Kaustav Bera, Ph.D.

University of Colorado Boulder

kaustav.bera@colorado.edu | www.kaustavbera.com

Education

Helen Hay Whitney Postdoctoral Fellow | Chemical and Biological Engineering

Advisor: Dr. Kristi Anseth

October 2022 – present University of Colorado

April 2022

Doctor of Philosophy | Chemical and Biomolecular Engineering

Advisor: Dr. Konstantinos Konstantopoulos

Thesis: Bioengineering Approach to Elucidate How Cells Sense and Respond to Diverse Physical

Cues

Johns Hopkins University

Master & Bachelor of Technology | Biotechnology and Biochemical Engineering

Advisors: Dr. Suman Chakraborty & Dr. Tapas Kumar Maiti

Thesis: Shape Evolution of Red Blood Cell in Pulsating Microfluidic Environment

May 2016 Indian Institute of Technology Kharagpur (IIT Kharagpur)

Grants and Fellowships

Received (selected): - secured > \$309,500 in individual funding as PI

- Helen Hay Whitney Foundation Postdoctoral Fellowship | 2024-2027
- Commonwealth Scholarship | 2016 | for MS at University of Cambridge, UK (declined)
- Khorana Fellowship | 2015 | Government of India, Indo-U.S. Science and Technology Forum and WINStep Forward
- **DAAD WISE Fellowship** | 2015 | German Academic Exchange Service for research internship in Germany (declined)

With mentors:

- R01 National Cancer Institute | Viscotaxis: Novel cell migration mechanisms regulated by microenvironmental viscosity | 2021-2026 (PI: Konstantinos Konstantopoulos)
- **R01 National Cancer Institute** | The interplay of ion transporters and cytoskeleton in breast cancer migration and metastasis | 2021-2026 (PI: Konstantinos Konstantopoulos)

Publications — 24 total, 7 as first/co-first author including in **Nature** and **Science Advances**

* indicates co-first authors

First or co-first authored publications:

- 1. <u>Bera K</u>, McNally DL, Kirkpatrick BE, Petrich NR, Yavitt FM, Coulombe M, Quintero M, Skillin NP, Khang A, McGrath PS, Samuelson LC, Lele TP, Dempsey PJ, Anseth KS. (2025) *Nuclei sense complex tissue shape and direct intestinal stem cell fate. bioRxiv* (<u>link</u>), in peer review at *Nature Cell Biology*.
- 2. <u>Bera K</u>, Kiepas A, Godet I, Li Y, Mehta P, Ifemembi B, Paul CD, Sen A, Serra SA, Stoletov K, Tao J, Shatkin G, Lee SJ, Zhang Y, Boen A, Mistriotis P, Gilkes DM, Lewis JD, Fan CM, Feinberg AP, Valverde MA, Sun SX, Konstantopoulos K. (2022) *Extracellular fluid viscosity enhances cell migration and cancer dissemination*. *Nature*. (<u>link</u>). Article highlighted in *Nature Research Briefing* (<u>link</u>), Cancer Discovery Research Watch (<u>link</u>), Faculty Opinions (<u>link</u>), Nature Reviews Molecular Cell Biology (<u>link</u>)
- 3. <u>Bera K</u> *, Zhang Y *, Kiepas A *, Zhang Y, Sun SX, Konstantopoulos K. (2022) *The interplay of between physical cues and mechanosensitive ion channels in cancer metastasis. Frontiers in Cell and Developmental Biology*. (link)
- 4. Afthinos A*, Bera K*, Chen J, Ozcelikkale A, Amitrano A, Choudhury MI, Huang R, Pachidis P, Mistriotis P, Chen Y, Konstantopoulos K. (2022) *Migration and 3D traction force measurements inside compliant microchannels.* **Nano Letters**. (link)
- 5. Yankaskas CL*, <u>Bera K</u> *, Stoletov K, Serra SA, Carrillo-Garcia J, Tuntithavornwat S, Mistriotis P, Lewis JD, Valverde MA, Konstantopoulos K. (2021). *The fluid shear stress sensor TRPM7 regulates tumor cell intravasation*. **Science Advances**. (link)

First or co-first authored articles in preparation:

- 6. <u>Bera K</u>, McNally DL, Brumbaugh J, Dempsey PJ, Anseth KS. (2026) *Epigenetic landscape of intestinal stem cells in homeostasis and tumors*. In preparation
- 7. McNally DL *, Bera K *, Petrich NR, Khang A, Dempsey PJ, Anseth KS. (2026) Photo tunable hydrogel-based model to study intestinal crypt fission dynamics in-vitro. In preparation

Publications as contributing author:

- 8. Blatchley MR, <u>Bera K</u>, Kirkpatrick BE, Yavitt FM, McGrath PS, Dempsey P, Anseth KS. (2025) *Spatiotemporally Controlled Matrix Softening Facilitates Deterministic Crypt Formation in Human Intestinal Organoids*. Submitted to **PNAS**.
- 9. Yavitt FM, Khang A, <u>Bera K</u>, McNally DL, Blatchley MR, Gallagher AP, Klein OD, Castillo-Azofeifa D, Dempsey PJ, Anseth KS. (2025) Engineered epithelial curvature controls Paneth cell localization in intestinal organoids. **Cell Biomaterials**. (link)
- 10. Hushka EA, Blatchley MR, Macdougall LJ, Yavitt FM, Kirkpatrick BE, <u>Bera K</u>, Dempsey PJ, Anseth KS. (2025) *Fully synthetic hydrogels promote robust crypt formation in intestinal organoids. Advanced Materials. (link)*
- 11. Tran A*, Wisniewski EO*, Mistriotis P*, Stoletov K, Parlani M, Amitrano A, Ifemembi B, Lee SJ, Bera K, Zhang Y, Tuntithavornwat S, Afthinos A, Kiepas A, Agarwal B, Nath S, Jamieson JJ, Zuo Y, Habib D, Wu PH, Martin SS, Gerecht S, Gu L, Lewis JD, Kalab P, Friedl P, Konstantopoulos K. (2025) Cytoplasmic anillin and Ect2 promote RhoA/myosin II-dependent confined migration and invasion. Nature Materials. (link)
- 12. Kirkpatrick BE *, Dhand AP *, Hibbard LP, Jaeschke MW, Yendamuri T, Nelson BR, Lee JS, Bera K, Zlotnick HM, Fox CN, Meurer-Zeman B, Miksch CE, Skillin NP, Blatchley MR, White TJ, Bowman CN, Burdick JA, Anseth KS. (2025) *Ultrafast-relaxing and photopolymerizable PEG hydrogels enable viscoelasticity-mediated cell remodeling in synthetic matrices*. In press at *Matter*.
- 13. Batan D *, Tseropoulos G *, Kirkpatrick BE, Bishop C, Bera K, Khang A, Weiser-Evans M, Anseth KS. (2025). *PTEN Regulates Myofibroblast Activation in Valvular Interstitial Cells Based on Subcellular Localization.* **Advanced Biology**. (link)
- 14. Khang A, Barmore A, Tseropoulos G, <u>Bera K</u>, Batan D, Anseth KS. (2025). *Automated prediction of fibroblast phenotypes using mathematical descriptors of cellular features*. *Nature Communications*. (link)
- 15. Ni Q*, Ge Z*, Li Y, Shatkin G, Fu J, Sen A, <u>Bera K</u>, Yang Y, Wang Y, Wu Y, Nogueira Vasconcelos AC, Yan Y, Lin D, Feinberg AP, Konstantopoulos K, Sun SX. (2024) *Cytoskeletal activation of NHE1 regulates mechanosensitive cell volume adaptation and proliferation. Cell Reports*. (link)
- 16. Ohnsorg ML, Mash KM, Khang A, Rao VV, Kirkpatrick BE, <u>Bera K</u>, Anseth KS. (2024) Nonlinear elastic bottlebrush polymer hydrogels modulate actomyosin mediated protrusion formation in mesenchymal stromal cells. **Advanced Materials**. (<u>link</u>)
- 17. Beedle AEM, Jaganathan A, Albajar-Sigales A, Yavitt FM, <u>Bera K</u>, Andreu I, Granero-Moya I, Zalvidea D, Kechagia Z, Wiche G, Trepat X, Ivaska J, Anseth KS, Shenoy VB, Roca-Cusachs P. (2023) *Fibrillar adhesion dynamics govern the timescales of nuclear mechano-response via the vimentin cytoskeleton. bioRxiv* (link), in peer review at *Nature Materials*.
- 18. Maity D, Bera K, Li Y, Ge Z, Ni Q, Konstantopoulos K, Sun SX. (2022). Extracellular hydraulic resistance enhances cell migration. Advanced Science. (link)
- 19. Zhang Y, Li Y, Thompson KN, Stoletov K, Yuan Q, <u>Bera K</u>, Lee SJ, Zhao R, Kiepas A, Wang Y, Mistriotis P, Serra SA, Lewis JD, Valverde MA, Martin SS, Sun SX, Konstantopoulos K. (2022) *Polarized NHE1 and SWELL1 regulate migration direction, efficiency and metastasis. Nature Communications*. (link)
- 20. Zhao R, Cui S, Ge Z, Zhang Y, <u>Bera K</u>, Zhu L, Sun SX, Konstantopoulos K. (2021). *Hydraulic resistance induces cell phenotypic transition in confinement*. *Science Advances*. (<u>link</u>)
- 21. Wisniewski EO *, Mistriotis P *, <u>Bera K</u>, Law RA, Zhang J, Nikolic M, Weiger M, Parlani M, Tuntithavornwat S, Afthinos A, Zhao R, Wirtz D, Kalab P, Scarcelli G, Friedl P, Konstantopoulos K. (2020). *Dorsoventral polarity directs cell responses to migration track geometries*. *Science Advances*. (link)
- 22. Mistriotis P*, Wisniewski EO*, <u>Bera K</u>, Keys J, Li Y, Tuntithavornwat S, Law RA, Perez-Gonzalez NA, Erdogmus E, Zhang Y, Zhao R, Sun SX, Kalab P, Lammerding J, Konstantopoulos K. (2019). *Confinement hinders motility by inducing RhoA-mediated nuclear influx, volume expansion, and blebbing.* **Journal of Cell Biology**. (<u>link</u>)
- 23. Banna M, Bera K, Sochol R, Lin L, Najjaran H, Sadiq R, Hoorfar M. (2017). 3D printing-based integrated water quality sensing system. Sensors. (link)
- 24. Pandit S*, Khilari S*, Bera K, Pradhan D, Das D. (2014). Application of PVA–PDDA polymer electrolyte composite anion exchange membrane separator for improved bioelectricity production in a single chambered microbial fuel cell. **Chemical Engineering Journal**. (link)

Patents

Maji S, Kar S, <u>Bera K</u>, Maiti TK, Chakraborty S, A Portable Gel Electrophoresis System. Indian Patent Application: 201831028977;
 Patent: 446116; Granted: August 21, 2023.

Honors and Awards

- Helen Hay Whitney Foundation Postdoctoral Fellowship | 2024-2027
- Best Poster Award | 2024 | Society for Biomaterials 2024 Regional Symposia- Western, Denver.
- Travel Grant Award | 2024 | 12th World Biomaterials Congress, Daegu, Korea
- Siebel Scholars Finalist | 2021
- Whiting School of Engineering Research Trainee Award | 2021 | Johns Hopkins University
- Best Poster Award | 2020 | National Cancer Institute 2020 Junior Investigators Meeting.
- HEART Course Teaching Fellow | 2019 | Johns Hopkins University
- Commonwealth Scholarship | 2016 | Commonwealth Scholarship Commission for MS at University of Cambridge, UK
- Khorana Fellowship | 2015 | Government of India, Indo-U.S. Science and Technology Forum and WINStep Forward
- Globalink Research Fellowship | 2015 | Mitacs for summer research internship in Canada
- DAAD WISE Fellowship | 2015 | German Academic Exchange Service for summer research internship in Germany
- Visiting Undergraduate Research Scholar (VURS) Fellowship | 2014 | University of British Columbia
- J.C. Ghosh Memorial Prize | 2014 | IIT Kharagpur for securing the highest cumulative GPA after 6 semesters
- Best Volunteer Award | 2013 | National Service Scheme, Government of India and IIT Kharagpur

Oral Presentations

- 1. <u>Bera K</u> (Sep. 2025) Shining Light on Complex Tissues: Intestinal Organoids and Phototunable Biomaterials for Studying Gut Heath and Composition. Department of Chemical and Biological Engineering, Cu Boulder, CO. *Invited Talk*
- 2. <u>Bera K</u>, Dempsey P, Anseth KS. (Aug. 2025) Shining Light on Organoids: A Phototunable Biomaterial Platform to Study Tissue Homeostasis and Disease. Colorado Clinical and Translational Sciences Institute (CCTSI), Denver, CO. *Invited Talk*
- 3. <u>Bera K</u>, McNally DL, Yavitt MF, Dempsey P, Anseth KS. (Oct. 2024) *Nuclear mechanics of intestinal cells determine cellular composition in 3D tissue models and in vivo*. 2024 Biomedical Engineering Society (BMES) Annual Meeting, Baltimore, MD.
- 4. <u>Bera K</u>, Yavitt MF, Dempsey P, Anseth KS. (May 2024) *Photo-responsive hydrogel system to study mechano-transduction during intestinal tissue homeostasis*. 12th World Biomaterials Congress, Daegu, Korea. *Travel Award*
- 5. <u>Bera K</u>, Yavitt MF, Dempsey P, Anseth KS. (Nov. 2023) *Photo-responsive hydrogel system to study mechano-transduction during intestinal tissue homeostasis*. 2023 American Institute of Chemical Engineers (AIChE) Annual Meeting, Orlando, FL.
- 6. Bera K (Mar. 2023) Fluid viscosity as an accelerator of cell motility and cancer dissemination. Biomaterials Journal Club, University of Virginia, virtual. Invited Talk
- 7. <u>Bera,K</u> (Jan. 2023) Extracellular fluid viscosity enhances cell migration and cancer dissemination. Brain Tumor Stem Cell Laboratory Meeting and Journal Club Series, Mayo Clinic Florida, virtual. *Invited Talk*
- 8. <u>Bera K</u>, Kiepas A, Li Y, Mehta P, Ifemembi B, Paul CD, ... Konstantopoulos K. (Nov. 2022) *Counterintuitive effect of fluid viscosity on enhancing cell motility via dynamic load response of actin*. 2022 American Institute of Chemical Engineers (AIChE) Annual Meeting, Phoenix, AZ.
- 9. <u>Bera K</u>, Kiepas A, Godet I, Li Y, Mehta P, Ifemembi B, ... Konstantopoulos K. (Oct. 2022) *Actin loading counterintuitively enhances cell motility and metastasis in response to fluid viscosity*. 2022 Biomedical Engineering Society (BMES) Annual Meeting, San Antonio, TX.
- 10. Bera K, Konstantopoulos K. (Dec. 2021) *Hydraulic forces shaping cancer metastasis*. 2021 Center for Cell Dynamics Seminar Series, Baltimore, MD.
- Bera K, Yankaskas CL, Stoletov K, Serra SA, Garcia JC, Tuntithavornwat S, ... Konstantopoulos K. (Nov. 2021) The fluid shear stress sensor TRPM7 regulates cell intravasation. 2021 American Institute of Chemical Engineers (AIChE) Annual Meeting, Boston, MA.

- 12. <u>Bera K</u>, Konstantopoulos K. (Oct. 2021) *Back to the confinement: TRPM7 helps cells to sense shear flow and regulates intravasation*. The CRICK London Cell Motility Club Symposium 2021, virtual. *Invited Talk*
- 13. <u>Bera K</u>, Yankaskas CL, Stoletov K, Serra SA, Garcia JC, Tuntithavornwat S, ... Konstantopoulos K. (Oct. 2021) *Tumor cell intravasation is regulated by the fluid shear stress sensor TRPM7*. 2021 Biomedical Engineering Society (BMES) Annual Meeting, Orlando, FL.
- 14. <u>Bera K</u>, Li Y, Mehta P, Lee SJ, Ifemembi B, Zhang Y, Mistriotis P, Sun SX, Konstantopoulos K. (Oct. 2021) *Hydraulic resistance promotes cancer metastasis by enhancing osmotic engine*. 2021 Biomedical Engineering Society (BMES) Annual Meeting, Orlando, FL.
- 15. Bera K, Lee SJ, Mehta P, Mistriotis P, Sun SX, Konstantopoulos K. (Oct. 2020) Cytoskeleton coordinates enhanced cell motility against high hydraulic resistance. 2020 Biomedical Engineering Society (BMES) Annual Meeting, virtual.
- 16. <u>Bera K</u>, Lee SJ, Mehta P, Mistriotis P, Sun SX, Konstantopoulos K. (Aug. 2020) *Hydraulic resistance accelerates cell motility*. 2020 CSBC/PS-ON Junior Investigator Meeting, National Cancer Institute, virtual. *Best Poster Award*
- 17. <u>Bera K</u>, Mehta P, Boen A, Lee SJ, Mistriotis P, Sun, SX, Konstantopoulos K. (Nov. 2019) *Cellular adaptations against hydraulic resistance towards higher motility*. 2019 American Institute of Chemical Engineers (AIChE) Annual Meeting, Orlando, FL.
- 18. <u>Bera K</u>, Mehta P, Boen A, Lee SJ, Mistriotis P, Sun SX, Konstantopoulos K. (Oct. 2019) *Hydraulic resistance induced cellular adaptations and higher motility*. 2019 Biomedical Engineering Society (BMES) Annual Meeting, Philadelphia, PA.

Poster Presentations

- 1. <u>Bera K</u>, McNally D, Yavitt MF, Dempsey P J, Anseth KS. (Sep. 2024) *Photo-responsive hydrogel to study 4D mechano-transduction during intestinal tissue homeostasis*. Society for Biomaterials 2024 Regional Symposia- Western, Denver, CO. **Best Poster Award**
- Bera K, McNally D, Yavitt MF, Skillin NP, Dempsey PJ, Anseth KS. (Aug. 2024) Deciphering nuclear mechano-transduction in intestinal crypts using tissue derived organoids and photo-tunable culture platform. 2024 Cell Symposia: Engineering development and disease in organoids, San Diego, CA.
- 3. <u>Bera K</u>, Yavitt MF, Dempsey P, Anseth KS. (Jan. 2023) *Engineering of novel designer polymers to study intestinal diseases*. 2023 Colorado STEM Capitol Poster Day, Denver, CO.
- 4. <u>Bera K</u>, Kiepas A, Godet I, Li Y, Mehta P, Ifemembi B, ... Konstantopoulos K. (Oct. 2022) *Fluid viscosity enhances breast cancer metastasis through co-ordinated activity between volume-regulator and mechanosensitive ion channels*. 2022 Biomedical Engineering Society (BMES) Annual Meeting, San Antonio, TX.
- 5. <u>Bera K</u>*, Yankaskas CL*, Stoletov K, Tuntithavornwat S, Mistriotis P, Lewis JD, Valverde MA, Konstantopoulos K. (Mar. 2021) *Role of the fluid shear stress sensor TRPM7 in regulating tumor cell intravasation. 2021 JHU Department of Medicine/Whiting School of Engineering Research Retreat, virtual (* designates equal contribution). <i>Excellence in Research Award*
- 6. Bera K, Boen B, Konstantopoulos K. (May 2018) Cell motility against resistance. 2018 JHU Nano-Bio Symposium, Baltimore MD.
- 7. <u>Bera K</u>, Alapan Y, Gurkan U. (Aug. 2015) *Micro pillar embedded channels for probing adhesion and deformability of red blood cells*. 2015 Khorana Bose Research Symposium, Delhi, India.
- 8. <u>Bera K</u>, Pandit S, Khilari S, Pradhan D, Das D. (Feb. 2014) *Transition metal oxide integrated microfluidic microbial fuel cell as an efficient BOD biosensor*. 2014 International Conference on Functional Materials, Kharagpur, India. *Poster Competition finalist*

Teaching Experiences and Pedagogy Training

Co-Instructor

Biological Systems Analysis Spring 2025

University of Colorado Boulder

Guest Lecturer and Lab Instructor

Advanced topics in Cell Biology, Stem Cells & Development University of Colorado Denver | Anschutz Medical Campus

Future Faculty Teaching Academy Certificate

Teaching Academy's Certificate of Completion of 3-phase Pedagogy Training Center for Educational Resources | Johns Hopkins University

2019 - 2021

Spring 2024

	Kaustav Bera CV Fall 2020
Teaching Assistant Advanced Transport Phenomena (graduate level course)	1 411 2020
Johns Hopkins University	
Course Creator and Instructor Hopkins Engineering Applications & Research Tutorials (HEART) Johns Hopkins University	Fall 2019
Teaching Assistant Transport Phenomena (undergraduate level course) Johns Hopkins University	Spring 2019
Lecturer Programming and Data Structure Indian Institute of Technology Kharagpur, India	2012 - 2013
Mentoring	
 Graduate students CU Boulder: Nolan Petrich, PhD Chemical Engineering (awarded: NSF GRFP) CU Boulder: Kurtis Winkler, Interdisciplinary Quantitative (IQ) Biology rotation student JHU: Brent Ifemembi, PhD Chemical and Biomolecular Engineering JHU: Habben Desta, PhD Chemical and Biomolecular Engineering (awarded: NSF GRFP) JHU: Anindya Sen, PhD Chemical and Biomolecular Engineering JHU: Alice Amitrano, PhD Chemical and Biomolecular Engineering JHU: Bishwa Ranjan Si, PhD Chemical and Biomolecular Engineering JHU: Pranav Mehta, MS Chemical and Biomolecular Engineering, currently PhD candidate at Technische Universiteit Delft Undergraduate students CU Boulder: Delaney McNally, BS Chemical and Biological Engineering, currently PhD candidate at University of Virginia (awarded: Barry Goldwater Scholarship, UROP Funding, NSF GRFP honorable mention) CU Boulder: Tvishi Yendamuri, BA Biochemistry (awarded: UROP Funding) Yale College: Tori Sodeinde, BS Molecular, Cellular, and Developmental Biology, currently PhD candidate at Massachusetts Institute of Technology JHU: Adrianna Boen, BS Chemical and Biomolecular Engineering, currently Clinical Project 	Sept '24 – present Jan '23 – March '23 2019 – 2022 2019 – 2022 2020 – 2022 2021 – 2022 2021 – 2022 2018 – 2020 August '23 – present Sept '24 – April '25
Manager at Vanda Pharmaceuticals	2017 – 2019
Leadership and Outreach	
Session Chair American Institute of Chemical Engineers (AIChE) Annual Meeting 2025	November 2025
Postdoc Peer Mentor Post Doctoral Association of Colorado Boulder (PAC)	June '24 – present
Elected Secretary Rocky Mountain Section of the American Institute of Chemical Engineers (AIChE)	August '24 – July '25
Graduate Admission Mentor Graduate Student Mentorship Initiative (GSMI), Cientifico Latino	Sept '24 – April '25
Elected Board Member and Treasurer Post Doctoral Association of Colorado Boulder (PAC)	July '23 – June '24
Organizing Committee Member 2023 & 2024 Front Range Industry & Postdoc Summit (FRIPS)	August '23 – July '24

Review Editor	Kaustav Bera CV Dec '22 – present
Frontiers in Cell and Developmental Biology Session Co-chair American Institute of Chemical Engineers (AIChE) Annual Meeting 2022	November 2022
Planning Committee Co-Chair 2022 CSBC/PS-ON/BD-STEP Annual Junior Investigators' Meeting National Cancer	Institute Feb '22 – Sep. '22
Planning Committee Member 2021 CSBC/PS-ON/BD-STEP Annual Junior Investigators' Meeting National Cancer	Institute Feb '21 – Sep. '21
Transportation Team Member Incident Command Response Team, Johns Hopkins COVID-19 Response	2020
Student Ambassador Office of International Services, Johns Hopkins University	2016 - 2017
Scientific Planning Committee Member Association of Biotechnologists, Indian Institute of Technology Kharagpur, India	2014 - 2016
Elementary School Volunteer Teacher Taught Mathematics, English, and the basics of Computers to students aged 5-9 year	2011 - 2013
Team Leader National Service Scheme, Indian Institute of Technology Kharagpur, India	2012 - 2013 2011 - 2012
Volunteer National Service Scheme, Indian Institute of Technology Kharagpur, India	2011 - 2012
Research Experiences	
Postdoctoral Fellow Chemical and Biological Engineering Advisor: Dr. Kristi Anseth	October '22 – present University of Colorado Boulder, USA
PhD Research Chemical and Biomolecular Engineering Advisor: Dr. Konstantinos Konstantopoulos	2016 - 2022 Johns Hopkins University, USA
Research Scholar Biotechnology and Biochemical Engineering Advisors: Dr. Suman Chakraborty & Dr. Tapas Kumar Maiti	2014 - 2016 Indian Institute of Technology Kharagpur, India
Research Intern Mechanical and Aerospace Engineering Advisors: Dr. Umut Gurkan	Summer 2015 Case Western Reserve University, USA
Research Intern Mechanical Engineering Advisors: Dr. Mina Hoorfar	Summer 2014 University of British Columbia, Canada
Undergraduate Research Assistant Biotechnology and Biochemical Engineering Advisors: Dr. Debabrata Das	2013 - 2014 Indian Institute of Technology Kharagpur, India

Reviewing Activities

Journals:

- Nature Communications
- APL Bioengineering
- ACS Applied Materials & Interfaces
- Small
- Frontiers in Cell and Developmental Biology
- Advanced Healthcare Materials

Conference abstracts:

- Biomedical Engineering Society Annual Meetings
- American Institute of Chemical Engineers Annual Meetings
- National Cancer Institute's Cancer Systems Biology Consortium (CSBC)/ Physical Sciences-Oncology Network (PS-ON)/ Big Data Scientist Enhancement Program (BD-STEP) Annual Junior Investigators' Meetings

Fellowships/Awards:

- Postdoctoral Travel Award (University of Colorado)
- Research/Outreach Grant (University of Colorado)
- Undergraduate Research Opportunities Program UROP (University of Colorado)

- Imaging Science Journal
- BMC Journal of Translational Medicine
- Star Protocols
- Nature Biomedical Engineering, Science Advances, Advanced Science, Nature Communications, Journal of Cell Science, Acta Biomaterialia (with mentors)