

Ruobing Bai

Assistant Professor, Mechanical and Industrial Engineering (MIE), Northeastern University
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Education

Ph.D., Engineering Sciences 2018
Harvard University
Thesis: *Fatigue of Hydrogels*
Advisor: Zhigang Suo

B.S., Theoretical and Applied Mechanics 2012
Peking University
Thesis: *Stress Analysis of Lithium Ion Batteries with Surface Effect and Phase Transition*
Advisor: Huiling Duan

Employment History

Assistant Professor Jan 2021 - Now
Northeastern University, Department of Mechanical and Industrial Engineering

Postdoctoral Fellow Aug 2018 - Dec 2020
California Institute of Technology, Department of Mechanical and Civil Engineering
Advisor: Kaushik Bhattacharya

Postdoctoral Fellow May 2018 - Aug 2018
Graduate Research Assistant Sept 2012 - May 2018
Harvard University, John A. Paulson School of Engineering and Applied Sciences
Advisor: Zhigang Suo

Awards and Honors

-
- *NSF CAREER Award* 2025
National Science Foundation
 - *MPS Best Referee Award* 2025
Journal of the Mechanics and Physics of Solids
 - *Doctoral New Investigator Grant* 2024
American Chemical Society (ACS) Petroleum Research Fund
 - *EML Young Investigator Award* 2022
Extreme Mechanics Letters
 - *Haythornthwaite Research Initiation Award* 2022
Applied Mechanics Division of American Society of Mechanical Engineers (ASME)
 - *Best Poster Award* 2017
New England Workshop on the Mechanics of Materials and Structures (NEW.Mech), Massachusetts Institute of Technology, Cambridge, MA

- *Haythornthwaite Student Travel Grants*
American Society of Mechanical Engineers International Mechanical Engineering Congress & Exposition, Phoenix, AZ 2016
- *Chun-Tsung Scholar*
Peking University, Beijing, China 2010
- *National Scholarship of China*
Peking University, Beijing, China 2009
- *Pacemaker to Merit Student*
Peking University, Beijing, China 2009

Journal Publications

[#]Equal contribution; *Corresponding author; ¹My PhD student; ²My undergraduate student

Since Joining Northeastern University

1. Chen, W.; Zhou, X.; Tang, J.; Bai, R.; Wang, L.; Liu, K. * Influence of water-soaking on the mechanical properties of liquid crystal elastomers: an experimental study. *Acta Mechanica Sinica* **2026**, accepted.
2. Usmanova, Z.¹; Bai, R. * Anomalous thermomechanical actuation of liquid crystal elastomer balloons. *Extreme Mechanics Letters* **2026**, 83, 102448.
3. Wan, Y.¹; Bai, R. * Prevalent low interfacial fatigue threshold in pressure-sensitive adhesives. *Journal of Applied Mechanics* **2026**, accepted.
4. Yu, Z.[#]; Xu, D.[#]; Usmanova, Z.^{#,1}; Swarnkar, A.; Ye, C.; Scott, E.; Huang, S.; Rao, S.; Boriskina, S. V. *; Bai, R. *; Lin, S. * An elastocaloric polymer with ultra-high solid-state cooling via defect engineering. *Advanced Science* **2025**, e18106.
5. Xu, L.[#]; Penda, F.[#]; Usmanova, Z.^{#,1}; Li, W.; Ihuaenyi, R.; Zhu, J. *; Bai, R. *; Xu, H. * Exploring the role of stochasticity in lattice structures for crush energy absorption capabilities. *Thin-Walled Structures* **2025**, 219, 114169.
6. Xiao, Y.; Zeng, Y.; Liu, B.; Bai, R.; Hong, W.; Yang, C. * Prolonged fracture resistance of hydrogels through spontaneous network reconfiguration. *Extreme Mechanics Letters* **2025**, 75, 102298.
7. Yin, Q.¹; Manav, Y. A.; Wan, Y.¹; Davaji, B. *; Bai, R. * Highly switchable and reversible soft sticky adhesives based on thermo-responsive phase separation. *Extreme Mechanics Letters* **2025**, 75, 102293.
8. Usmanova, Z.¹; Bai, R. * Peeling an architected interface: Roles of softness and fractoadhesive length in adhesion toughening. *International Journal of Fracture* **2025**, 249, 18.
9. Wei, Z.¹; Bootwala, U. H.²; Bai, R. * Synthesis-processing-property relationships in thermomechanics of liquid crystal elastomers. *Journal of the Mechanics and Physics of Solids* **2024**, 105977.
10. Wan, Y.¹; Yin, Q.¹; Zhang, P.; Yang, C.; Bai, R. * Interfacial fatigue fracture of pressure sensitive adhesives. *Extreme Mechanics Letters* **2024**, 72, 102248.
11. Anssari-Benam, A.; Wei, Z.¹; Bai, R. * Modelling the deformation of polydomain liquid crystal elastomers as a state of hyperelasticity. *Journal of Elasticity* **2024**, 156 (2), 387-413.
12. Wang, Y.[#]; Wei, Z.^{#,1}; Ji, T.; Bai, R. *; Zhu, H. * Highly ionic conductive, stretchable, and tough ionogel for flexible solid-state supercapacitor. *Small* **2023**, 2307019.
13. Cao, D.; Ji, T.; Wei, Z.¹; Liang, W.; Bai, R.; Burch, K. S.; Geiwitz, M.; Zhu, H. * Enhancing lithium stripping efficiency in anode-free solid-state batteries through self-regulated internal pressure. *Nano Letters* **2023**, 23 (20), 9392-9398.
14. Wei, Z.^{#,1}; Wang, P.^{#,2}; Bai, R. * Thermomechanical coupling in polydomain liquid crystal elastomers. *Journal of Applied Mechanics* **2023**, 91 (2).
15. Xiao, Y.; Li, Q.; Yao, X.; Bai, R.; Hong, W.; Yang, C. * Fatigue of amorphous hydrogels with dynamic covalent bonds. *Extreme Mechanics Letters* **2022**, 53, 101679.

16. Wei, Z.¹; Bai, R.* Temperature-modulated photomechanical actuation of photoactive liquid crystal elastomers. *Extreme Mechanics Letters* **2022**, 51, 101614.

Before Joining Northeastern University

17. Bai, R.; Ocegueda, E.; Bhattacharya, K. Photochemical-induced phase transitions in photoactive semicrystalline polymers. *Physical Review E* **2021**, 103 (3), 033003.
18. Hua, M.; Kim, C.; Du, Y.; Wu, D.; Bai, R.; He, X. Swaying gel: Chemo-mechanical self-oscillation based on dynamic buckling. *Matter* **2021**, 4 (3), 1029-1041.
19. Bai, R.; Teh, Y. S.; Bhattacharya, K. Collective behavior in the kinetics and equilibrium of solid-state photoreaction. *Extreme Mechanics Letters* **2021**, 43, 101160.
20. Bai, R.; Bhattacharya, K. Photomechanical coupling in photoactive nematic elastomers. *Journal of the Mechanics and Physics of Solids* **2020**, 144, 104115.
21. Yang, J.; Steck, J.; Bai, R.; Suo, Z. Topological adhesion ii. Stretchable adhesion. *Extreme Mechanics Letters* **2020**, 40, 100891.
22. Chen, B.; Yang, J.; Bai, R.; Suo, Z. Molecular staples for tough and stretchable adhesion in integrated soft materials. *Advanced Healthcare Materials* **2019**, 0 (0), 1900810.
23. Yang, J.; Bai, R.; Li, J.; Yang, C.; Yao, X.; Liu, Q.; Vlassak, J. J.; Mooney, D. J.; Suo, Z. Design molecular topology for wet-dry adhesion. *ACS Applied Materials & Interfaces* **2019**, 11 (27), 24802-24811.
24. Yang, J.; Bai, R.; Chen, B.; Suo, Z. Hydrogel adhesion: A supramolecular synergy of chemistry, topology, and mechanics. *Advanced Functional Materials* **2019**, 0 (0), 1901693.
25. Bai, R.; Yang, J.; Morelle, X. P.; Suo, Z. Flaw-insensitive hydrogels under static and cyclic loads. *Macromolecular Rapid Communications* **2019**, 40 (8), e1800883.
26. Bai, R.; Chen, B.; Yang, J.; Suo, Z. Tearing a hydrogel of complex rheology. *Journal of the Mechanics and Physics of Solids* **2019**, 125, 749-761.
27. Bai, R.; Yang, J.; Suo, Z. Fatigue of hydrogels. *European Journal of Mechanics - A/Solids* **2019**, 74, 337-370.
28. Sun, M.; Bai, R.; Yang, X.; Song, J.; Qin, M.; Suo, Z.; He, X. Hydrogel interferometry for ultrasensitive and highly selective chemical detection. *Advanced Materials* **2018**, 0 (0), 1804916.
29. Morelle, X. P.; Illeperuma, W. R.; Tian, K.; Bai, R.; Suo, Z.; Vlassak, J. J. Highly stretchable and tough hydrogels below water freezing temperature. *Advanced Materials* **2018**, 30 (35), 1801541.
30. Wang, Z.; Tang, J.; Bai, R.; Zhang, W.; Lian, T.; Lu, T.; Wang, T. A phenomenological model for shakedown of tough hydrogels under cyclic loads. *Journal of Applied Mechanics* **2018**, 85 (9), 091005-091005-091008.
31. Yang, J.[#]; Bai, R.[#]; Suo, Z. Topological adhesion of wet materials. *Advanced Materials* **2018**, 30 (25), 1800671.
32. Zhang, E.; Bai, R.; Morelle, X. P.; Suo, Z. Fatigue fracture of nearly elastic hydrogels. *Soft Matter* **2018**, 14 (18), 3563-3571, 10.1039/C8SM00460A.
33. Qin, M.; Sun, M.; Bai, R.; Mao, Y.; Qian, X.; Sikka, D.; Zhao, Y.; Qi, H. J.; Suo, Z.; He, X. Bioinspired hydrogel interferometer for adaptive coloration and chemical sensing. *Advanced Materials* **2018**, 1800468.
34. Bai, R.; Yang, J.; Morelle, X. P.; Yang, C.; Suo, Z. Fatigue fracture of self-recovery hydrogels. *ACS Macro Letters* **2018**, 312-317.
35. Morelle, X. P.; Bai, R.; Suo, Z. Localized deformation in plastic liquids on elastomers. *Journal of Applied Mechanics* **2017**, 84 (10), 101002.
36. Bai, R.; Yang, Q.; Tang, J.; Morelle, X. P.; Vlassak, J.; Suo, Z. Fatigue fracture of tough hydrogels. *Extreme Mechanics Letters* **2017**, 15, 91-96.
37. Bai, R.; Suo, Z. Optomechanics of soft materials. *Journal of Applied Mechanics* **2015**, 82 (7), 071011-071011-071019.

38. Liu, Y.; Lv, P.; Ma, J.; Bai, R.; Duan, H. L. Stress fields in hollow core-shell spherical electrodes of lithium ion batteries. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Science* **2014**, 470 (2172).

Other Research/Scholarship/Creative Activities

¹My PhD student

Since Joining Northeastern University

Patents

1. Bai, R.; Wei, Z.¹; Wan, Y.¹; Usmanova, Z.¹; Yin, Q.¹ Tough and switchable liquid crystalline pressure-sensitive adhesives. *U.S. Provisional Patent* **2024**, App. 63/685,073.
2. Bai, R.; Yin, Q.¹; Wan, Y.¹ Thermo-switchable pressure-sensitive adhesives. *U.S. Patent* **2024**, App. 18/830,163.

Book Chapters

1. Yang, J.; Bai, R. Mechanics of wet adhesion. In *Mechanics of Flexible and Stretchable Electronics*, 2024; pp 345-372.

Before Joining Northeastern University

Patents

1. Yang J.; Bai, R.; Suo, Z. Topological adhesion of materials. *U.S. Patent* **2021**, App. 17/048,803.

Presentations

Since Joining Northeastern University

Invited Seminars and Keynote Presentations

- *Multifunctional Polymer Mechanics Towards Intelligent and Sustainable Mechanical Systems*
Worcester Polytechnic Institute, Worcester, MA 2025
- *Thermomechanical and Photomechanical Coupling in Liquid Crystal Elastomers*
Society of Engineering Science (SES) Annual Meeting, Hangzhou, China 2024
- *Interfacial Fatigue and Switchable Adhesion of Soft Sticky Adhesives*
Fracture of Soft Materials Symposium, UT Austin, Austin, TX 2024
- *Mechanics of Physically Intelligent Soft Materials*
Brown University, Providence, RI 2024
- *Mechanics of Physically Intelligent Soft Materials*
Tufts University, Medford, MA 2024
- *Embedding Physical Intelligence in Soft Active Materials: from Actuation of Liquid Crystal Elastomers to Switchable Pressure-Sensitive Adhesives*
Extreme Mechanics Letters Webinar, virtual 2023
- *Fracture, Fatigue, and Adhesion of Soft Active Materials*
Adhesion Community of Practice, Dow, virtual 2023
- *Embedding Physical Intelligence in Soft Active Materials through Stimuli-Responsive Phase Transformation: from Photomechanical Actuation to Thermo-switchable Adhesion*
University of Connecticut, Mansfield, CT 2023
- *Photomechanical Coupling in Photoactive Molecular Crystals and Liquid Crystal Elastomers*
UMass Dartmouth, Dartmouth, MA 2022

- *Mesoscale Photomechanical Coupling in Photoactive Materials*
New England Workshop on the Mechanics of Materials and Structures (NEW.Mech), MIT, Cambridge, MA 2022
- *Fatigue of Hydrogels and What We Have Learned So Far*
Prospects of Soft Matter Symposium, CU Boulder, virtual 2022
- *Liquid Crystal Elastomers: from Optics to Novel Mechanics*
Display Materials Technology Symposium, KLA Instruments, virtual 2022
- *Mesoscale Photomechanical Coupling in Photoactive Materials*
Engineering and Applied Science Forum Webinar, virtual 2022

Conference Presentations

- *Low Interfacial Fatigue Threshold Prevails in Various Pressure Sensitive Adhesives*
American Physical Society (APS) March Meeting, Anaheim, CA 2025
- *Peeling an Architected Interface: Roles of Softness and Fractocohesive Length in Adhesion Toughening*
Adhesion Society Annual Meeting, New Orleans, LA 2025
- *Interfacial Fatigue Fracture of Pressure Sensitive Adhesives*
Adhesion Society Annual Meeting, New Orleans, LA 2025
- *Synthesis-Processing-Dependent Thermomechanics of Liquid Crystal Elastomers*
International Mechanical Engineering Congress & Exposition (ASME-IMECE), Portland, OR 2024
- *Interfacial Fatigue Fracture of Pressure Sensitive Adhesives*
International Mechanical Engineering Congress & Exposition (ASME-IMECE), Portland, OR 2024
- *Peeling an Architected Interface*
International Mechanical Engineering Congress & Exposition (ASME-IMECE), Portland, OR 2024
- *The Detailed Synthesis Process Determines Thermomechanical Behaviors of a Liquid Crystal Elastomer*
Fracture of Soft Materials Symposium, UT Austin, Austin, TX 2024
- *Thermo-Switchable Adhesives with Strong Adhesion and Fast, Repeatable Switching*
Fracture of Soft Materials Symposium, UT Austin, Austin, TX 2024
- *Interfacial Fatigue Fracture of Pressure Sensitive Adhesives*
Fracture of Soft Materials Symposium, UT Austin, Austin, TX 2024
- *Interplay between Geometric Heterogeneity and Elasticity in Architected Adhesion*
Fracture of Soft Materials Symposium, UT Austin, Austin, TX 2024
- *Interfacial Fatigue Fracture of Pressure Sensitive Adhesives*
New England Workshop on the Mechanics of Materials and Structures (NEW.Mech), Boston, MA 2024
- *Interplay between Geometric Heterogeneity and Elasticity in Architected Adhesion*
New England Workshop on the Mechanics of Materials and Structures (NEW.Mech), Boston, MA 2024
- *Interfacial Fatigue Fracture of Pressure Sensitive Adhesives*
American Physical Society (APS) March Meeting, Minneapolis, MN 2024
- *Thermomechanical Coupling in Monodomain and Polydomain Liquid Crystal Elastomers*
American Physical Society (APS) March Meeting, Minneapolis, MN 2024

- *Interfacial Fatigue Fracture of Pressure Sensitive Adhesives*
Adhesion Society Annual Meeting, Savannah, GA 2024
- *Thermo-Switchable Adhesives with Strong Adhesion and Fast, Repeatable Switching*
Adhesion Society Annual Meeting, Savannah, GA 2024
- *Temperature-Switchable Adhesives Enabled by Thermo-Responsive Soft Active Materials*
International Mechanical Engineering Congress & Exposition (ASME-IMECE), New Orleans, LA 2023
- *Thermomechanical Coupling in Monodomain and Polydomain Liquid Crystal Elastomers*
International Mechanical Engineering Congress & Exposition (ASME-IMECE), New Orleans, LA 2023
- *Temperature-Switchable Adhesives Enabled by Thermo-Responsive Soft Active Materials*
Society of Engineering Science (SES) Annual Meeting, Minneapolis, MN 2023
- *Temperature-Switchable Adhesives Enabled by Thermo-Responsive Soft Active Materials*
Science of Adhesion Gordon Research Seminar (GRS), Mount Holyoke, MA 2023
- *Temperature-Switchable Adhesives Enabled by Thermo-Responsive Soft Active Materials*
New England Workshop on the Mechanics of Materials and Structures (NEW.Mech), Boston, MA 2023
- *Effects of Pre-Stretch on Thermomechanical Behaviors of Nematic Liquid Crystal Elastomers*
New England Workshop on the Mechanics of Materials and Structures (NEW.Mech), Boston, MA 2023
- *Effects of Pre-Stretch on Thermomechanical Behaviors of Nematic Liquid Crystal Elastomers*
American Physical Society (APS) March Meeting, Las Vegas, NV 2023
- *Temperature-Switchable Adhesives Enabled by Thermo-Responsive Soft Active Materials*
American Physical Society (APS) March Meeting, Las Vegas, NV 2023
- *Temperature-Switchable Adhesives Enabled by Thermo-Responsive Soft Active Materials*
Adhesion Society Annual Meeting, Orlando, FL 2023
- *Mesoscale Photomechanical Coupling in Photoactive Liquid Crystal Elastomers*
Materials Research Society (MRS) Fall, Boston, MA 2022
- *Photomechanics and Thermomechanics of Nematic Liquid Crystal Elastomers*
Society of Engineering Science (SES) Annual Meeting, College Station, TX 2022
- *Mesoscale Photomechanical Coupling in Photoactive Liquid Crystal Elastomers*
National Congress for Theoretical and Applied Mechanics (USNC-TAM), Austin, TX 2022
- *Photomechanical Coupling in Photoactive Nematic Elastomers*
International Mechanical Engineering Congress & Exposition (ASME-IMECE), virtual 2021
- *Collective Behavior in the Kinetics and Equilibrium of Solid-State Photoreaction*
International Mechanical Engineering Congress & Exposition (ASME-IMECE), virtual 2021

Before Joining Northeastern University

Invited Seminars and Keynote Presentations

- *Mechanics of Soft Active Materials: Characterization, Design, and Functionalization*
California Institute of Technology, Pasadena, CA 2020
- *Soft Active Materials towards Soft Machines: Characterization, Design, and Functionalization*
University of Houston, Houston, TX 2020

- *Mechanics of Soft Active Materials: Characterization, Design, and Functionalization*
Southern Methodist University, Dallas, TX 2020
- *Mechanics of Soft Active Materials: Characterization, Design, and Functionalization*
Northeastern University, Boston, MA 2020
- *Mechanics of Soft Active Materials: Characterization, Design, and Functionalization*
University at Buffalo, Buffalo, NY 2019

Conference Presentations

- *Society of Engineering Science (SES)*: 2019 (St. Louis, MO)
- *International Mechanical Engineering Congress & Exposition (ASME-IMECE)*: 2016 (Phoenix, AZ)
- *National Congress for Theoretical and Applied Mechanics (USNC-TAM)*: 2018 (Chicago, IL)
- *New England Workshop on the Mechanics of Materials and Structures (NEW.Mech)*: 2017 (Cambridge, MA)
- *Materials Research Society (MRS) Fall*: 2019 (Boston, MA)

Teaching and Advising

Courses

- **Spring 2025: ME2340, *Introduction to Materials Science***
58 students
- **Fall 2024: ME2355, *Mechanics of Materials***
52 students
- **Spring 2024: ME2340, *Introduction to Materials Science***
43 students
- **Fall 2023: ME6320, *Mechanics of Soft Materials***
New course I developed
6 students
- **Spring 2023: ME2340, *Introduction to Materials Science***
36 students
- **Fall 2022: ME2355, *Mechanics of Materials***
29 students
- **Spring 2022: ME2340, *Introduction to Materials Science***
36 students
- **Spring 2021: ME2340, *Introduction to Materials Science***
47 students

Supervision of Postdoctoral Associates

- **Yanchu Zhang, Postdoctoral Associates, Sep 2025 - Now**

Supervision of Graduate Students

- **Rafi Bin Dastagir, PhD student, Sep 2025 - Now**
- **Rongyue Lin, PhD student, Sep 2024 - Now**
- **Yichen Wan, PhD candidate, Sep 2022 - Now**
- **Zumrat Usmanova, PhD candidate, Sep 2022 - Now**

- Qianfeng Yin, PhD candidate, Sep 2021 - Now
- Zhengxuan Wei, PhD candidate, Jan 2021 - Now
- Peixun Wang, Master, Oct 2021 - May 2023

Service and Professional Development

Service to the Institution

Department Service

- Mechanics&Design Graduate Curriculum Subcommittee member, 2024-2024
- Mechanics&Design Program Graduate Admission Committee member, 2023-Now
- MIE Graduate Affairs Committee member, 2023-Now
- MIE Lab Affairs Committee member, 2025-Now
- Faculty advisor of the MIE PhD Council, 2023-Now

Service to the Discipline/Profession

- Guest Editor, *Special Issue: Mechanics of Soft and Living Matter*, Experimental Mechanics, 2025
- Vice-Chair (2026), Secretary (2025), Editor (2024), American Society of Mechanical Engineers (ASME) technical committee, *Mechanics of Soft Materials*
- Extreme Mechanics Letters (EML) Early Career Advisory Board, 2023-Now
- Moderator, iMechanica, world's largest website of mechanics and mechanicians, 2015-Now
- Consulting committee member, University-Industry Workshop, *High-Throughput Soft Material Development*, Michigan State University, 2025
- Editor, iMechanica Journal Club, 2024-2025
- Reviewer, American Chemical Society (ACS) Petroleum Research Fund, 2025, 2024
- Review panelist, National Science Foundation (NSF), 2025, 2024, 2022
- Reviewer, National Aeronautics and Space Administration (NASA), 2024
- Organizer, New England Workshop on the Mechanics of Materials and Structures (NEW.Mech), Northeastern University, 2023
- Reviewer, American Society for Engineering Education (ASEE) eFellows (Engineering Postdoctoral Fellowship) by National Science Foundation (NSF), 2022
- Review Editor, *Frontiers in Materials - Smart Materials & Soft Robotics*, 2022
- Guest Editor, *Frontiers in Robotics and AI - Soft Robotics*, Research Topic *Extreme Mechanics of Soft Active Materials for Soft Robotics*, 2020-2021
- Multiple conference session chairs for: *Mechanics of Soft Materials* (International Mechanical Engineering Congress & Exposition, Memphis, 2025), *Adhesion, Friction, and Fracture at Soft Interfaces: Theory, Simulation, and Experiment* (Society of Engineering Science Annual Meeting, Atlanta, 2025), *Mechanics and Polymer Physics of Soft Adhesives* (American Physical Society March Meeting, Anaheim, 2025), *Gels, Elastomers, and Hybrids I* (Adhesion Society Annual Meeting, New Orleans, 2025), *Mechanics of Soft Materials* (International Mechanical Engineering Congress & Exposition, Portland, 2024), *Fracture of Soft Materials* (AmeriMech Symposium, Austin, 2024), *Reversible Adhesion/Adhesives & 3D Printing* (Adhesion Society Annual Meeting, Savannah, 2024), *Adhesion, Friction, and Fracture at Soft Interfaces: Theory, Simulation, and Experiment* (Society of Engineering Science Annual Meeting, Hangzhou, 2024), *EML 10th Anniversary Symposium* (Society of Engineering Science Annual Meeting, Hangzhou, 2024), *Elastomeric Fracture* (Society of

Engineering Science Annual Meeting, Minneapolis, 2023), *Adhesion, Friction, and Fracture at Soft Interfaces: Theory, Simulation, and Experiment* (Society of Engineering Science Annual Meeting, Minneapolis, 2023), *Mechanics of Liquid Crystal Elastomers* (U.S. National Congress on Theoretical and Applied Mechanics, Austin, 2022), *Mechanics of Smart and Tough Gels* (International Union of Theoretical and Applied Mechanics Symposium, Austin, 2021)

- Active reviewer for: *ACS Macro Letters*, *Advanced Materials*, *Advanced Functional Materials*, *Applied Physics Letters*, *Chemical Reviews*, *Engineering Fracture Mechanics*, *European Journal of Mechanics / A Solids*, *European Polymer Journal*, *Experimental Mechanics*, *Extreme Mechanics Letters*, *International Journal of Fracture*, *International Journal of Mechanical Sciences*, *International Journal of Solids and Structures*, *iScience*, *Journal of Applied Mechanics*, *Journal of Applied Physics*, *Journal of the Mechanics and Physics of Solids*, *Liquid Crystals*, *Macromolecules*, *Materials Science & Engineering C*, *Materials Today*, *Mechanics of Materials*, *Mechanics of Soft Materials*, *Molecules*, *Nano Letters*, *npj Computational Materials*, *Proceedings of the Royal Society A*, *Physical Review Applied*, *Physical Review E*, *Physical Review Letters*, *Physical Review Materials*, *Physical Review X*, *PNAS*, *RSC Advances*, *Science*, *Science Advances*, *Soft Matter*, etc.
- Discussion leader, iMechanica Journal Club, *Fatigue of hydrogels*, 2019

Service to the Community/Public

- Young Scholars Program Lunch Seminar, NU Center for STEM Education, 2025
- Building Bridges, NU Center for STEM Education, 2023
- Building Bridges, NU Center for STEM Education, 2022
- Pathways to STEM, NU Center for STEM Education, 2021
- Young Scholars Program, NU Center for STEM Education, 2021