CURRICULUM VITAE

Name:	Hadi Tavakoli Nia	**Updated:**	July 2025
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RESEARCH EXPERIENCE

2019-present Assistant Professor of Biomedical Engineering (primary), Material Science and Engineering (secondary) Boston University

2022-present Core member of Multicellular Design Program

2021-present Member of Center for Multiscale and Translational Mechanobiology (CMTM)

2022-present Member of Pulmonary Center

2021-present Member of Neurophotonics Center

2023-present Member of Photonics Center

2024-present Member of Program in Molecular Biology, Cell Biology, and Biochemistry

2013-2018 Postdoctoral Fellow, Steele Labs, Department of Radiation Oncology, Massachusetts General Hospital, Harvard Medical School, Boston, MA. Mentor: Rakesh Jain, PhD.
Research topic: "*Physical Hallmarks of Cancer*"
Rakesh K. Jain, director of Steele Labs, at Massachusetts General Hospital, Harvard Medical School.

2013-2021 Visiting Scientist, Center for Biomedical Engineering, MIT, Cambridge, MA. Mentor: Prof. Alan Grodzinsky.

2010-2013 Research Assistant, Center for Biomedical Engineering and Department of Mechanical Engineering, MIT, Cambridge, MA. Mentors: Profs. Alan Grodzinsky and Christine Ortiz. *Alan Grodzinsky is a professor of Biological, Mechanical and Electrical Engineering at MIT. Christine Ortiz is a professor of Material Science and Engineering at MIT.*

2004-2005 Visiting Research Student in Mechanical Systems Design Laboratory, Tokyo Institute of Technology, Tokyo, Japan. Mentor: Prof. Koichi Sugimoto.

EDUCATION

06/2013 PhD, Mechanical Engineering, Massachusetts Institute of Technology, Cambridge MA. Thesis title: "*Nanomechanics of cartilage at the matrix and molecular levels*." Supervisors: Profs. Alan Grodzinsky and Christine Ortiz

01/2010 MSc, Mechanical Engineering, Massachusetts Institute of Technology, Cambridge MA
06/2006 MSc, Mechanical Engineering, Sharif University of Technology, Tehran, Iran
06/2003 BSc, Mechanical Engineering, Sharif University of Technology, Tehran, Iran

AWARDS

2025	Cellular Molecular Bioengineering (CMBE) Rising Star
2025-2028	**Hevolution/AFAR New Investigator Awards in Aging Biology & Geroscience Research**
2024-2027	**DoD Idea Award**
2024-2026	**Sloan Research Fellowship**
2023-2026	**Kilachand Fund Award for Integrated Life Sciences and Engineering**
2023	American Thoracic Society Science and Innovation Center Award
2023	Early Career Excellence Award, College of Engineering, Boston University
2023-2028	**NSF CAREER**
2022-2027	**NIH Director's New Innovator Award (DP2)**
2022-2026	**Beckman Young Investigator Award**
2021-2024	**NIH-NIBIB Trailblazer Award**
2020-2021	Center for Multiscale and Translational Mechanobiology (CMTM) Award
2020-2022	Dean's Catalyst Award
2020-2021	ACS-BU pilot Award
2017-2019	**NIH-NCI Ruth L. Kirschstein (NRSA) Postdoctoral Fellowship (F32)**
2017	Best poster award (3rd place), Gordon Research Conference on Physical Sciences of Cancer
2016-2017	Tosteson Postdoctoral Fellowship Award
2016	MGPA Travel Award
2011-2013	**Whitaker Health Sciences Fellowship Award** (covered two years of my doctoral program)
2012	De Florez Travel Award
2011	Finalist in YC FUNG Student Paper Competition in Bio-mechanics and Bio-physics
2008-2011	**Office of Naval Research (ONR) Research Fellowship Awards**
2004-2005	**Japan Student Service Organization Fellowship Award**
2003	Finalist in the 8th Iranian National Mechanical Engineering Olympiad
1998	Silver Medal, Iranian National Computer Olympiad

PUBLICATIONS (published and under revision)

As of July 2025: total citations: 4585, h-index: 28, i-10 index: 36. Link to Google Scholar

#: students or postdocs supervised by H. T. Nia
*: equal contribution

1. Gabrielle Grifno#, Han Ali Kahvecioglu#, Victoria Travnik#, Robert LeBourdais#, Rohin Banerji#, Winita Wangsrikhun#, Linzheng Shi#, Suleyman B. Bozal, Heewon Suh, Athanasios Batgidis#, Abdulrahman Kobayter#, Lauren Castle#, Kathryn Regan#, Feiyang Deng, Michael Vannini, Mohammad Rashidian, Liang Hao, Joseph P. Mizgerd, Worth Longest, Michael Hindle, W. Mark Saltzman, James P. Butler, Béla Suki, H. T. Nia, "Mosaic pattern: lung functional heterogeneity at the alveolus level," Under review in ***Nature Biomedical Engineering***.

2. Kathryn Regan*#, Lauren Castle*#, Robert LeBourdais#, Abdulrahman Kobayter#, Linzheng Shi#, Winita Wangsrikhun#, Gabrielle Grifno#, Rohin Banerji#, Athanasios Batgidis#, Bela Suki, Hadi T. Nia, "Micromechanics of lung capillaries across mouse lifespan and in positive vs negative-pressure ventilation," Accepted in **npj *Biological Physics and Mechanics***.

3. H. T. Nia, L. L. Munn, R. K. Jain, "Probing the physical hallmarks of cancer," ***Nature Methods***, **2025**, https://doi.org/10.1038/s41592-024-02564-4

4. Muhamed Hadzipasic#, Margaret S. Sten , Elie Massaad, Ali Kiapour, George Nageeb, Muneeb A. Sharif Joseph Bradley, Gunnlaugur P. Nielsen, Jean-Valery C. Coumans, Lawrence F. Borges, John H. Shin, Alan J. Grodzinsky, Hadi T. Nia, and Ganesh M. Shankar, "ROCK-dependent mechanotransduction of macroscale forces drives fibrosis in degenerative spinal disease," ***Nature Biomedical Engineering***, **2025**, https://doi.org/10.1038/s41551-025-01396-7

5. Taha Rakhshandehroo , Shreya R. Mantri , Heydar Moravej, Benjamin Louis, Ali Salehi Farid, Leila Munaretto, Kathryn Regan#, Min Cong, Adrien Kuhnast, Ali Nili, Harris Allen, Lea Berland, Ester Simkova, Safak Uslu, Jessika Baral, Soheil Tavakolpour, Jennifer Rowley, Haneyeh Shahbazian, Jason Pyrdol, Caron Jacobson, Omar Nadeem, Hadi Nia, Kai Wucherpfennig, Mohammad Rashidian, "Development of a CAR-Enhancer (CAR-E) therapeutic platform to enhance the activity and persistence of CAR T cells," ***Nature Biotechnology***, **2024**. https://doi.org/10.1038/s41587-024-02339-4

6. Rohin Banerji#,*, Gabrielle N. Grifno#,*, Linzheng Shi#, Dylan Smolen#, Rob LeBourdais#, Johnathan Muhvich#, Cate Eberman#, Bradley Hiller, Jisu Lee, Kathryn Regan#, Siyi Zheng#, Sue S. Zhang#, John Jiang, Riley Phil, Katrina Traber, Giovanni Ligresti, Joseph P. Mizgerd, Bela Suki, Hadi T. Nia, "Crystal ribcage: a platform for probing real-time lung function at cellular resolution," ***Nature Methods***, **2023.** https://doi.org/10.1038/s41592-023-02004-9 *: equal contribution
    - Featured by News and Views, BU Expert, NIH-NHLBI

7. Sue Zhang#, Rachel Passaro#, Kathryn Regan#, Muhamed Hadzipasic#, Gabrielle Grifno#, Siyi Zheng#, Logan O'Connor#, Vinson Chu#, Sung Yeon Kim#, Jiarui Yang, Rohin Banerji#, Kavon Karrobi, Darren Roblyer, Mark Grinstaff, Hadi T. Nia, In vivo multiscale measurements of solid stresses in tumors reveal scale-dependent stress transmission, ***Nature Biomedical Engineering,*** **2023**. https://doi.org/10.1038/s41551-023-01080-8
    - Featured by News and Views, BU ENG

8. Sue Zhang#, Kathryn Regan#, Julian Najera, Mark W. Grinstaff, Meenal Datta, Hadi T. Nia, "The peritumor microenvironment: physics and immunity", ***Trends in Cancer***, **2023**. https://doi.org/10.1016/j.trecan.2023.04.004

9. Etesami NS, Barker KA, Shenoy AT, De Ana CL, Arafa EI, Grifno GN#, Matschulat AM, Vannini ME, Pihl RMF, Breen MP, Soucy AM, Goltry WN, Ha CT, Betsuyaku H, Browning JL, Varelas X, Traber KE, Jones MR, Quinton LJ, Maglione PJ, Nia HT, Belkina AC and Mizgerd JP "B cells in the pneumococcus-infected lung are heterogeneous and require CD4+ T cell help including CD40L to become resident memory B cells". ***Front. Immunology,*** **2024**. https://doi.org/10.3389/fimmu.2024.1382638

10. LeBourdais Robert#, Gabrielle N Grifno#, Rohin Banerji#, Kathryn Regan#, Bela Suki, Hadi T. Nia, "Mapping the strain-stiffening behavior of the lung and lung cancer at microscale resolution using the crystal ribcage," ***Frontiers in Network Physiology, 2024***, https://doi.org/10.3389/fnetp.2024.1396593

11. Elizabeth L. Doherty, Wen Yih Aw, Emily C. Warren, Max Hockenberry, Chloe P. Whitworth, Grace Krohn, Stefanie Howell, Brian O. Diekman, Wesley R. Legant, Hadi T. Nia, Anthony J. Hickey, William J. Polacheck, "Patient-derived extracellular matrix demonstrates role of COL3A1 in blood vessel mechanics," ***Acta Biomaterialia***, **2023.** https://doi.org/10.1016/j.actbio.2023.05.015

12. Kathryn Regan#, Robert LeBourdais#, Rohin Banerji#, Johnathan Muhvich#, Siyi Zheng#, Sue Zhang#, Hadi T. Nia, "Multiscale elasticity mapping of biological samples in 3D at optical resolution," ***Acta Biomaterialia***, 2024, https://doi.org/10.1016/j.actbio.2023.12.036.

13. Muhamed Hadzipasic#, Sue Zhang#, Zhuoying Huang#, Rachel Passaro#, Margaret Sten, Ganesh Shankar, Hadi T. Nia, "Emergence of nanoscale viscoelasticity from single cancer cells to established tumors," ***Biomaterials***, 2024, https://doi.org/10.1016/j.biomaterials.2023.122431.

14. Siyi Zheng[#], Rohin Banerji[#], Rob LeBourdais[#], Sue Zhang[#], Eric DuBois, Timothy O'Shea, Hadi T. Nia, "Alteration of mechanical stresses in the murine brain by age and hemorrhagic stroke," ***PNAS Nexus***, 2024, https://doi.org/10.1093/pnasnexus/pgae141

15. Linzheng Shi[#], Jacob Herman, Samer Bou Jawde, Jason HT Bates, Hadi T. Nia; Béla Suki, "Modeling the influence of gravity and the mechanical properties of elastin and collagen fibers on alveolar and lung pressure–volume curves," ***Scientific Reports***, 12 (1), pp. 1-12, **2022**. https://doi.org/10.1038/s41598-022-16650-0

16. Z. Yuan, J. H., S. Murthy, K. Peters[#], H. T. Nia, K. R. Lutchen and B. Suki, A personalized consistent spring network representation of emphysematous lungs from CT images, ***Frontiers In Network Physiology***, **2022.** https://doi.org/10.3389/fnetp.2022.828157

17. D. Jones, Z. Wang, I. X. Chen, S. Zhang[#], R. Banerji[#], P. Lei, H. Zhou, V. Xiao, C. Kwong, J. W. M. van Wijnbergen, E. R. Pereira, B. J. Vakoc, P. Huang, H. T. Nia, and T. P. Padera, Solid stress impairs lymphocyte infiltration into lymph-node metastases, ***Nature Biomedical Engineering***, 1-11, **2021**. https://doi.org/10.1038/s41551-021-00766-1

18. S. Aoki, K. Inoue, S. Klein, S. Halvorsen, J. Chen, A. Matsui, M. Nikmaneshi, S. Kitahara, T. Hato, X. Chen, K. Kawakubo, H. T. Nia, I. Chen, D. H Schanne, E. Mamessier, K. Shigeta, H. Kikuchi, R. Ramjiawan, T. CE Schmidt, M. Iwasaki, T. Yau, T. Hong, A. Quaas, P. S Plum, S. Dima, I. Popescu, N. Bardeesy, L. L Munn, M. J Borad, S. Sassi, R. K Jain, A. X Zhu, D. G Duda, Placental growth factor promotes tumour desmoplasia and treatment resistance in intrahepatic cholangiocarcinoma, ***Gut***, 71(1), 185-193, **2022**. http://dx.doi.org/10.1136/gutjnl-2020-322493

19. H.T. Nia, L.L. Munn and R.K. Jain, "Physical traits of cancer", ***Science***, 370, eaaz0868, **2020**. DOI: 10.1126/science.aaz0868.

20. H.T. Nia, M. Datta, G. Seano, S. Zhang[#], W.W. Ho, S. Roberge, P. Huang, L.L. Munn and R.K. Jain, "In vivo compression and imaging in mouse brain to measure the effects of solid stress", ***Nature Protocols***, **2020**. https://doi.org/10.1038/s41596-020-0328-2

21. L. Munn and H. T. Nia, "Mechanosensing tensile solid stresses," ***PNAS***, 116 (44), 21960-21962, **2019**. https://doi.org/10.1073/pnas.1916115116

22. H. T. Nia, L. Munn, and R. K. Jain, "Mapping physical tumor microenvironment and drug delivery," ***Clinical Cancer Research***, **2019.** https://10.1158/1078-0432.CCR-18-3724

23. J. B. Sellon, M. Azadi, R. Oftadeh, H. T. Nia, R. Ghaffari, A. J. Grodzinsky, and D. M. Freeman, "Nanoscale Poroelasticity of the Tectorial Membrane Determines Hair Bundle Deflections," ***Physical Review Letters***, 122, 028101, **2019.** https://doi.org/10.1103/PhysRevLett.122.028101
    - MIT News

24. H. T. Nia, H. Liu, G. Seano, M. Datta, D. Jones, N. Rahbari, J. Incio, V. P. Chauhan, K. Jung, J. D. Martin, V. Askoxylakis, T. P. Padera, D. Fukumura, Y. Boucher, F. J. Hornicek, A. J. Grodzinsky, J. W. Baish, L. Munn, and R.K. Jain, "Solid stress and elastic energy as measures of tumour mechanopathology," ***Nature Biomedical Engineering*** 1, 0004, **2017**. https://doi.org/10.1038/s41551-016-0004
    - Featured by News and Views, Nature Reviews Clinical Oncology, HMS News, EurekaAlert

25. G. Seano*, H. T. Nia*, K. Emblem*, M. Datta, J. Ren, J. Kloepper, S. Krishnan, M. Ghosh, M. Pinho, V. Askoxylakis, G. Ferraro, L. Riedemann, E.Gerstner, T. Batchelor, P. Wen, N. Lin, A. Grodzinsky, D. Fukumura, P. Huang, J. Baish, T. Padera, L. Munn, R.K. Jain, "Neurological dysfunction induced by brain tumor-generated solid stress is reversed by lithium treatment," ***Nature Biomedical Engineering***, 3, 230–245, **2019.** https://doi.org/10.1038/s41551-018-0334-7 *: equal contribution.
    - Featured by News and Views, Trends in Cancer Spotlight

26. H. T. Nia*, M. Datta*, G. Seano, P. Huang, L. Munn, and R.K. Jain, "Quantifying solid stress and elastic energy from excised or in situ tumors," ***Nature Protocols***, 13(5), 1091, **2018**. *: equal contribution. https://doi.org/10.1038/nprot.2018.020

27. Y. Zhao, J. Cao, A. Melamed, M. Worley, A. Gockley, D. Jones, H. T. Nia, Y. Zhang, T. Stylianopoulos, A. Kumar, F. Mpekris, M. Datta, Y. Sun, L. Wu, X. Gao, O. Yeku, M. del Carmen, D. Spriggs, R. K. Jain, L. Xu, "Losartan treatment enhances chemotherapy efficacy and reduces ascites in ovarian cancer models by normalizing the tumor stroma," ***PNAS***, 116 (6) 2210-2219, **2019**. https://doi.org/10.1073/pnas.1818357116.

28. R Oftadeh, B. Connizzo, H. T. Nia, C. Ortiz, A. Grodzinsky, "Biological connective tissues exhibit viscoelastic and poroelastic behavior at different frequency regimes: application to tendon and skin biophysics," ***Acta Biomaterialia***, 70, 249-259, **2018**. https://doi.org/10.1016/j.actbio.2018.01.041

29. J. Incio, P.Suboj, S.M. Chin, Y. Huang, H. T. Nia, S. Kao, S. Babykutty, N. Rahbari, V. Chauhan, J. Martin, R. Ngo, I. Chen, H. Liu, X. Han, T. Reiberger, J. Gravohac, K. Jung, P. Huang, R. Soares, Y. Boucher, D. Fukumura, R.K. Jain, "Obesity-induced inflammation aggravates desmoplasia in PDAC reducing the efficacy of chemotherapy," ***Cancer Discovery***, 6 (8), 852-869, **2016**. https://doi.org/10.1158/2159-8290.CD-15-1177
    - Featured by Nature News and Views, Science Signaling

30. N. Rahbari, D. Kedrin, J. Incio, T. Reiberger, H. Liu, H. T. Nia, C. Edrich, J. Dubroix, I. Chen, T. Heishi, J. Martin, Y. Huang, A. J. Grodzinsky, D. G. Duda, R. K. Jain & D. Fukumura, "Extracellular matrix remodeling after anti-VEGF therapy contributes to therapeutic resistance in colorectal cancer liver metastases," ***Science Translational Medicine***, 8 (360), **2016**. https://doi.org/10.4251/wjgo.v15.i2.215
    - Featured by Nature Reviews Gastroenterology & Hepatology

31. B. Han, H. T. Nia, C. Wang, O. Chandrasekaran, Q. Li, D. Chery, H. Li A. J. Grodzinsky, and L. Han, "AFM-nanomechanical test: an interdisciplinary tool that links the understanding of cartilage and meniscus biomechanics, osteoarthritis degeneration, and tissue engineering," ***ACS Biomater. Sci. Eng***., 3 (9), 2033-2049, **2017**. https://doi.org/10.1021/acsbiomaterials.7b00307

32. Z. Hajjarian, H. T. Nia, S. Ahn, A. J. Grodzinsky, R. K. Jain, and S. K. Nadkarni, "Laser Speckle Rheology for evaluating the viscoelastic properties of hydrogel scaffolds," ***Scientific Report***, 6, **2016**. https://doi.org/10.1038/srep37949

33. H. T. Nia, L. Han, I. Soltani, P. Roughley, K. Youcef-Toumi, A. Grodzinsky and C. Ortiz, "Aggrecan nanoscale solid-fluid interactions are a primary determinant of cartilage dynamic mechanical properties," ***ACS Nano***, 9 (3), 2614-2625, **2015**. https://doi.org/10.1021/nn5062707

34. M. Azadi*, H. T. Nia*, S. Gauci, A. Fosang, C. Ortiz and A. Grodzinsky, "Wide bandwidth nanomechanical assessment of murine cartilage reveals protection of aggrecan knock-in mice from joint-overuse," ***Journal of Biomechanics***, 49 (9), 1634–1640, **2016**. *: equal contribution. https://doi.org/10.1016/j.jbiomech.2016.03.055

35. H. T. Nia, I. Soltani, Y. Li, L. Han, H. Hung, E. Frank, K. Youcef-Toumi, C. Ortiz and A. Grodzinsky, "High bandwidth AFM-based rheology reveals that cartilage is most sensitive to high loading rates at early stages of impairment," ***Biophysical Journal***, 104(7) pp. 1529-1537, **2013**. https://doi.org/10.1016/j.bpj.2013.02.048
    - Featured by: MIT News, Sciencedaily

36. G. Scarcelli, W. Polacheck, H. T. Nia, K. Patel, A. J. Grodzinsky, R. Kamm and SH Yun, "Noncontact mapping of intracellular hydromechanical properties by Brillouin confocal microscopy," ***Nature Methods***, 12 (12), 1132-1134, **2015**. https://doi.org/10.1038/nmeth.3616
    - Featured by: REUTERS, Yahoo News

37. H. T. Nia, S. Gauci, M. Azadi, H. Hung, E. Frank, A. Fosang, C. Ortiz and A. J. Grodzinsky, "High-bandwidth AFM-based rheology is a sensitive indicator of early cartilage aggrecan degradation relevant to mouse models of osteoarthritis," ***Journal of Biomechanics***, 48, pp. 162-168, **2015**. https://doi.org/10.1016/j.jbiomech.2014.11.012

38. M. A. Batista, H. T. Nia, P. Önnerfjord, K. A. Cox, C. Ortiz, A. J. Grodzinsky, D. Heinegård and L. Han, "Nanomechanical phenotype of chondroadherin-null murine articular cartilage," ***Matrix Biology***, 38, pp. 84-90, **2014**. https://doi.org/10.1016/j.matbio.2014.05.008

39. D. J. Rubin, H. T. Nia, T. Desire, P. Nguyen, M. Gevelber, C. Ortiz and N. Joshi, "Mechanical reinforcement of polymeric fibers through peptide nanotube incorporation," ***Biomacromolecules***, 14(10) pp 3370–3375, **2013**. https://doi.org/10.1021/bm4008293

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    - Featured by New York Times, Economist, USA Today, Christian Science Monitor, MIT News, NBC News

42. S. Jagannathan, D. Symonds, I. Bertsatos, T. Chen, M. Andrews, Z. Gong, N. Donabed, H. T. Nia, A. Tan, L. Ngor, R. Nero, M. Jech, O. R. Godo, S. Lee, P. Ratilal, and N. Makris, "Ocean Acoustic Waveguide Remote Sensing (OAWRS) of marine ecosystems," ***Marine Ecology Progress Series***, 395, pp. 137-160, **2009**. https://doi.org/10.3354/meps08266

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44. H. T. Nia, H. N. Pishkenari and A. Meghdari, "A recursive approach for analysis of snake robots using Kane's equations," ***Robotica***, 24(2), pp. 251-256, **2006**. https://doi.org/10.1017/S0263574705002456

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46. H. Zohoor and H. T. Nia, "Optimal synthesis of planar and spatial mechanisms for path generation using regression deviation," ***Scientica Iranica***, 12(2), pp. 190-198, **2005**.

BOOK CHAPTER

47. H. T. Nia, C. Ortiz and A. Grodzinsky, "Aggrecan: approaches to study biophysical and biomechanical properties," *Methods in Molecular Biology*, 1229, pp. 221-237, 2014.

48. H. T. Nia, S. H. Alemohammad, S. Bagheri, R. H. Khiabani and A. Meghdari, "Design, dynamic analysis and optimization of a rover for rescue operations," Lecture Notes in Computer Science, 4020, pp. 290-300, 2006.

PATENTS

#: student supervised by H. T. Nia

1. H. T. Nia, K. Regan#, “3D ELASTICITY MAPPING OF BIOLOGICAL SAMPLES,” U.S. Application Number: 63/222,182, Filed: September 15, 2022

2. H. T. Nia, C. Eberman#, R. Banerji#, G. Grifno#, B. Suki, “Optically transparent ribcage and uses thereof,” U.S. Application Number: 63/222,182, Filed: July 15, 2021

3. H. T. Nia, S. Kappadia#, “Electromechanical streaming potential and uses thereof,” provisional filed by Boston University.

4. H. T. Nia, I. S. Bozchaloui, E. Frank, K. Youcef-Toumi, C. Ortiz and A. Grodzinsky, “High-Frequency Rheology System,” US Patent 8516610, 2013.

TRANSLATION

- Non-profit translation of Siddhartha Mukherjee, *The Emperor of All Maladies: A Biography of Cancer*, Scribner, 2011.
  Persian title: سرطان امپراطور بیماری‌ها: بیوگرافی کاملی از بیماری سرطان (ISBN: 978-600-6926-36-0), 2014.

INVITED TALKS (including scheduled)

82	02/22/2026	Gordon Research Conference on Biology of Acute Respiratory Infection
81	02/21/2026	Mechanobiology mini-symposium of Biophysical Society Meeting
80	12/03/2025	Northeastern University, Department of Bioengineering
79	11/10/2025	Johns Hopkins University, Department of Biomedical Engineering
78	10/07/2025	Harvard T.H. Chan School of Public Health
77	10/02/2025	Keynote speaker at Inaugural Vanderbilt Lung Research Symposium
76	09/22/2025	Physics of Cancer, Leipzig, Germany
75	09/19/2025	Respiratory Grand Rounds, Division of Respirology, University of Toronto
74	09/15/2025	Department of Biomedical Engineering, Boston University, invited lecture in Cancer Biology and Oncology for Engineers
73	07/27/2025	Keynote speaker at Gordon Research Conference on Lung Development, Injury and Repair
72	07/10/2025	War Related Illness & Injury Study Center (WRIISC) at NJ
71	07/08/2025	Stem Cells, Cell Therapies, and Bioengineering in Lung Biology and Diseases
70	05/20/2025	ATS 2025 Networking Super Center Session
69	04/02/2025	Research on Tap: Tackling Cancer Through Multidisciplinary Research
68	03/26/2025	Research on Tap: Biology of Aging
67	03/14/2025	Draper Laboratories
66	01/03/2025	Cellular and Molecular Bioengineering Rising Star, CMBE, Carlsbad, CA
65	12/13/2024	Bioengineering Technology & Entrepreneurship Center Advisory Board Meeting
64	11/22/2024	Department of Mechanical Engineering, Tufts University
63	11/08/2024	Bhatia’s group, IMES, MIT

62	11/06/2024	Institute Curie, Paris, France
61	10/22/2024	Building Bridges Across NIH and the Broader Engineering Community
60	09/26/2024	Department of Biomedical Engineering, Boston University, invited lecture in Cancer Biology and Oncology for Engineers
59	08/23/2024	Keynote speaker at NCI Annual JI Meeting, Bethesda, MD
58	07/28/2024	FASEB Lung Conference, Lung Epithelium in Health and Disease
57	07/22/2024	Gordon Research Conference on Signal Transduction by Engineered Extracellular Matrices
56	06/03/2024	Pulmonary Immunology Group, Boston University School of Medicine
55	05/19/2024	American Thoracic Society, Session on Mechanical Forces in Lung Disease
54	05/06/2024	Keynote Speaker at Respiratory Drug Delivery Conference 2024, Tucson, AZ
53	04/18/2024	Pulmonary, Critical Care, and Sleep Medicine, Yale University
52	04/02/2024	Basic &Translational Research in Lung Disease Conference, University of Pittsburg
51	02/23/2024	Center for Engineering in Medicine & Surgery (CEMS) at Massachusetts General Hospital – Harvard Medical School
50	02/16/2024	Mechanobiology Institute (MBI), National University of Singapore
49	01/12/2024	Metastasis Network (MetNet) – MIT group – host: Roger Kamm, PhD
48	01/11/2024	Physical Sciences in Oncology Networks - Cell & Tissue Mechanics SIG
47	11/28/2023	Department of Mechanical and Aerospace Engineering, University of Notre Dame
47	11/21/2023	Department of Biomedical Engineering, Yale University
45	11/16/2023	CMTM mini-symposium on Engineering Tools in Mechanobiology, Boston University
44	11/10/2023	Department of Biomedical Engineering, University of North Caroline at Chappell Hill
43	10/25/2023	Neurophotonics Center, Boston University, Faculty Spotlight
42	10/20/2023	Biomedical Engineering Department, University of Virginia
41	10/19/2023	Biomedical Innovations of the Future Symposium, Boston University
40	10/09/2023	Society of Engineering Science, University of Minnesota
39	10/06/2023	Biomedical Engineering Department, Ohio State University
38	10/02/2023	Pulmonary and Critical Care Research Conference, Massachusetts General Hospital, Harvard Medical School
36	07/28/2023	STEM Pathway, Boston University
36	07/10/2023	Institute for the Physics of Living Systems, University College London, UK
35	07/07/2023	School of Biomedical Sciences, University of Hong Kong, Hong Kong
34	06/26/2023	Pulmonary Immunology Group, Boston University School of Medicine
33	05/21/2023	American Thoracic Society, American Thoracic Society Science and Innovation Center Rising Star/Abstract Award
32	03/08/2023	Department of Radiation Oncology, Massachusetts General Hospital, Harvard Medical School
31	02/05/2023	Gordon Research Conference on Physical Science of Cancer, Galveston, TX

30	11/12/2022	Department of Biochemistry, Boston University
29	10/26/2022	Department of Mechanical and Industrial Engineering, New Jersey Institute of Technology
28	06/02/2022	Fibrosis Group, Boston University School of Medicine
27	05/23/2022	Pulmonary Immunology Group, Boston University School of Medicine
26	04/08/2022	Center for Multiscale and Translational Mechanobiology, Boston University
25	03/04/2022	Pancreas Center of Excellence, University of Pittsburgh Medical Center
24	11/05/2021	Rising Star Presentation at Center for Multiscale and Translational Mechanobiology, Boston University
23	08/06/2021	Center for Engineering in Medicine and Surgery, Massachusetts General Hospital, Harvard Medical School
22	12/26/2019	Institute for Research in Fundamental Sciences, Tehran
21	10/11/2019	Department of Mechanical Engineering, Boston University
20	04/05/2018	Department of Aerospace and Mechanical Engineering, USC
19	03/27/2018	Department of Mechanical Engineering, UT Austin
18	03/23/2018	Department of Materials Science and Engineering, MIT, invited lecture in Nanomechanics of Materials and Biomaterials
17	02/20/2018	Department of Mechanical Engineering and Applied Mechanics, UPenn
16	02/11/2018	Department of Mechanical and Industrial Engineering, UMass Amherst
15	02/01/2018	Department of Biomedical Engineering, Boston University
14	12/13/2017	Department of Mechanical Engineering, Colorado State University
13	09/27/2017	Department of Bioengineering, Northeastern University; invited lecture in Multiscale Biomechanics
12	05/04/2017	Department of Mechanical Engineering, MIT
11	04/07/2017	Department of Biomedical Engineering, Columbia University
10	02/21/2017	Department of Mechanical Engineering, MIT
9	01/22/2017	Department of Biomedical Engineering, University of Wisconsin, Madison
8	12/14/2016	Squishy Physics, Harvard University
7	04/2015	Nano-indentation and its Application in Mechanobiology and Soft Materials Workshop at UIUC
6	09/2015	Overture Council, Chicago Symphony Orchestra (declined)
5	08/2013	Department of Physics, Sharif University of Technology, Tehran, Iran
4	07/2013	School of Biomedical Engineering, Drexel University, Philadelphia, PA
3	04/2013	Department of Radiation Oncology, Massachusetts General Hospital, Harvard Medical School, Boston, MA
2	07/2011	Women's Technology Program Workshop, MIT, Cambridge, MA
1	05/2010	Women's Technology Program Workshop, MIT, Cambridge, MA

REFEREED CONFERENCE PRESENTATIONS:

2025:

1. Gabrielle N. Grifno, Han Ali Kahvecioglu, Victoria Travnik, Robert LeBourdais, Rohin Banerji, Winita Wangsrikhun, Linzheng Shi, Suleyman B. Bozal, Heewon Suh, Athanasios Batgidis, Byungjun Kang, Abdulrahman Kobayter, Lauren Castle, Kathryn Regan, Feiyang Deng, Michael Vannini, Mohammad Rashidian, Liang Hao, Joseph P. Mizgerd, Worth Longest, Michael Hindle, W. Mark Saltzman, James P. Butler, Béla Suki, **Hadi T. Nia**, "*Mosaic pattern: functional lung heterogeneity at the alveolar level and its association with lung metastasis*"*,* talk, February 2025, Gordon Research Conference Physical Science of Cancer, Pomona CA.
2. Gabrielle N. Grifno, Han Ali Kahvecioglu, Victoria Travnik, Robert LeBourdais, Rohin Banerji, Winita Wangsrikhun, Linzheng Shi, Suleyman B. Bozal, Heewon Suh, Athanasios Batgidis, Byungjun Kang, Abdulrahman Kobayter, Lauren Castle, Kathryn Regan, Feiyang Deng, Michael Vannini, Mohammad Rashidian, Liang Hao, Joseph P. Mizgerd, Worth Longest, Michael Hindle, W. Mark Saltzman, James P. Butler, Béla Suki, **Hadi T. Nia**, "*Mosaic pattern: functional lung heterogeneity at the alveolar level and its association with lung metastasis*"*,* poster, February 2025, Gordon Research Conference Physical Science of Cancer, Pomona CA.
3. Kathryn Regan, Abdulrahman Kobayter, Robert LeBourdais, Winita Wangsrikhun, Seyed Heydar Moravej, Lea Berland, Gabrielle Grifno, Linzheng Shi, Rohin Banerji, Mohammad Fallahi-Sichani, Mohammad Rashidian, **Hadi T. Nia**, "T cell motility signatures in lung melanoma metastasis investigated in real-time in functional murine lungs using crystal ribcage." Invited Research talk, Short talk & poster, February 2025, Gordon Research Seminar Physical Science of Cancer, Pomona CA.
4. Kathryn Regan, Abdulrahman Kobayter, Robert LeBourdais, Winita Wangsrikhun, Seyed Heydar Moravej, Lea Berland, Gabrielle Grifno, Linzheng Shi, Rohin Banerji, Mohammad Fallahi-Sichani, Mohammad Rashidian, **Hadi T. Nia**, "T cell motility signatures in lung melanoma metastasis investigated in real-time in functional murine lungs using crystal ribcage." Poster, February 2025, Gordon Research Seminar Physical Science of Cancer, Pomona CA.
5. Kathryn Regan, Abdulrahman Kobayter, Robert LeBourdais, Winita Wangsrikhun, Seyed Heydar Moravej, Lea Berland, Gabrielle Grifno, Linzheng Shi, Rohin Banerji, Mohammad Fallahi-Sichani, Mohammad Rashidian, **Hadi T. Nia**, "T cell motility signatures in lung melanoma metastasis investigated in real-time in functional murine lungs using crystal ribcage." Invited short talk, February 2025, Gordon Research Conference Physical Science of Cancer, Pomona CA.
6. Kathryn Regan, Abdulrahman Kobayter, Robert LeBourdais, Winita Wangsrikhun, Seyed Heydar Moravej, Lea Berland, Gabrielle Grifno, Linzheng Shi, Rohin Banerji, Mohammad Fallahi-Sichani, Mohammad Rashidian, **Hadi T. Nia**, "T cell motility signatures in lung melanoma metastasis investigated in real-time in functional murine lungs using crystal ribcage." Poster, February 2025, Gordon Research Conference Physical Science of Cancer, Pomona CA.

2024:

7. Yuqing Deng, Zhiheng Xu, Abdulrahman Kobayter, Linzheng Shi, Gabrielle N. Grifno, Kathryn Regan, Kenneth R. Lutchen, Elizabeth Bartolák-Suki, Béla Suki, and **Hadi T. Nia**, "*Effects of emphysema-associated agents on neutrophil migration in mouse precision-cut lung slices*", Poster presentation, November 2024, Center for Multiscale and Translational Mechanobiology annual symposium, Boston University, November 2024.
8. Gabrielle N. Grifno, Han Kahvecioglu, Victoria Travnik, Rohin Banerji, Bela Suki, **Hadi T. Nia**, "*Origins and significance of mosaic pattern: novel lung functional heterogeneity at the alveolar level*", talk, 21st Annual QBP, TRB, SB2, and BFC Graduate Research Symposium, Boston University 2024, Boston MA.
9. Gabrielle N. Grifno, Han Kahvecioglu, Victoria Travnik, Rohin Banerji, Béla Suki, **Hadi T. Nia**, "*Mosaic pattern: multiscale lung functional heterogeneity from the organ to alveolus leve*l", Oral presentation, November 2024, Center for Multiscale and Translational Mechanobiology annual symposium, Boston University.
10. Byungjun Kang, Rohin Banerji, Linzheng Shi, Kathryn Regan, Gabrielle Grifno, Lauren Castle, Athanasios Batgidis, **Hadi T. Nia**, "*Development of in vivo models for translational and mechanistic lung mechanobiology*," Poster presentation, November 2024, Center for Multiscale and Translational Mechanobiology annual symposium, Boston University, November 2024.
11. Lauren Castle*, Kathryn Regan*, Abdulrahman Kobayter, Linzheng Shi, Gabrielle Grifno, Rohin Banerji, Winita Wangsrikhun, **Hadi T. Nia**, "Respiration-circulation micromechanics at the capillary level across lifespan in mice using a crystal ribcage." Poster presentation, October 2024, Biomedical Engineering Society Annual Meeting, Baltimore MD.

12. Lauren Castle*, Kathryn Regan*, Abdulrahman Kobayter, Linzheng Shi, Gabrielle Grifno, Rohin Banerji, Winita Wangsrikhun, **Hadi T. Nia**, "Respiration-circulation micromechanics at the capillary level across lifespan in mice using a crystal ribcage" Poster presentation, November 2024, Poster presentation, November 2024, Center for Multiscale and Translational Mechanobiology annual symposium, Boston University.
13. Lauren Castle*, Kathryn Regan*, Abdulrahman Kobayter, Linzheng Shi, Gabrielle Grifno, Rohin Banerji, Winita Wangsrikhun, **Hadi T. Nia**, "Respiration-circulation micromechanics at the capillary level across lifespan in mice using a crystal ribcage" Poster presentation, November 2024, Poster presentation, December 2024, QBP/TRB/SB2 Graduate Research Symposium, Boston University, Boston.
14. Kathryn Regan, Robert LeBourdais, Rohin Banerji, Sue Zhang, Jonathan Muhvich, Siyi Zheng, **Hadi T. Nia**, "*Multiscale elasticity mapping of biological samples in 3D at optical resolution*." Oral Presentation, October 2024, Biomedical Engineering Society Annual Meeting, Baltimore MD.
15. Kathryn Regan, Abdulrahman Kobayter, Gabrielle Grifno, Rohin Banerji, Linzheng Shi, Winita Wangsrikhun, Lea Berland, Mohammad Rashidian, Mohammad Fallahi-Sichani, **Hadi T. Nia**, "*Motility signatures of native T cells within lung tumor microenvironment using the murine crystal ribcage*," Oral Presentation, October 2024, Biomedical Engineering Society Annual Meeting 2024, Baltimore, MD.
16. Linzheng Shi, Michael Vannini, Gabrielle Grifno, Rohin Banerji, Kathryn Regan, Joseph Mizgerd, **Hadi T. Nia**, "Using extracorporeal cross-circulation coupled with Crystal Ribcage to dissect the role of systemic vs pulmonary immunity against pneumonia," Oral Presentation, October 2024, Biomedical Engineering Society Annual Meeting 2024, Baltimore, MD.
17. Gabrielle N. Grifno, Rohin Banerji, Béla Suki, **Hadi T. Nia**, "Single droplet-level aerosol deposition dynamics in functioning alveoli in mice", Oral talk, October 2024, Biomedical Engineering Society Annual Meeting 2024, Baltimore, MD.
18. Gabrielle N. Grifno, Rohin Banerji, Han Kavehcioglu, Bela Suki, **Hadi T. Nia**, "Novel alveolus-level heterogeneities of aerosol transport and its alteration by metastasis", Oral talk, October 2024, Biomedical Engineering Society Annual Meeting 2024, Baltimore, MD.
19. Kathryn Regan, Rohin Banerji, Gabrielle Grifno, Linzheng Shi, Robert LeBourdais, Lauren Castle, Winita P. Wangsrikuhn, Mohammad Rashidian, **Hadi T. Nia**, "*Location-specific motility signatures of T cells in the tumor microenvironment*", Oral presentation, Boston University Center for Multiscale and Translational Mechanobiology, Boston, MA August 2024.
20. Linzheng Shi, Michael Vannini, Gabrielle Grifno, Rohin Banerji, Kathryn Regan, Joseph Mizgerd, **Hadi T. Nia**, "Using extracorporeal cross-circulation coupled with Crystal Ribcage to dissect the role of systemic vs pulmonary immunity against pneumonia," Oral Presentation, October 2024, Boston University Center for Multiscale and Translational Mechanobiology
21. Gabrielle N. Grifno, Rohin Banerji, Victoria Travnik, Bela Suki, **Hadi T. Nia**, *"Probing transport and deposition of single aerosols in real time in functional mouse lungs"*, Invited talk, CEMB Future Leaders in Mechanobiology Seminar, University of Pennsylvania, April 2024.
22. Rohin Banerji, Winita Wangsrikhun, Athanasios Batgidis, Dylan Smolen, Bela Suki, **Hadi T. Nia**, "Development of the Pig Crystal Ribcage to Probe Real-Time Lung Function at Cellular Resolution", Invited research talk Biomedical Engineering Society Conference, Baltimore, October 2024.
23. Rohin Banerji, Siyi Zheng, Rob LeBourdais, Eric DuBois, Sue Zhang, Tim O'Shea, **Hadi T. Nia**, "Alteration of mechanical stress in the mouse brain with age and haemorrhagic stroke", Invited research talk Biomedical Engineering Society Conference, Baltimore, October 2024.
24. Rohin Banerji, Gabrielle N. Grifno, Linzheng Shi, Bela Suki, **Hadi T. Nia**, *"Crystal Ribcage: A Platform for Imaging Functional Lungs in Real-time at Cellular Resolution in Health and Disease"*, Lightning talk, Boston University Admitted Students Weekend. March 2023, Boston, MA.

2023:

25. Rohin Banerji, Gabrielle N. Grifno, Linzheng Shi, Dylan Smolen, Rob LeBourdais, Jonathan Muhvich, Cate Eberman, Sarah Mazilli, Bela Suki, **Hadi T. Nia**, *"Tumor Micromechanics Probed in Functional Lungs at Cellular Resolution with Novel Crystal Ribcage"*, Invited research talk, Gordon Research Seminar, February 2023 Physical Sciences of Cancer, Galveston, TX.
26. Rohin Banerji, Gabrielle N. Linzheng Shi, Dylan Smolen, Rob LeBourdais, Jonathan Muhvich, Cate Eberman, Sarah Mazilli, Bela Suki, **Hadi T. Nia**, *"Tumor Micromechanics Probed in Functional Lungs at Cellular Resolution with Novel Crystal Ribcage"*, Invited research talk, Gordon Research Conference Physical Sciences of Cancer, February 2023, Galveston, TX.

27. Rohin Banerji, Gabrielle N. Grifno, Linzheng Shi, Dylan Smolen, Rob LeBourdais, Jonathan Muhvich, Cate Eberman, Sarah Mazilli, Bela Suki, **Hadi T. Nia**, *"Tumor Micromechanics Probed in Functional Lungs at Cellular Resolution with Novel Crystal Ribcage"*, Poster presentation, Gordon Research Conference Physical Sciences of Cancer, February 2023, Gavelston, TX.
28. Gabrielle N. Grifno, Rohin Banerji, Linzheng Shi, Dylan Smolen, Johnathan Muhvich, Siyi Zheng1, Bradley Hiller, Riley Pihl, Katrina Traber, Béla Suki, Joseph P. Mizgerd, **Hadi T. Nia**, *"Mechano-immunity and vascular transport in lung metastasis probed in multiscale and real-time via crystal ribcage"*, Poster, Gordon Physical Sciences of Cancer Research Conference (Galveston, TX; 2023).
29. Rohin Banerji, Gabrielle N. Grifno, Linzheng Shi, Dylan Smolen, Rob LeBourdais, Jonathan Muhvich, Cate Eberman, Sarah Mazilli, Bela Suki, **Hadi T. Nia**, *"Crystal Ribcage: A Platform for Imaging Functional Lungs in Real-time at Cellular Resolution in Health and Disease"*, Lightning talk, Boston University Admitted Students Weekend. March 2022, Boston, MA.
30. Rohin Banerji, Dylan Smolen, Jung Won Park, Raghavan Ramaswamy, **Hadi T. Nia**, *"Development of the Pig Crystal Ribcage to Probe Real-Time Lung Function at Cellular Resolution"*, Poster presentation, Center for Multiscale and Translational Mechanobiology, Boston University, October 2023.
31. Kathryn Regan, Gabrielle Grifno, Rohin Banerji, Bela Suki, **Hadi T. Nia**. "*Probing respiration-circulation coupling in positive- vs negative-pressure ventilation of the lung at the capillary level*", Poster presentation, Center for Multiscale and Translational Mechanobiology, Boston University, October 2023.
32. Gabrielle N. Grifno, Rohin Banerji, Victoria Travnik, Bela Suki, **Hadi T. Nia**. "Probing real-time aerosol deposition at the single droplet level in functional alveoli", Oral talk, October 2023, Biomedical Engineering Society Annual Meeting 2023, Seattle, WA.
33. Linzheng Shi, Gabrielle Brifno, Rohin Banerji, **Hadi Nia**. "Developing extracorporeal cross-circulation coupled with crystal ribcage for long-term probing of lung mechanobiology in health and disease", Oral talk, October 2023, BUSM MDPhD program retreat, Boston, MA.
34. Linzheng Shi, Gabrielle Brifno, Rohin Banerji, **Hadi Nia**. "Developing extracorporeal cross-circulation coupled with crystal ribcage for long-term probing of lung mechanobiology in health and disease", Oral talk, October 2023, CMTM Annual SYmposium, Boston, MA.
35. Gabrielle N. Grifno, Rohin Banerji, Bela Suki, **Hadi T. Nia**. "Probing real-time aerosol deposition at the single droplet level in functional alveoli", Oral talk, December 2023, QBP/TRB/SB2 Graduate Research Symposium, Boston University, Boston.

2022:

36. Sue Zhang, Rachel Passaro, Kathryn Regan, Muhamed Hadzipasic, Gabrielle Grifno, Siyi Zheng, Logan O'Connor, Vinson Chu, Sung Yeon Kim, Jiarui Yang, Rohin Banerji, Kavon Karrobi, Darren Roblyer, Mark W. Grinstaff, **Hadi T. Nia**, "*In vivo multiscale measurements of solid stresses in tumors reveal scale-dependent stress transmission*", Poster presentation, Biomedical Engineering Society Annual Meeting 2022, San Antonio
37. Béla Suki, Jae Hun Kim, Yuqing Deng, Joseph Hall, **Hadi T. Nia**, Elizabeth Bartolák-Suki, Ramaswamy Krishnan, "*Mitochondrial Response of Type II Alveolar Epithelial Cells to Cough-induced Stretch*", Poster presentation, Biomedical Engineering Society Annual Meeting 2022, San Antonio.
38. Linzheng Shi, Jacob Herrmann, Samer Bou Jawde, Jason HT Bates, **Hadi T Nia**, Béla Suki, "*The Role of Gravity and Mechanical Properties of Elastin and Collagen on Lung Pressure-Volume Curves*", Poster presentation, Biomedical Engineering Society Annual Meeting 2022, San Antonio.
39. Linzheng Shi, Jacob Herrmann, Samer Bou Jawde, Jason HT Bates, **Hadi T Nia**, Béla Suki, "*The Role of Gravity and Mechanical Properties of Elastin and Collagen on Lung Pressure-Volume Curves*", Abstract submission, BUSM MD/PhD Retreat 2022.
40. Johnathan Muhvich, Linzheng Shi, Rohin Banerji, Gabrielle N. Grifno, **Hadi T. Nia**, "*Development of a Programmable Ventilator For Negative and Positive Pressure Ventilation in Mice*", Poster presentation, Biomedical Engineering Society Annual Meeting 2022, San Antonio.
41. Kathryn Regan, Robert LeBourdais, Siyi Zheng, Sue Zhang, **Hadi T. Nia**, "*Multiscale Mapping of Elasticity in Biological Tissues in 3-D at Optical Resolution*", Poster presentation, Biomedical Engineering Society Annual Meeting 2022, San Antonio
42. Siyi Zheng, Sue Zhang, Rohin Banerji, **Hadi T. Nia**, "*Evolution of Solid Stresses in Normal Brain by Age*", Poster presentation, Biomedical Engineering Society Annual Meeting 2022, San Antonio.
43. Dylan Smolen, Rohin Banerji, Hadi T. Nia, "*Design and Fabrication of Porcine Crystal Ribcage for High Resolution Ex Vivo Imaging*", Poster presentation, Biomedical Engineering Society Annual Meeting 2022, San Antonio.

44. Rob LeBourdais, Rohin Banerji, Gabrielle N. Grifno, Kathryn Regan, **Hadi T. Nia**, *"Micro-elastography of the Functioning Lung at Multiple Length Scales in Health and Disease*," Poster presentation, Biomedical Engineering Society Annual Meeting 2022, San Antonio.
45. Gabrielle N. Grifno, Rohin Banerji, Riley Pihl, Katrina Traber, Bela Suki, **Hadi T. Nia**, *"Multiscale, Real-Time Lung Vascular Dynamics Probed via Crystal Ribcage"*, Poster, Boston University Center for Multiscale & Translational Mechanobiology 3rd Annual Symposium 2022, Boston MA.
46. Gabrielle N. Grifno, Rohin Banerji, Riley Pihl, Katrina Traber, Bela Suki, **Hadi T. Nia**, *"Multiscale and Real-Time Vascular Dynamics in the Lung Parenchyma Probed via a Crystal Ribcage"*, Oral talk, Biomedical Engineering Society Annual Meeting 2022, San Antonio, TX.
47. Rohin Banerji, Gabrielle N. Grifno, Cate Eberman, Jonathan Muhvich, Jisu Lee, Giovanni Ligresti, Bela Suki, **Hadi T. Nia**, *"Development of a Novel Crystal Ribcage to Probe Functional Lungs at Cellular Resolution in Real-Time"*, Oral talk, Biomedical Engineering Society Annual Meeting 2022, San Antonio, TX.
48. Rohin Banerji, Gabrielle N. Grifno, Cate Eberman, Jonathan Muhvich, Jisu Lee, Giovanni Ligresti, Bela Suki, **Hadi T. Nia**, *"Development of a Novel Crystal Ribcage to Probe Functional Lungs at Cellular Resolution in Real-Time"*, Poster presentation, Center for Multiscale and Translational Mechanobiology Annual Symposium 2022, Boston, MA.
49. Rohin Banerji, Gabrielle N. Grifno, Cate Eberman, Jonathan Muhvich, Bela Suki, **Hadi T. Nia**, *"Understanding pulmonary disease in mouse models using a novel crystal ribcage"*, Lightning talk, Center for Multiscale and Translational Mechanobiology Annual Symposium 2022, Boston, MA.
50. Rohin Banerji, Gabrielle N. Grifno, Cate Eberman, Jonathan Muhvich, Bela Suki, **Hadi T. Nia**, *"Understanding pulmonary disease in mouse models using a novel crystal ribcage"*, Lightning talk, Boston University Admitted Students Weekend 2022, Boston, MA.
51. Linzheng Shi, **Hadi T Nia**, Béla Suki, "*The Role of Gravity and Mechanical Properties of Elastin and Collagen on Lung Pressure-Volume Curves*", Poster Presentation, Center for Multiscale and Translational Mechanobiology Annual Symposium 2022, Boston, MA.
52. Johnathan Muhvich, Linzheng Shi, Rohin Banerji, Gabrielle N. Grifno, **Hadi T. Nia**, "*Development of a Programmable Ventilator For Negative and Positive Pressure Ventilation in Mice*", Poster presentation, Center for Multiscale and Translational Mechanobiology Annual Symposium 2022, Boston, MA.
53. Siyi Zheng, Sue Zhang, Rohin Banerji, **Hadi T. Nia**, "*Evolution of Solid Stresses in Normal Brain by Age*", Poster presentation, Center for Multiscale and Translational Mechanobiology Annual Symposium 2022, Boston, MA.
54. Dylan Smolen, Rohin Banerji, **Hadi T. Nia**, "*Design and Fabrication of Porcine Crystal Ribcage for High Resolution Ex Vivo Imaging*", Poster presentation, Center for Multiscale and Translational Mechanobiology Annual Symposium 2022, Boston, MA.
55. Kathryn Regan, Robert LeBourdais, Siyi Zheng, Sue Zhang, **Hadi T. Nia**, "*Multiscale Mapping of Elasticity in Biological Tissues in 3-D at Optical Resolution*", Poster presentation, Center for Multiscale and Translational Mechanobiology Annual Symposium 2022, Boston, MA
56. Rohin Banerji, Gabrielle N. Grifno, Cate Eberman, Jonathan Muhvich, Jisu Lee, Giovanni Ligresti, Bela Suki, **Hadi T. Nia**, *"Development of a Novel Crystal Ribcage to Probe Functional Lungs at Cellular Resolution in Real-Time"*, Oral presentation, Department of Biomedical Engineering Student Seminar, December 2022, Boston, MA.
57. Gabrielle N. Grifno, Rohin Banerji, Lingzheng Shi, Dylan Smolen, Jonathan Muhvich, Siyi Zheng, Bradley Hiller, Riley Pihl, Katrina Traber, Joseph P. Mizgerd, **Hadi T. Nia**, "*Real-Time Lung Vascular Dynamics Probed via Crystal Ribcage*". Poster presentation, Quantitative Biology, Translational Research in Biomaterials, and Synthetic Biology and Biotechnology 19th Annual Graduate Research Symposium, December 2022, Boston MA.
58. Gabrielle N. Grifno, Rohin Banerji, Lingzheng Shi, Dylan Smolen, Jonathan Muhvich, Siyi Zheng, Bradley Hiller, Riley Pihl, Katrina Traber, Joseph P. Mizgerd, **Hadi T. Nia**, *"Multiscale, Real-Time Lung Vascular Dynamics Probed via Crystal Ribcage"*. Poster presentation, Boston University Center for Multiscale and Translational Mechanobiology Annual Symposium 2022, Boston, MA.

2021:

59. Sue Zhang, Rachel Passaro, Vinson Chu, Mark W. Grinstaff, **Hadi T. Nia**., "*Non-invasive measurement of solid stress in breast tumors in vitro and in vivo,*" Poster presentation, Biomedical Engineering Society Annual Meeting, virtual, October 2021.

60. Sue Zhang, Rachel Passaro, Mark W. Grinstaff, **Hadi T. Nia**., "*Non-invasive measurement of solid stress in breast tumors in vitro and in vivo*", Poster presented at QBP/TRB/SB2 Graduate Research Symposium, Boston University, December 2021.
61. Gabrielle N. Grifno, Rohin Banerji, Cate Eberman, Béla Suki, **Hadi T. Nia**, *"Dynamic Deformation of Alveoli during Pulmonary Edema under Mechanical Ventilation"*, Oral talk, Biomedical Society Annual Meeting 2021, virtual.
62. Rohin Banerji, Cate Eberman, Gabrielle N. Grifno, Bela Suki, **Hadi T. Nia**, *"Altered Alveolar Micromechanics in the Presence of Metastatic Tumors"*, Poster presentation, Biomedical Engineering Society Annual Meeting 2021, Virtual attendance.

2020:

63. Sue Zhang, **H. T. Nia**. 2020. "*In vivo measurement of solid stress in solid tumors*." Poster presented at Boston University Virtual Graduate Research Symposium, Boston University, December 2020.
64. Scott Gaines, Aditya Jain, Rohin Banerji, Elizabeth Hanchar, Sarah Gerard, Jacob Hermann, Bela Suki, Hadi T. Nia, *"Biophysical Contribution to Tumor Progression and Incidence in Lung Cancer"*, Poster presentation, Biomedical Engineering Society Annual Meeting 2020, Virtual attendance.

Prior to 2020:

65. **H. T. Nia**, H. Liu, G. Seano, M. Datta, D. Jones, N. Rahbari, J. Incio, V. P. Chauhan, K. Jung, J. D. Martin, V. Askoxylakis, T. P. Padera, D. Fukumura, Y. Boucher, F. J. Hornicek, A. J. Grodzinsky, J. W. Baish, L. Munn, and R.K. Jain, "Solid stress and elastic energy as measures of tumour mechanopathology,*"* Biomedical Engineering Society Annual Meeting , Phoenix, AZ., October 2017.

66. G. Seano*, **H. T. Nia***, K. Emblem*, M. Datta, J. Ren, J. Kloepper, S. Krishnan, M. Ghosh, M. Pinho, V. Askoxylakis, G. Ferraro, L. Riedemann, E.Gerstner, T. Batchelor, P. Wen, N. Lin, A. Grodzinsky, D. Fukumura, P. Huang, J. Baish, T. Padera, L. Munn, R.K. Jain, "Neurological dysfunction induced by brain tumor-generated solid stress is reversed by lithium treatment," Biomedical Engineering Society Annual Meeting , Phoenix, AZ., October 2017.

67. **H. T. Nia**, H. Liu, G. Seano, M. Datta, D. Jones, N. Rahbari, J. Incio, V. P. Chauhan, K. Jung, J. D. Martin, V. Askoxylakis, T. P. Padera, D. Fukumura, Y. Boucher, F. J. Hornicek, A. J. Grodzinsky, J. W. Baish, L. Munn, and R.K. Jain, "Solid stress and elastic energy as measures of tumour mechanopathology,*"* American Cancer Research, April, Washington D.C., April 2017.

68. **H. T. Nia**, H. Liu, G. Seano, M. Datta, D. Jones, N. Rahbari, J. Incio, V. P. Chauhan, K. Jung, J. D. Martin, V. Askoxylakis, T. P. Padera, D. Fukumura, Y. Boucher, F. J. Hornicek, A. J. Grodzinsky, J. W. Baish, L. Munn, and R.K. Jain, "Solid stress and elastic energy as measures of tumour mechanopathology,*"* Gordon Research Conference on Physical Sciences of Cancer, Galveston, TX., February 2017.

69. J. Incio, P.Suboj, S.M. Chin, Y. Huang, **H. T. Nia**, S. Kao, S. Babykutty, N. Rahbari, V. Chauhan, J. Martin, R. Ngo, I. Chen, H. Liu, X. Han, T. Reiberger, J. Gravohac, K. Jung, P. Huang, R. Soares, Y. Boucher, D. Fukumura, R.K. Jain, "Obesity-induced inflammation aggravates desmoplasia in PDAC reducing the efficacy of chemotherapy," American Cancer Research, April, Washington D.C., April 2017.

70. N. Rahbari, D. Kedrin, J. Incio, T. Reiberger, H. Liu, **H. T. Nia**, C. Edrich, J. Dubroix, I. Chen, T. Heishi, J. Martin, Y. Huang, A. J. Grodzinsky, D. G. Duda, R. K. Jain & D. Fukumura, "Extracellular matrix remodeling after anti-VEGF therapy contributes to therapeutic resistance in colorectal cancer liver metastases," American Cancer Research, April, Washington D.C., April 2017.

71. M. Azadi, **H. T. Nia**, A. Grodzinsky, C. Ortiz, "AFM Nanodynamics a complementary tool to conventional Micromechanical AFM-contact assessment for time dependent biomaterial", Accepted for presentation at AFM BioMed Conference, October 2014.

72. **H. T. Nia**, M. Azadi, L. Han, P. Roughley, C. Ortiz, A. Grodzinsky, "Fluid-Solid Interactions within Aggrecan Proteoglycan Networks: Molecular Origins of Tissue-Level Biomechanics and Functioning of Cartilage", Proceeding of 2014 World Congress of Biomechanics, January 2014.

73. M. Azadi, **H. T. Nia**, A. Grodzinsky, C. Ortiz, “Comparison of Nano and Microscale Mechanics of Murine Articular Cartilage,” Proceeding of IEEE Engineering in Medicine and Biology Society, May 2014.

74. M. Azadi, **H. T. Nia**, A. Grodzinsky, A. Ortiz, “Nonlinear nanomechanics of murine articular cartilage”, Proceeding of 2014 World Congress of Biomechanics, Jan 2014.

75. **H. T. Nia**, L. Han, I. Bozchalooi, K. Youcef-Toumi, A. Grodzinsky and C. Ortiz, “Frequency-dependent nanomechanical behavior of aggrecan demonstrates that aggrecan is the dominant constituent responsible for the frequency dependence of cartilage poroelasticity,” Transactions of the 59th Annual Orthopaedic Research Society 2013, San Antonio, TX, 2013, poster presentation.

76. **H. T. Nia**, L. Han, I. S. Bozchalooi, K. Yousef-Toumi, C. Ortiz and A. Grodzinsky, “Dynamic Nanomechanics of End Grafted Aggrecan Monolayers Reveals Energy Dissipation and Self-stiffening Properties of Cartilage at the Nanoscale,” Materials Research Society, Boston, Nov 25-30, 2012, poster presentation.

77. **H. T. Nia**, I. S. Bozchalooi, Y. Li, L. Han, H. Hung, E. Frank, K. Yousef-Toumi, A. Grodzinsky and C. Ortiz, “AFM-Based High-Frequency Rheology of Cartilage as a Sensitive Method to Measure Matrix Degradation,” Materials Research Society, Boston, Nov 25-30, 2012, poster presentation.

78. S. A. O’Neill, **H. T. Nia**, A. Grodzinsky, C. Ortiz, “Nanomechanics of Agarose Hydrogel at the Nanoscale Deformation,” SACNAS, San Jose, USA, Oct 28, 2011.

79. **H. T. Nia**, L. Han, I. Bozchalooi, K. Youcef-Toumi, A. Grodzinsky and C. Ortiz, “Molecular Level Origins of the Dynamic Mechanical Functioning of Cartilage,” 2nd Global Congress on Nanoengineering for Medicine and Biology, Boston, 2013, podium presentation.

80. **H. T. Nia**, Y. Li, Y. Wang, I. Bozchalooi, S. Chubinskaya, K. Youcef-Toumi, C. Ortiz and A. Grodzinsky, “Depth-dependent self-stiffening, energy dissipation and poroelastic properties of normal human cartilage via broad-spectrum dynamic nanoindentation,” Transactions of the 59th Annual Orthopaedic Research Society 2013, San Antonio, TX, 2013, podium presentation.

81. Batista, M., **Nia, H.T.**, Cox, K., Grodzinsky, A. J., Ortiz, C., Heinegrd, D., and L. Han. “Effects of Chondroadherin on Cartilage Nanostructure and Biomechanics via Murine Model," Proceedings of the ASME 2013 Summer Bioengineering Conference, Sunriver, OR, 2013.

82. M. Batista, **H. T. Nia**, K. Cox, A. Grodzinsky, C. Ortiz, D. Heinegård and L. Han, “Role of Chondroadherin in Nanoscale Tissue Assembly and Biomechanics of Murine Articular Cartilage,” Transactions of the 59th Annual Orthopaedic Research Society 2013, San Antonio, TX, 2013, podium presentation.

83. L. Han, **H. T. Nia**, A. Grodzinsky, C. Ortiz, “Cartilage Dynamic Nanomechanics,” East Lake International Forum on Frontiers of Science and Technology for Outstanding Overseas Young Scholars, Hubei, China Oct. 6-8, 2012.

84. **H. T. Nia**, I. Soltani, Y. Li, E. Frank, K. Yousef-Toumi, A. Grodzinsky and C. Ortiz, “The Effect of GAG Depletion on Cartilage Nanoscale Hydraulic Permeability,” Transactions of the 2012 58th Annual Orthopaedic Research Society 2012, San Francisco, CA, 2011.

85. **H. T. Nia**, L. Han, Y. Li, C. Ortiz, A. J. Grodzinsky, “Poro/viscoelasticity of Cartilage at the Nanoscale,” The 4th International Conference on Mechanics of Biomaterials Tissues, Marriott Waikoloa Beach Resort and Spa, Waikoloa, HI, Dec 11-14, 2011.

86. **H. T. Nia**, L. Han, Y. Li, C. Ortiz and A. J. Grodzinsky, “Poroelasticity is the Dominant Energy Dissipation Mechanism in Cartilage at the Nano-scale,” Transactions of the 57th Annual Orthopaedic Research Society Podium Presentation Spotlight Session, Long Beach, California, 36, 2011.

87. **H. T. Nia**, L. Han L, A. J. Grodzinsky and C. Ortiz, “Micro- and nanoscale poroelasticity of cartilage,” Materials Research Society, Boston, Nov 29 Dec 3, 2010.

88. K. Sugimoto, **H. T. Nia**, and A. Enomoto, 2005, “Reciprocal Spaces and Dual Spaces for the Analysis of Parallel Mechanisms,” Proceeding of the 11th Symposium on Theory of Machines and Mechanisms (Jc-IFToMM), TIT, Tokyo, Japan (In Japanese).

89. **H. T. Nia**, S. H. Alemohamad, S. Bagheri, R. H. A. Khiabani and A. Meghdari “An Approach to Rough Terrain Rovers Dynamic Analysis and Optimization,” Proceeding of IDETC/CIE, Sep. 24-28, 2005, Long Beach, CA, USA.

90. **H. T. Nia**, H. N. Pishkenari, A. Meghdari, “Effective Analysis of Snake Robots Using Kane’s Equations,” Proceeding of IDETC/CIE, Sep. 24-28, 2005, Long Beach, CA, USA.

91. **H. T. Nia**, H. Pendar, M. Vakil, H. Zohoor, “Closed Form Dynamical Equations of the General Stewart Platform; Part II: Kane Approach,” Proceeding of the 12th ISME International Conference of Mechanical Engineering, 2004, 42.

92. M. Vakil, H. Pendar, **H. T. Nia**, H. Zohoor, “Closed Form Dynamical Equations of the General Stewart Platform; Part I: Newton-Euler Approach,” Proceeding of the 12th ISME International Conference of Mechanical Engineering, 2004, 41.

93. **H. T. Nia**, H. Zohoor, “Optimal Synthesis of Planar and Spatial Mechanisms for Path Generation Using Regression Deviation,” Proceeding of the 11th ISME International Conference of Mechanical Engineering, 2003 (In Persian).

SCIENTIFIC OUTREACH

11/2024	Served in CDMRP (DoD) Melanoma Research Program Panel
2024-present	Co-chair of Respiratory Structure Function (RSF) Assembly at American Thoracic Society (ATS)
2024-present	Editorial board of Biological Physics and Mechanics
03/2024	Served in NIH Study Section F09C: Fellowships: Oncological Sciences
07/2023	Invited to serve in NIH study section ZRG1, Fellowships: Cancer Immunology and Immunotherapy
09/2022	Session Chair, Annual Meeting of Biomedical Engineering Society (BMES), San Antonio
02/2021	Served in NIH study section of Cellular Molecular Technologies (CMT)
09/2019	Session Chair, Annual Meeting of Biomedical Engineering Society (BMES), Cancer Technologies Track, Philadelphia, PA
07/2013	Session Chair, Society of Engineering Science at the 50th Annual Technical Meeting, Brown, RI
12/2011	Session Chair, The 4th International Conference on Mechanics of Biomaterials Tissues, Waikoloa, HI

- **Reviewed for** Nature Cancer, PNAS, Biophysical Journal, Journal of Biomechanics, BMC Cancer, APL Bioengineering, Acta Biomaterialia, Biomechanics and modeling in mechanobiology, Trends in Cancer, Communication Biology, Science Advances, Scientific Report, Cancer Discovery, Journal of Experimental Mechanics, Journal of Biomechanical Engineering, Osteoarthritis and Cartilage, ASME OMEA 2012, Journal of the Mechanical Behavior of Biomedical Materials

- **Member of:** Biomedical Engineering Society (BMES), American Association for Cancer Research (AACR), American Thoracic Society (ATS), American Society of Mechanical Engineers (ASME), American Chemical Society (ACS).

- **Organizing member** of the annual course on Critical Issues in Tumor Microenvironment: Angiogenesis, Metastasis and Immunology in 2014, 2015 and 2016; Academia transition seminars for Mass. General Postdoctoral Association (MGPA).

Departmental Service:

- 2019-2020, Admission committee, Chair: Jerome Mertz
- 2020-2021, Admission committee, Chair: Darren Roblyer
- 2021-2022, Search committee, Chair: Muhammad Zaman
- 2022-2023, Search committee, Chair: Chris Chen
- 2023-2024, Admission committee, Chair: Darren Roblyer
- 2024-2025, Admission committee, Chair: Diane Joseph-McCarthy
- 2022-2023, Member of strategic planning task force in Center for Multiscale and Translational Mechanobiology (CMTM) Chairs: Elise Morgan (ENG) and Bob Varelas (BUSM)
- 2024-present, Member of Executive Committee in Center for Multiscale and Translational Mechanobiology (CMTM)
- Member of qualifying exam:
    - Nanotechnology 2019
    - Nanotechnology 2020
    - Nanotechnology 2021
    - Nanotechnology 2022
    - Nanotechnology 2023
    - Nanotechnology 2024

Research Fundings:

	Funding period	Role	Agency	Title
ACTIVE				
20	2025-2028	**PI: Hadi Nia**	Hevolution/American Federation of Aging Research	Inflammaging in the Lung: Dissecting the Impact of Aging on pulmonary vs. circulatory factors
19	2024-2027	**PI: Hadi Nia**; co-PI Mohammad Fallahi-Sichiani	DoD	Uncovering Cell Intrinsic and Extrinsic Factors Governing Melanoma Dormancy at Single-Cell Resolution
18	2024-2026	**PI: Hadi Nia**	Alfred Sloan Foundation	-
17	2023-2026	**PI: Hadi Nia** (co-PI: J. Mizgerd)	Kilachand Fund for Integrated Life Sciences and Engineering	Crystal ribcage investigation of how age and experience impact pulmonary vs. systemic immune defenses against pneumonia
16	2023-2028	**PI: Hadi Nia**	NSF CAREER	CAREER: LungEx for probing multiscale mechanobiology of pulmonary respiration-circulation coupling in real-time
15	2022-2027	**PI: Hadi Nia**	NIH Director's New Innovator Award (DP2)	Probing functioning lung at the cellular resolution in health and disease
14	2022-2026	**PI: Hadi Nia**	Beckman Young Investigator	Development of Crystal Ribcage for Imaging of Functioning Lung at High resolution
13	2021-2024	**PI: Hadi Nia**	NIH-NIBIB	Classifying malignant pulmonary nodules using biophysics-enhanced artificial intelligence
12	2024-2029	**Co-I** (PI: Bob Varelas)	NIH-NCI	Defining Immune-Evasive Mechanical Signaling in Head and Neck Cancer
11	2024-2029	**Co-I** (PI: Dennis Jones)	NIH-NCI	Improving anti-tumor immunity in advanced breast cancer by targeting solid stress
10	2022-2026	**Co-I** (PI: Giovanni Ligresti)	NIH-NHLBI	Targeting vascular dysfunction to promote lung repair and fibrosis resolution
9	2023-2026	**Mentor** PI: Gabrielle Grifno	NSF GRFP	Fellowship for Gabrielle Grifno
8	2023-2027	**Mentor** PI: Linzheng Shi	NIH-NHLBI-F30	Probing immunovascular mechanobiology in pneumonia-associated acute lung injury at the single capillary level
7	2022-2023	**PI: Hadi Nia**	Johnson & Johnson	Physical and Immune microenvironment of lung cancer probed in real-time at the cellular resolution
6	2021-2022	**PI: Hadi Nia**	Johnson & Johnson	Cellular resolution imaging of drug delivery into tumors in functioning ex vivo lung
5	2020-2021	**PI: Hadi Nia**	Johnson & Johnson	Biomechanics-enhanced artificial intelligence in lung cancer detection

4	2020-2021	**PI: Hadi Nia**	Center for Translational and Multiscale Mechanobiology	Mechanical signatures of cell-specific transcriptomics of the lung
3	2020-2021	**PI: Hadi Nia**	American Cancer Society-BU	Tools for Probing Solid Stresses in Fibrotic Tumors
2	2020-2022	**PI: Hadi Nia**	Dean's Catalyst Award	Mechano-immunity of lung cancer in COPD background
1	2021-2023	**Mentor** PI: Gabrielle Grifno	Clare Boothe Luce	Fellowship for Gabrielle Grifno
				Total

Nia Lab Team:

Current Graduate Students:

No	Name	Degree	Title of Thesis	Your role	expected Completion	Student's current position/plan
1	Rohin Banergji	PhD	Developing crystal ribcage for high spatiotemporal resolution probing of lung in health and disease	Sole advisor	2025	Ongoing
2	Kathryn Regan	PhD	Developing methods to measure stiffness in 3D at the cellular resolution	Sole advisor	2025	ongoing
3	Gabrielle Grifno	PhD	Probing hemodynamics of lung in health and disease in real-time at the cellular resolution	Sole advisor	2026	ongoing
4	Lingzhen Shi	MD/PhD	Mechanical signature of lung transcriptomics at single cell level	Sole advisor	2026	Ongoing
5	Rob Lebourdais	PhD	Mechanical enhanced artificial intelligence for prediction of lung cancer	Sole advisor	2027	Ongoing
6	Lauren Castle	PhD	Mechano-immunity in the lung	Sole advisor	2028	Ongoing
7	Andrew Tsao	MD/PhD	Developing crystal skull	Sole advisor	2028	Ongoing

Nia Lab Past Graduate Students:

1	Sue Zhang	PhD	Developing tools and model system to probe solid stress in fibrotic tumors	Primary advisor; co-advised by Mark Grinstaff	2024	Graduated
2	Cate Eberman	MSc.	Developing flexible crystal ribcage	Sole advisor	2021	PhD program at UW Madison
3	Dylan Smolen	MSc. Thesis	Developing crystal ribcage for large animals	Sole advisor	2023	Industry
4	Siyi Zheng	MSc. Thesis	Probing solid stress evolution from development to aging	Sole advisor	2022	PhD program at BU
5	Azeo Torre	MSc. Thesis	Utilizing lung mechanical information to classify the malignancy of lung nodules	Sole advisor	2022	Industry
6	Sunny Kapadia	MS Project	Electromechanics of fibrotic tumors	Advisor	2019	Industry
7	Vinson Chu	MS Project	Developing models to apply solid stress	Advisor	2020	Industry
8	Rachel Passaro	MS Project	Solid stress measurement in tumor spheroids	Advisor	2021	Industry

Nia Lab Postdocs:

No	Name	Topic	Years in the lab	Current position
1	Byungjun Kang, PhD	Mechano-immunity in cancer and pneumonia	2024-present	-
2	Muhamad Hadzipasic, MD/PhD	Micromechanics of tumors	2022-2024	Neurosurgeon resident at MGH

Nia Lab Undergraduate students:

Number	Semester	UG Student name	Award
1	Summer 2019	Sung Yeon Kim	UROP/STARS funded
2	Fall 2019	Scott Gaines	UROP
3	Fall 2019	Logan O'Connor	UROP
4	Spring 2020	Elizabeth Hanchar	-
6	Spring 2020	Tasneem Jivanji	-
7	Summer 2020	Logan O'Connor	UROP
8	Summer 2020	Aditya Jain	**Dean's Distinguished Summer Research Fellowship**
9	Fall 2020	Logan O'Connor	UROP
10	Fall 2020	Elizabeth Hanchar	UROP
11	Spring 2021	Delaney Dow	UROP
12	Summer 2021	Delaney Dow	UROP
13	Fall 2021	Juncheng Zhang	-
14	Fall 2021	Brian Jung	-
15	Spring 2022	Johnathan Muhvich	Directed study
16	Summer 2022	Johnathan Muhvich	**Dean's Distinguished Summer Research Fellowship**
17	Fall 2023	Jung Won Park	UROP
18	Fall 2023	Raghavan Ramaswamy	-
19	Fall 2024	Winita Wangsrikhun	UROP
20	Fall 2024	Han Kahvecioglu	UROP
21	Fall 2024	Thanadol Sangprasert (TT)	UROP
22	Fall 2024	Victoria Travnik	UROP

TEACHING

Semester	Course	Name of the course	Credits	Students	Role	TAs	Graders
Spring 2020	BE436	Fundamentals of fluid mechanics	4	50 UG	Sole instructor	1	1
Fall 2020	BE435	Transport phenomenon in living systems	4	50 UG	Sole instructor	1	1
Spring 2021	BE436	Fundamentals of fluid mechanics	4	66 UG	Sole instructor	2	1
Fall 2021	BE435	Transport phenomenon in living systems	4	37 UG 1 G	Sole instructor	1	1
Spring 2023	BE436	Fundamentals of fluid mechanics	4	39 UG	Sole instructor	2	2
Spring 2023	BE435	Transport phenomenon in living systems	4	37 UG	Sole instructor	2	2
Spring 2024	BE435	Transport phenomenon in living systems	4	70 UG	Sole instructor	2	2
Spring 2025	BE435	Transport phenomenon in living systems	4	69 UG	Sole instructor	2	2

Prior to 2019:

- Teaching Assistant of “Molecular, Cell and Tissue Biomechanics”, Spring 2011, course instructors: Profs. Alan Grodzinsky and Roger Kamm.

- Teaching Assistant of “Acoustics and Sensing”, Spring 2008, course instructor: Nicholas Makris.

- Teaching Dynamics at prep schools to prepare undergraduates for graduate school entrance exam, 2003-2004.

- Teaching Geometry, Combinatorial Techniques, Graph Theory and Physics to Olympiad students 2000-2004.

Service – Thesis committee:

No	Student name	Advisor	Committee type	My role	University Department	Date (range)
1	Keith Gagnon	Chris Chen/Mc Khalil	PhD committee	Chair	BU BME	2020-present
2	Jourdan Ewoldt	Chris Chen	PhD committee	Chair	BU BME	2020-present
3	Julian Tefft	Chris Chen	PhD committee	3rd reader	BU BME	2019-2022
4	Kavon Karrobi	Darren Roblye	PhD committee	3rd reader	BU BME	2019-2019
5	Anup Tank	Darren Roblye	PhD committee	3rd reader	BU BME	2020-present
6	Yuying Tan	Ji-Xin Cheng	PhD committee	3rd reader	BU BME	2020-present
7	Neil Fringe	Elise Morgan	PhD committee	Chair	BU BME	2022-present
8	Alex Seibel	Joe Tien	PhD committee		BU BME	2021-present
9	Nicole Wang	Wilson Wong	PhD committee	5th reader	BU BME	2019-2020
10	Seungee Lee	Wilson Wong	PhD committee	Chair	BU BME	2020-2022
11	Samhita Murthy	Bela Suki	MS Committee	Chair	BU BME	2020-2021
12	Jahn Otto Walderland	Steinar Evje	PhD Committee	1st opponent	Stavanger University (Norway)	2019-2020
13	Alex Lammers	Chris Chen	PhD Committee	Chair	BU BME	2021-2023
14	-	-	Senior Design Conference	Chair of sessio for biomechanics		Spring 2022
15	Nikunj Khetan	Jerome Mertz	PhD committee	2nd reader	BU ME	2022-present
16	Inbo Shim	Wilson Wong	MSc Committee	Chair	BU BME	2021-present
17	Chinmayee Prabhu Dessai	Ji-Xin Cheng	PhD committee	3rd reader	BU BME	2022-present
18	Amish Patel	Allison Dennis	PhD Committee	3rd reader	BU BME	2022-present
19	Joseph Hall	Bela Suki	PhD Committee	Chair	BU BME	2022-present
20	Delaney Gray	Chris Chen	PhD Committee	3rd reader	BU BME	2022-present
21	Menna Siddiqui	Wilson Wong	PhD Committee	3rd reader	BU BME	2022-present
22	Hugh Xiao	Michael Mak	PhD Committee	External reade	Yale BME	2024