

Ting Ge, Ph.D.

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Google Scholar: <https://scholar.google.com/citations?user=52DPu84AAAAJ&hl=en&oi=ao>

Education

- September 2007 – September 2013, Baltimore, MD, USA
Ph.D., Department of Physics and Astronomy, Johns Hopkins University
Advisor: Prof. Mark O. Robbins (deceased)
Dissertation: "Entanglements in Large Deformation and Mechanical Failure of Glassy Polymers"
 - September 2003 – July 2007, Hefei, Anhui, P. R. China
B.S., Department of Physics, University of Science and Technology of China
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Research Interest

Elucidation of the microscopic origin of macroscopic behaviors of polymer and soft matter systems. The goal is achieved through the combination of molecular simulations and theoretical modeling. Topics currently investigated include (1) the effects of polymer topology on the thermodynamics, rheology, and mechanics of polymeric materials, (2) the transport of nanoscale objects in complex polymeric environments, as well as (3) the scale-bridging physics in the large deformation and fracture behavior of thermoplastics, elastomers, and gels.

Keywords: *soft matter, polymer physics, computational physics, molecular simulation*

Research Experience

- January 2020 – Present, Columbia, SC, USA
Assistant Professor
Department of Chemistry and Biochemistry, University of South Carolina
Computational and Theoretical Research in Polymer and Soft Matter
- January 2018 – December 2019, Durham, NC, USA
Postdoctoral Researcher
Department of Mechanical Engineering and Materials Science, Duke University
Theoretical and Computational Research in Polymer Physics
Advisor: Prof. Michael Rubinstein
- October 2013 – December 2017, Chapel Hill, NC, USA
Postdoctoral Research Associate
Department of Chemistry, University of North Carolina at Chapel Hill & Research Triangle MRSEC
Theoretical and Computational Research in Polymer Physics
Advisor: Prof. Michael Rubinstein
- June 2008 – September 2013, Baltimore, MD, USA
Graduate Research Assistant
Department of Physics and Astronomy, Johns Hopkins University
Molecular Simulation in Polymer Physics
Advisor: Prof. Mark O. Robbins

- August 2012 – September 2013, Baltimore, MD, USA
Graduate Student Researcher
Hopkins Extreme Materials Institute
Multiscale Modeling of Polymers and Composites
Advisor: Prof. Mark O. Robbins
- July 2006 – June 2007, Hefei, Anhui, P. R. China
Undergraduate Research Internship
Hefei National Laboratory for Physical Sciences at the Microscale
Computation of Quantum Transport in Nanostructures
Advisor: Prof. Zejun Ding

Awards

- 2023, Doctoral New Investigator research grant, ACS Petroleum Research Fund
- 2023, CAREER award, Division of Materials Research, NSF
- 2023, 35+1 challenges in materials science being tackled by PIs under 35(ish) in 2023, *Matter* (Elsevier)
- 2022, Soft Matter Emerging Investigator, RSC Journal
- 2022, Southeastern Conference (SEC) Visiting Faculty Travel Grant, University of South Carolina
- 2021, Recipient of ASPIRE I funding for junior faculty development, University of South Carolina
- 2017, Outstanding Reviewer for *Molecular Systems Design & Engineering*
- 2013, Finalist for the 2013 Frank J. Padden Jr. Award, Division of Polymer Physics, APS
- 2011, E. J. Rhee Travel Grant, Department of Physics and Astronomy, Johns Hopkins University
- 2005, Guanghua Scholarship, University of Science and Technology of China
- 2003, 2004, and 2006, Outstanding Student Scholarship, University of Science and Technology of China

Publications in Professional Journals

37. “Integrated colloidal deformation to advanced polymer network design through polymer-nanoparticle alternating hybrids”, D. Zhou, R. Sun, A. Wijesekera, S. Patil, Z. Gan, T. Ge, X.-H. Dong, and S. Cheng, *Giant* 17, 100218 (2024).
36. “35+1 challenges in materials science being tackled by PIs under 35(ish) in 2023”, M. Allen, K. Bediako, W. J. Bowman, M. Calabrese, L. Caretta, R. K. Cersonsky, W. Chen, S. Correa, R. Davidson, L. Dresselhaus-Marais, C. N. Eisler, A. Furst, T. Ge, A. Hook, Y.-T. Hsu, C. Jia, J. Lu, A. Lunghi, M. S. Messina, I. A. Moreno-Hernandez, E. Nichols, R. Rao, M. Seifrid, K. E. Shulenberger, A. N. Simonov, X. Su, D. F. Swearer, E. Tang, M. K. Taylor, H. Tran, G. F. Trindade, R. Truby, H. Utzat, Y. Yang, D. W. Yee, S. Zhao, and S. Cranford, *Matter* 6 (8), 2480 (2023).
35. “Scaling Perspective on Dynamics of Nanoparticles in Polymers: Length- and Time-Scale Dependent Nanoparticle-Polymer Coupling”, T. Ge, *Macromolecules* 56, 3809 (2023), Invited Perspective Article.
34. “Dynamics of Associative Polymers with High Density of Reversible Bonds”, S. Nian, S. Patil, S. Zhang, M. Kim, Q. Chen, M. Zhernenkov, T. Ge, S. Cheng, and L.-H. Cai, *Physical Review Letters* 130, 228101 (2023).
33. “Mechanically Tunable and Reconstructable Lignin Thermosets via ‘Click’ Chemistry and Surface Functionalization”, Y. Bension, L. B. Kurnaz, T. Ge, and C. Tang, *Macromolecules* 56, 2831 (2023).
32. “Inclusion Polymerization of Pyrrole and Ethylenedioxythiophene in Assembled Triphenylamine Bis-Urea Macrocycles”, M. F. Islam, E. Adame-Ramirez, E. R. Williams, P. Kittikhunnatham, A. Wijesekera, S. Zhang, T. Ge, M. Stefik, M. D. Smith, P. J. Pellechia, A. B. Greytak, and L. S. Shimizu, *Macromolecules* 55, 11013 (2023).
31. “Entropic mixing of ring/linear polymer blends”, G. S. Grest, T. Ge, S. J. Plimpton, M. Rubinstein, and T. C. O’Connor, *ACS Polymers Au* 3, 209 (2022).
30. “Superstretchable Elastomers from Cross-linked Ring Polymers”, J. Wang, T. C. O’Connor, G. S. Grest, and T. Ge, *Physical Review Letters* 128, 237801 (2022).
29. “Force-driven active dynamics of thin nanorods in unentangled polymer melts”, S. Zhang, J. Wang, and T. Ge, *Soft Matter* 18, 6582 (2022), Emerging Investigator Collection.

28. “Effects of Coarse-Graining on Molecular Simulation of Craze Formation in Polymer Glass”, J. Wang, P. J. in’t Veld, M. O. Robbins, and T. Ge, *Macromolecules* 55, 1267 (2022).
27. “Composite entanglement topology and extensional rheology of symmetric ring-linear polymer blends”, T. C. O’Connor, T. Ge, and G. S. Grest, *Journal of Rheology* 66, 48 (2022).
26. “Crazing Reveals an Entanglement Network in Glassy Ring Polymers”, J. Wang and T. Ge, *Macromolecules* 54, 7500 (2021).
25. “Diffusion of Thin Nanorods in Polymer Melts”, J. Wang, T. C. O’Connor, G. S. Grest, Y. Zheng, M. Rubinstein, and T. Ge, *Macromolecules* 54, 7051 (2021).
24. “Physicochemical properties of respiratory droplets and their role in COVID-19 pandemics: a critical review”, T. Ge and S. Cheng, *Biomaterials Translational* 2, 10 (2021).
23. “Effects of Coarse-Graining on Molecular Simulations of Mechanical Properties of Glassy Polymers”, T. Ge, J. Wang, and M. O. Robbins, *Macromolecules* 54, 2277 (2021).
22. “Stress relaxation of comb polymer melts”, S. Wijesinghe, D. Perahia, T. Ge, K. M. Salerno, and G. S. Grest, *Tribology Letters* 69, 1 (2021).
21. “Nonlinear shear rheology of entangled polymer rings”, D. Parisi, S. Costanzo, Y. Jeong, J. Ahn, T. Chang, D. Vlassopoulos, J. D. Halverson, K. Kremer, T. Ge, M. Rubinstein, G. S. Grest, W. Srinin, and A. Y. Grosberg, *Macromolecules* 54, 2811 (2021).
20. “Threading-unthreading transition of linear-ring polymer blends in extensional flow”, A. Borger, W. Wang, T. C. O’Connor, T. Ge, G. S. Grest, G. V. Jensen, J. Ahn, T. Chang, O. Hassager, K. Mortensen, D. Vlassopoulos, and Q. Huang, *ACS Macro Letters* 9 (10), 1452 (2020).
19. “Viscoelastic response of dispersed entangled polymer melts”, B. L. Peters, K. M. Salerno, T. Ge, D. Perahia, and G. S. Grest, *Macromolecules* 53, 8400 (2020).
18. “Effects of Tethered Polymers on Dynamics of Nanoparticles in Unentangled Polymer Melts”, T. Ge, M. Rubinstein, and G. S. Grest, *Macromolecules* 53, 6898 (2020).
17. “Topological linking drives anomalous thickening of ring polymers in weak extensional flows”, T. C. O’Connor, T. Ge, M. Rubinstein, and G. S. Grest, *Physical Review Letters* 124 (2), 027801 (2020).
16. “Resolving properties of entangled polymer melts through atomistic derived coarse-grained models”, G. S. Grest, K. Michael Salerno, B. L. Peters, T. Ge, and D. Perahia, *Handbook of Materials Modeling: Methods: Theory and Modeling*, 1397 (2020).
15. “Mobility of Polymer-Tethered Nanoparticles in Unentangled Polymer Melts”, T. Ge and M. Rubinstein, *Macromolecules*, 52, 1536 (2019).
14. “Effect of Chain Length Dispersity on the Mobility of Entangled Polymers”, B. L. Peters, K. M. Salerno, T. Ge, D. Perahia, and G. S. Grest, *Phys. Rev. Lett.* 121, 057802 (2018).
13. “Resolving Properties of Entangled Polymer Melts Through Atomistic Derived Coarse-Grained Models”, G. S. Grest, K. M. Salerno, B. L. Peters, T. Ge, and D. Perahia, *Handbook of Materials Modeling*, Springer, Cham, edited by W. Andreoni and S. Yip (2018).
12. “Nanorheology of Entangled Polymer melts”, T. Ge, G. S. Grest, and M. Rubinstein, *Phys. Rev. Lett.* 120, 057801 (2018).
11. “Nanoparticle Motion in Entangled Melts of Linear and Non-Concatenated Ring Polymers”, T. Ge, J. T. Kalathi, J. D. Halverson, G. S. Grest, and M. Rubinstein, *Macromolecules*, 50, 1749 (2017).
10. “Entanglements in glassy polymer crazing: crosslinks or tubes?”, T. Ge, S. Anogiannakis, C. Tzoumanekas, R. S. Hoy, and M. O. Robbins, *Macromolecules* 50, 459 (2017).
9. “Crazing of Nanocomposites with Polymer-Tethered Nanoparticles”, D. Meng, S. K. Kumar, T. Ge, M. O. Robbins, and G. S. Grest, *J. Chem. Phys.* 145, 094902 (2016).
8. “Self-Similar Conformations and Dynamics in Entangled Melts and Solutions of Nonconcatenated Ring Polymers”, T. Ge, S. Panyukov, and M. Rubinstein, *Macromolecules* 49, 708 (2016).
7. “Strong Selective Adsorption of Polymers”, T. Ge and M. Rubinstein, *Macromolecules* 48, 3788 (2015).

6. "Tensile Fracture of Welded Polymer Interfaces: Miscibility, Entanglements and Crazing", T. Ge, M. O. Robbins, and G. S. Grest, *Macromolecules* 47, 6982 (2014).
 5. "Healing of polymer interfaces: Interfacial dynamics, entanglements, and strength", T. Ge, M. O. Robbins, D. Perahia, and G. S. Grest, *Phys. Rev. E* 90, 012602 (2014).
 4. "Coarse-Graining Atactic Polystyrene and Its Analogues", A. Agrawal, D. Aryal, D. Perahia, T. Ge, and G. S. Grest, *Macromolecules* 47, 3210 (2014).
 3. "Structure and Strength at Immiscible Polymer Interfaces", T. Ge, G. S. Grest, and M. O. Robbins, *ACS Macro Lett.* 2, 882 (2013).
 2. "Molecular Dynamics Simulation of Polymer Welding: Strength From Entanglements", T. Ge, F. Pierce, D. Perahia, G. S. Grest, and M. O. Robbins, *Phys. Rev. Lett.* 110, 098301 (2013), Editor's Suggestion.
 1. "Anisotropic plasticity and chain orientation in polymer glasses", T. Ge and M. O. Robbins, *J. Polymer Sci. B: Polymer Physics* 48, 1473 (2010).
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Conferences and Seminars

Invited Talks

- December 2023, Gainesville, FL, Condensed Matter / Biophysics Seminars, Department of Physics, University of Florida
"Mechanics of Non-Concatenated Ring Polymers: Effects of Topology Revealed by Molecular Simulations"
- October 2023, St. Paul, MN, 3M Tech Forum, 3M Company
"Molecular Modeling of Ring Polymer Mechanics – Effects of Topology Revealed by Molecular Simulations"
- September 2023, Vancouver, BC, Canada, Stewart Blusson Quantum Matter Institute, University of British Columbia
"Molecular Modeling of Ring Polymer Mechanics – Effects of Topology Revealed by Molecular Simulations"
- March 2023, Las Vegas, NV, 2023 APS March Meeting
"Molecular Modeling of Ring Polymer Mechanics – Effects of Topology Revealed by Molecular Simulations"
- December 2022, Beijing University of Chemical Technology, Online Seminar
"Molecular Modeling of Ring Polymer Mechanics – Expanding Applicability of Topological Polymer Chemistry"
- November 2022, Columbia, SC, Department of Chemistry and Biochemistry, University of South Carolina
"Molecular Modeling of Ring Polymer Mechanics – Expanding Applicability of Topological Polymer Chemistry"
- November 2022, Knoxville, TN, Department of Chemistry, University of Tennessee
"Molecular Modeling of Ring Polymer Mechanics – Expanding Applicability of Topological Polymer Chemistry"
- October 2022, Greenville, SC, MADE in SC Fall 2022 Conference
"Molecular Modeling of Ring Polymer Mechanics – Expanding Applicability of Topological Polymer Chemistry"
- May 2022, Atlanta, GA, the 50th Southeastern Theoretical Chemistry Association (SETCA) conference
"Molecular Modeling of Ring Polymer Mechanics – Expanding Applicability of Topological Polymer Chemistry"
- April 2022, Columbia, SC, EPSCoR Conference
"Molecular Modeling of Ring Polymer Mechanics – Expanding Applicability of Topological Polymer Chemistry"
- February 2022, Department of Chemistry, North Carolina Agricultural and Technical State University, Online Seminar
"Mechanics of Non-Concatenated Ring Polymers"
- December 2021, South China University of Technology, Online Seminar
"Self-Similar Conformations and Dynamics of Non-Concatenated Ring Polymers"
- November 2021, Cookeville, TN, Department of Chemistry, Tennessee Tech University
"Mechanics of Non-Concatenated Ring Polymers"
- September 2019, Santa Fe, NM, 2019 CINT Annual Meeting
"Effects of Tethered Polymers on Dynamics of Nanoparticles in Unentangled Polymer Melts"

- January 2019, Blacksburg, VA, Department of Physics, Virginia Polytechnic Institute and State University
“*Rheology and Nanorheology of Entangled Melts of Non-Concatenated Ring Polymers*”
- January 2019, Champaign, IL, Department of Materials Science and Engineering, University of Illinois at Urbana-Champaign
“*Rheology and Nanorheology of Entangled Melts of Non-Concatenated Ring Polymers*”
- January 2019, Columbia, SC, Department of Chemistry and Biochemistry, University of South Carolina
“*Rheology and Nanorheology of Entangled Melts of Non-Concatenated Ring Polymers*”
- September 2018, Clinton, NJ, ExxonMobil Corporate Strategic Research Laboratories
“*Welding of Polymer Interfaces: Connecting Dynamics, Structure and Mechanical Strength*”
- March 2018, Los Angeles, CA, 2018 APS March Meeting
Division of Polymer Physics Short Course: The Gel, Elastomers, and Network Experience
“*Methods of Molecular Simulations as Applied to Rheology and Mechanics of Polymers*”
- August 2016, Blacksburg, VA, Department of Physics, Virginia Polytechnic Institute and State University
Center for Soft Matter and Biological Physics / Condensed Matter Seminar,
“*Nanoparticle Motion in Entangled Melts of Linear and Non-Concatenated Ring Polymers*”
- April 2016, San Marcos, TX, PREM Center on Interfaces in Materials, Texas State University
“*Self-Similar Conformations and Dynamics of Non-Concatenated Ring Polymers*”
- March 2016, Baltimore, MD, 2016 APS March Meeting
“*Self-Similar Conformations and Dynamics of Non-Concatenated Ring Polymers*”,
<https://absuploads.aps.org/presentation.cfm?pid=11630>
- June 2012, Santa Barbara, CA, Kavli Institute for Theoretical Physics
“*Entanglements and Mechanical Failure of Amorphous Polymers*”,
<http://online.kitp.ucsb.edu/online/multiscale12/ge/>

Contributed Talks

- March 2023, Las Vegas, NV, 2023 APS March Meeting
“*Force Driven Active Motion of Thin Nanorods in Unentangled Polymer Melts*”
- October 2022, Chicago, IL, 93rd Society of Rheology Annual Meeting
“*Superstretchable Elastomer from Cross-linked Ring Polymers*”
- October 2022, Chicago, IL, 93rd Society of Rheology Annual Meeting
“*Force Driven Active Motion of Thin Nanorods in Unentangled Polymer Melts*”
- October 2022, Baltimore, MD, 10th International Conference on Multiscale Materials Modeling
“*Effects of Coarse Graining on Molecular Simulations of Craze Formation in Polystyrene Glass*”
- April 2022, virtually, 18th International Conference on Deformation, Yield, and Fracture of Polymers
“*Crazing Reveals an Entanglement Network in Glassy Ring Polymers*”
- March 2022, Chicago, IL, 2022 APS March Meeting
“*Diffusion of Sticky Nanoparticles in Unentangled Polymer Melts*”
- October 2021, Bangor, ME, 92nd Annual Meeting of the Society of Rheology
“*Molecular Dynamics Simulations of Diffusion of Thin Nanorods in Polymer Melts*”
- October 2021, Bangor, ME, 92nd Annual Meeting of the Society of Rheology
“*Crazing Reveals an Entanglement Network in Glassy Ring Polymers*”
- March 2021, Virtual APS March Meeting
“*Molecular Dynamics Simulations of Diffusion of Thin Nanorods in Polymer Melts*”
- March 2021, Virtual APS March Meeting
“*Effects of Coarse-Graining on Molecular Simulations of Craze Formation in Polystyrene Glass*”
- October 2019, Raleigh, NC, 91st Annual Meeting of the Society of Rheology
“*Mobility of Polymer Tethered Nanoparticles in Entangled Polymer Melts*”

- May 2019, Durham, NC, 11th Triangle Soft Matter Workshop
“Mobility of Polymer Tethered Nanoparticles in Polymer Melts”
- October 2018, Houston, TX, 90th Annual Meeting of the Society of Rheology,
“Mobility of Polymer Tethered Nanoparticles in Polymer Melts”
- March 2018, Los Angeles, CA, 2018 APS March Meeting
“Mobility of Polymer Tethered Nanoparticles in Polymer Melts”
- November 2017, Minneapolis, MN, 2017 AIChE Annual Meeting
“Effects of Coarse-Graining on Simulations of Mechanical Properties of Polymers”
- October 2017, Denver, CO, 89th Annual Meeting of the Society of Rheology
“Rheology and Nanorheology of Non-Concatenated Ring Polymers”
- August 2017, Washington, DC,
Symposium on Simulations of Polymeric Materials: Molecular- to Macro-Scale, 254th ACS National Meeting
“Effects of Coarse-Graining on Simulations of Mechanical Properties of Polymers”
- August 2017, Washington, DC,
Symposium on Simulations of Polymeric Materials: Molecular- to Macro-Scale, 254th ACS National Meeting
“Nanorheology of Entangled Polymer Melts”
- May 2017, Chapel Hill, NC, 9th Annual Triangle Soft Matter Workshop
“Nanorheology of Entangled Polymer Melts”
- April 2017, Annapolis MD, 2017 Mach Conference for Multiscale Research in Materials
“Effects of Coarse-Graining on Simulations of Mechanical Properties of Polymers”
- March 2017, New Orleans, LA, 2017 APS March Meeting
“Molecular Dynamics Simulations of Nanoparticle-Based Rheology”
- March 2017, New Orleans, LA, 2017 APS March Meeting
“Nanoparticle Motion in Entangled Melts of Linear and Non-Concatenated Ring Polymers”
- May 2016, Durham, NC, 8th Annual Triangle Soft Matter Workshop
“Self-Similar Conformations and Dynamics of Non-Concatenated Ring Polymers”
- June 2015, Durham, NC, 5th International Conference on Self-Healing Materials
“Welding and Healing of Polymer Interfaces: Connecting Structure, Dynamics and Strength”
- May 2015, Raleigh, NC, 7th Annual Triangle Soft Matter Workshop
“Nanoparticle Dynamics in Ring Polymers”
- March 2015, San Antonio, TX, 2015 APS March Meeting
“Strong Selective Adsorption of Polymers”
- October 2014, Blacksburg, VA, 2nd Virginia Soft Matter Workshop
“Strong Selective Adsorption of Polymers”
- May 2014, Chapel Hill, NC, 6th Annual Triangle Soft Matter Workshop
“Strong Selective Adsorption of Polymers”
- April 2013, Annapolis, MD, 2013 Mach Conference for Multiscale Research in Materials
“Molecular Simulations of Polymer Mechanics Using Coarse-Graining Techniques”
- March 2013, Baltimore, MD, 2013 APS March Meeting
“Polymer Welding: Strength From Interfacial Entanglements”
- January 2013, Washington, D.C., 10th Mid-Atlantic Soft Matter Workshop
“Entanglements and Mechanical Failure of Glassy Polymers”
- September 2012, Baltimore, MD, 22nd International Workshop on Computational Mechanics of Materials
“Development of Interfacial Strength and Entanglements During Welding of Polymers”
- March 2012, Boston, MA, 2012 APS March Meeting
“Development of Interfacial Strength and Entanglements During Welding of Polymers”
- August 2011, Albuquerque, NM, LAMMPS Users’ workshop
“Shear Failure of Polymer Welds and Entanglements”

- July 2011, Minneapolis, MN, 11th US National Congress on Computational Mechanics
“*Entanglements and Mechanical Failure of Polymer Glasses*”
- March 2011, Dallas, TX, 2011 APS March Meeting
“*Evolution of Entanglements During Crazing of Glassy Polymers*”
- March 2010, Portland, OR, 2010 APS March Meeting
“*Anisotropic Plasticity and Chain Orientation in Polymer Glasses*”
- November 2009, Baltimore, MD, 5th Mid-Atlantic Soft Matter Workshop
“*Bauschinger Effect in Polymer Glasses*”
- March 2009, Pittsburg, PA, 2009 APS March Meeting
“*Evolution of Entanglements During Craze Formation*”

Contributed Posters

- July 2023, South Hadley, Gordon Research Conference on the Science of Adhesion
“*Molecular Modeling of Ring Polymer Mechanics*”
- July 2022, South Hadley, Gordon Research Conference on Polymer Physics
“*Molecular Modeling of Ring Polymer Mechanics*”
- March 2022, Chicago, IL, 2022 APS March Meeting
“*Superstretchable Elastomer from Cross-linked Ring Polymers*”
- July 2018, South Hadley, MA, Gordon Research Conference on Polymer Physics
“*Mobility of Polymer-Tethered Nanoparticles in Unentangled Polymer Melts*”
- October 2017, Minneapolis, MN, 2017 AIChE Annual Meeting
“*Nanorheology of Entangled Polymer Melts*”
- October 2017, Denver, CO, 89th Annual Meeting of the Society of Rheology
“*Nanorheology of Entangled Polymer Melts*”
- August 2017, New London, NH, Gordon Research Conference on Soft Condensed Matter Physics
“*Nanorheology of Entangled Polymer Melts*”
- May 2017, Raleigh, NC, Symposium on Molecular Theory and Modeling:
In Honor of the 80th Birthday of Professor Keith E. Gubbins
“*Nanoparticle Motion in Entangled Melts of Linear and Non-Concatenated Ring Polymers*”
- July 2016, South Hadley, MA, Gordon Research Conference on Polymer Physics
“*Nanoparticle Motion in Entangled Melts of Linear and Non-Concatenated Ring Polymers*”
- February 2016, Ventura, CA, Gordon Research Conference on Colloidal, Macromolecular & Polyelectrolyte Solutions, “*Scaling Theory for Strong Selective Adsorption of Polymers*”
- July 2014, South Hadley, MA, Gordon Research Conference on Polymer Physics
“*Scaling Theory for Strong Selective Adsorption of Polymers*”
- May 2014, Chapel Hill, NC, 6th Annual Triangle Soft Matter Workshop
“*Scaling Theory for Strong Selective Adsorption of Polymers*”
- July 2013, South Hadley, MA, Gordon Research Conference on the Science of Adhesion
“*Molecular Simulation Study of Structure and Strength at Polymer Interfaces*”
- June 2012, Santa Barbara, CA, Conference on Modeling Soft Matter: Linking Multiple Length and Time Scales
“*Entanglements and Mechanical Failure of Polymer Glasses*”
- July 2011, Minneapolis, MN, 11th US National Congress on Computational Mechanics
“*Entanglements and Mechanical Failure of Polymer Glasses*”

Teaching Experience

- Summer 2021, Summer 2022, and Summer 2023,
Department of Chemistry and Biochemistry, University of South Carolina
Summer Graduate Enrichment Program – Tutorial on Molecular Simulations using LAMMPS

- Spring 2021, Fall 2021, Fall 2022, and Spring 2023,
Department of Chemistry and Biochemistry, University of South Carolina
Chem541 Physical Chemistry – Thermodynamics and Kinetics Instructor
- Spring 2020 and Spring 2022, Department of Chemistry and Biochemistry, University of South Carolina
Chem739 Topic: Physical Chemistry of Polymer Instructor
- Fall 2019, Department of Mechanical Engineering and Materials Science, Duke University
Undergraduate Research Mentor
- Fall 2018, Department of Mechanical Engineering and Materials Science, Duke University
Polymer Physics Substitute Lecturer
- Fall 2017, Department of Chemistry, UNC-Chapel Hill
Statistical Thermodynamics Teaching Assistant and Substitute Lecturer
- Spring 2015, Spring 2016, and Spring 2017, Department of Chemistry, UNC-Chapel Hill
Graduate Cumulative Exam on Rubber Elasticity Writer and Grader
- Spring 2014, Department of Chemistry, UNC-Chapel Hill
Polymer Physics Teaching Assistant
- Fall 2010, Department of Applied Math, JHU
Advanced Parameterization Grader
- Fall 2007, Spring 2008, and Spring 2010, Department of Physics and Astronomy, JHU
General Physics Teaching Assistant

Outreach

- Summer 2022 and Summer 2023, ACS Project SEED, mentor of high school summer students
- Summer 2021, ACS Project SEED – Virtual Research Pilot Project mentor
- October 2019, Raleigh, NC, Volunteer at 91st Annual Meeting of the Society of Rheology
- April 2016, Raleigh, NC, Volunteer at 2016 North Carolina Science Festival
- April 2014, Durham, NC, Volunteer at 2014 North Carolina Science Festival
- November 2011, Baltimore, MD, Volunteer at 64th Annual Meeting of the APS Division of Fluid Dynamics
- 2009, 2010, 2011, 2012 and 2013, Volunteer at Physics Fair, Department of Physics and Astronomy, JHU

Professional Service

- May 2023, Columbia, SC, University of South Carolina
Co-organizer of the 51st Southeastern Theoretical Chemistry Association (SETCA) conference
- March 2023, Las Vegas, NV, 2023 APS March Meeting
Co-organizer and chair of the session “*Beyond Linear: Structure, Dynamics, Response and Unique Properties of Topological Polymers*”
- March 2022, Chicago, IL, 2022 APS March Meeting
Co-organizer and chair of the session “*Physics of Respiratory Droplets and Their Role in Disease Transmission*”
- March 2018, Los Angeles, CA, 2018 APS March Meeting,
Chair of the session “*Polyelectrolyte Complexation III: Biology and Applications*”
- March 2015, San Antonio, TX, 2015 APS March Meeting,
Chair of the session “*Theory and Modeling of Polymer Nanocomposites, Interfaces, and Surfaces*”
- July 2014, South Hadley, MA, Gordon Research Seminar on Polymer Physics,
Discussion leader of the session “*Mechanical Properties of Polymers*”
- 2013- present, External proposal reviewer for the Center for Integrated Nanotechnologies at Sandia National Laboratories, Albuquerque, NM
- Referee for *Phys. Rev. Lett.*, *Phys. Rev. E*, *Phys. Rev. B*, *Phys. Rev. Research*, *ACS Macro Lett.*, *Macromolecules*, *Soft Matter*, *Phys. Chem. Chem. Phys.*, *J. Phys. Chem.*, *J. Chem. Phys.*, *Molecular Systems Design & Engineering*,

Other Academic Experience

- October 2018, Albuquerque, NM, visited the Center for Integrated Nanotechnologies at Sandia National Laboratories
 - March 2017, Beverly, MA, participated in the spring school organized by Technical University of Berlin on *Self-Assembly in Soft Matter Systems*
 - July 2012, Boulder, CO, participated in Boulder Summer School for Condensed Matter and Material Physics *Polymers in Soft and Biological Matter*
 - May 2012 – June 2012, Santa Barbara, CA, visited the Kavli Institute for Theoretical Physics and participated in the program on *Physical Principles of Multiscale Modeling, Analysis, and Simulation in Soft Condensed Matter*
 - July 2009, Boulder, CO, participated in Boulder Summer School for Condensed Matter and Material Physics *Nonequilibrium Statistical Mechanics: Fundamental Problems and Applications*
 - September 2008 – May 2009, Baltimore, MD, Integrative Graduate Education & Research Traineeship (IGERT) Associate in the program *Modeling Complex Systems*
-