup and DNA Separations in Flow Through Porous Media" *Present Position: Supervisor, Exxon-Mobil Upstream Research Co.*
15. Jung 'Nathan' Woo, Univ. of California at Berkeley (BS in Chemical Engineering, BA in Mathematics), UC Davis (MS in Chemical Engineering and Mat. Sci.), (January, 1999—June, 2003) Thesis Title: "DNA chain dynamics and its application to microdevices and scission" *Present Position: Research Engineer, Intel, Co.*
16. Charles Martin Schroeder, Carnegie Mellon University, (May, 2000—October, 2004) Thesis Title: "Investigating polymer physics with single molecule experiment and Brownian dynamics simulation" (*Thesis won Liebermann award from Stanford for Highest Distinction in Graduate PhD work*) *Present Position: Assistant Professor, Univ. of Illinois at Urbana*
17. Rodrigo Esquivel Teixeira, Georgia Tech University, Thesis Title; "Single Molecule Studies of Flexible Polymers Under Shear and Mixed Flows" (May, 2000—March, 2005) *Present Position: Research Assistant Professor, University of Alabama, Huntsville, Ala.*
18. Gandharv Bhatara, Indian Institute of Technology, New Delhi, Thesis Title: "A computational study of the effects of viscoelasticity on the interfacial dynamics of free surface displacement flows", (May, 2000—October, 2004) *Present Position: Product Marketing Manager, Mentor Graphics, Portland, Or.*
19. John Steven Paschkewitz, M.I.T. Thesis Title: "Turbulent Drag Reduction using Rigid Microfibers" (April, 2001— November, 2004) *Present Position: Research Engineer, Palo Alto Research Corp. (PARC)*
20. Victor Alfred Beck, Northwestern, Thesis Title: "Polymer Dynamics in Nonlinear and Microfluidic Flows", (April, 2002 — September, 2006) *Present Position: Postdoctoral Fellow, Bioengineering Dept., Caltech*
21. David Saintillan, Ecole Polytechnique, Thesis Title: "Collective Dynamics in Dispersions of Anisotropic and Deformable Particles", (April, 2002 — August, 2006) (*Mechanical Engineering Student*) (*Thesis won Liebermann award from Stanford for Highest Distinction in Graduate PhD work. Thesis also won the Acrivos Award from the APS-DFD.*) *Present Position: Assistant Professor, Univ. of Illinois at Urbana*
22. Christopher Allen Leuth, Univ. of Minnesota, Thesis Title: Experimental and Numerical Studies of Tethered DNA Dynamics in Shear Flow, (April, 2004 — April, 2009) *Present Position: Postdoctoral Affiliate, Sandia National Labs*
23. Ajey Krishnamurthy Dambal, Washington University at St. Louis, Thesis Title: "Polymer Dynamics in Confined and Concentrated Media" (April, 2004 — December, 2008) *Present Position: Vice President, Goldman-Sachs, Co.*
24. Brendan David Hoffman, University of Maryland, Thesis Title: "Studies of NonEquilibrium Phase Transitions: Polymer Solutions and Fiber Suspensions" (December, 2004 — September, 2008) *Present Position: Quantitative Researcher in Commodity Futures, Campbell, Co, Baltimore, Md.*
25. Shikha Somani, IIT Bombay, Thesis Title: "Polymer dynamics in dilute media: a Brownian dynamics study " (April, 2006 — February, 2011) *Present Position: Software Developer, Bloomberg LLC, New York, New York*
26. David Hastings Richter, University of Massachusetts, (January, 2007 – May, 2011) Thesis Title: "The Effect of Viscoelasticity on the Transitioning Cylinder Wake" (*Mechanical Engineering Student*) *Present Position: Postdoctoral Researcher, National Center for Atmospheric Research (NCAR), Boulder, CO*
27. Shenghan Yan, MIT, Thesis Title: "Collective Behavior of Colloidal Particles on the Fluid Interface" *Present Position: Analyst, Boston Consulting Group, Beijing, China* (April, 2008 – August, 2012)
28. Andrew Spann, MIT, (March, 2008 – present) (*ICME Student*)
29. Amit Kushwaha, Indian Institute of Technology (IIT), Guwahati, Thesis Title: "Computational Modeling of Tethered and Entangled Polymers" *Present Position: Research Engineer, Exxon-Mobil Co., Houston, TX* (June, 2008 – September, 2012) (*Mechanical Engineering Student*)
30. Sean Richard Fitzgibbon, Cornell University, (April 2009 — present)
31. Sourav Padhy, Indian Institute of Technology (IIT), Kharagpur, (October 2009, – present) (*Mechanical Engineering Student*)

32. Vivek Narsimhan, California Institute of Technology, (April, 2010 – present)
33. Eleanor Lin, MIT, (June, 2010 – present) (*ICME Student*)
34. Sreenath Krishnan, Indian Institute of Technology (IIT), Kharagpur, (June 2012 – present) (*Mechanical Engineering Student*)
35. Preyas Shah, Indian Institute of Technology (IIT), Kharagpur, (June 2012 – present) (*Mechanical Engineering Student*)

Post-Doctoral Students Supervised

1. Jason Edward Butler, Univ. of Texas at Austin (Ph.D.), (April, 1999—July, 2001) *Present Position: Associate Professor, Univ. of Fla.*
2. Costas Dimitropoulos, Univ. of Delaware (PhD) (August, 2003 — August, 2004) *Present Position: Senior Scientist, Philips Lumileds, Co.*
3. Mansoo Shin, Cornell University, (September, 2004 — September, 2006) *Present Position: Postdoctoral Researcher, Samsung*
4. Olaf Marxen (co-advised w/ Gianluca Iaccarino, Mechanical Engineering), (January, 2007 – May, 2011) *Present Position: Research Scientist, Von Karman Institute for Fluid Dynamics, Belgium*
5. Hong Zhao (Mechanical Engineering) , (January, 2009 – September, 2012)
6. Guihua Yu (co-advised with Zhenan Bao, Chemical Engineering), (April, 2009 – August, 2012) *Present Position: Assistant Professor, Materials Science, Univ. of Texas at Austin*
7. Bryan Smith (co-advised w/ Sam Gambhir, Department of Radiology, Medical School), (October, 2009 – present)
8. Laura Guglielmini (October, 2010 – August, 2012)
9. Jorge Bernate, (August, 2012 – present)

Present Funding Sources

1. National Science Foundation Division of Chemical and Thermal Sciences (NSF)
Grant#CBET-
PI: Eric S.G. Shaqfeh
Title: Collaborative Research: Understanding the Collective Effects in Suspensions of Vesicles, Capsules, and Particles
Dates: 4/01/2011 – 3/31/2014
Costs: Directs – \$142,400
Indirects – \$82,600
Amount to ESGS per year: \$75,000
Effort: 33% Summer
2. Army High Performance Computational Research Center (AHPCRC)
Director: Charbel Farhat
Grant# W911NF07200271
PI: Eric S.G. Shaqfeh
Title: Simulation of the Dispersion of Biowarfare Agents & Microfluidic Sensing of Biowarfare Agents
Dates: 4/1/07-3/30/12
Costs: Directs – \$217,190
Indirects – \$101,512
Effort: 33% Summer, 5% Academic
3. National Science Foundation Division of Chemical and Thermal Sciences (NSF-CTS) Program in Particulate and Multiphase Flow
Grant#CBET-0729771
PIs: Eric S.G. Shaqfeh. J. Santiago, E. Darve
Title: Experimental and Computational Design of a Microfluidic Device for Micro-Barcode Based Oligonucleotide Synthesis
Dates: 8/01/07 12/31/11
Costs: Directs – 175,854
Indirects – –64,146
Effort: 16% Summer

4. National Institutes of Health (NIH) LOC ARRA
Grant# 8-RHG005596Z
PIs: Annelise Barron, Eric S.G. Shaqfeh, Stephen Quake, Serafim Batzoglou
Title: A Universal Front End to Improve Assembly Outcomes for Next-Gen Sequencing and Re-Sequencing
Dates: 09/30/09-12/31/11
Costs:
Directs - \$1,001,828
Indirects -\$470,429
Effort: 33.4% Summer, 12% Academic
5. National Science Foundation (NSF)
Grant# CBET 0960306
PIs: Eric S. G. Shaqfeh, Gianluca Iaccarino, Eric Darve
Title: MRI-R2: Acquisition of a Hybrid CPU/GPU and Visualization Cluster for Multidisciplinary Studies in Transport Physics with Uncertainty Quantification
Dates: 4/1/10-3/31/13
Total - \$4029600
Directs -
Indirects -
Effort: 0% Summer, 0% Academic