Andrej Košmrlj

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Positions

Princeton University

2022–	Associate Professor of Mechanical and Aerospace Engineering
2015–2022	Assistant Professor of Mechanical and Aerospace Engineering
2023–	Director of Graduate Studies in Mechanical and Aerospace Engineering
2024–	Associate Director of the Princeton Center for Complex Materials
2022–	Faculty Fellow at the Princeton Center for Theoretical Science
2016–	Associated Faculty with the Princeton Materials Institute
2023–	Associated Faculty with the Omenn-Darling Bioengineering Institute
2022–	Affiliated with the Graduate Program in Biophysics
2020–	Affiliated with the Graduate Program in Quantitative and Computational Biology
2020–2024	Member of the Princeton Global Collaborative Network ROBELARCH

Other

2022–	Member of the Development Council of the Republic of Slovenia
2016–	Member of the Board of Directors for the American Slovenian Education Foundation (ASEF)
2018–	Member of the Executive Committee for Northeast Complex Fluids and Soft Matter workshops

Education and Training

2011–2015	Post-Doctoral Fellow in Physics, Harvard University Supervisor: David R. Nelson
2006–2011	PhD in Physics, Massachusetts Institute of Technology Supervisors: Arup K. Chakraborty and Mehran Kardar Thesis: Statistical physics of T cell receptor selection and function GPA 5.0 (on 1-5 scale)
2001–2006	B.Sc. in Mathematical Physics, University of Ljubljana, Slovenia Supervisor: Primož Ziherl Thesis: Thermodynamic analysis of aggregate phases of soft colloids with a hard core GPA 10.0 (on 1-10 scale)

Research Interests

continuum mechanics, soft condensed matter, biophysics, biomechanics, statistical mechanics, morphogenesis, biomolecular condensates, mechanical metamaterials, soft robotics

Awards and Honors

2025	Princeton Engineering Commendation List for Outstanding Teaching
2024	Soft Matter Pioneering Investigator
2024	Finalist for Schmidt Science Polymaths Awards
2024	Princeton Engineering Commendation List for Outstanding Teaching

2023	Princeton Engineering Commendation List for Outstanding Teaching
2023	Friend of the USNC/TAM Committee
2022	Princeton Engineering Commendation List for Outstanding Teaching
2020	Princeton Engineering Commendation List for Outstanding Teaching
2019	Princeton Engineering Commendation List for Outstanding Teaching
2019	Alfred Rheinstein Faculty Award (Princeton University)
2019	Soft Matter Emerging Investigator
2018	Princeton Engineering Commendation List for Outstanding Teaching
2018	Excellence in Teaching Award from the School of Engineering and Applied Science
2018	NSF CAREER Award
2017	Princeton Engineering Commendation List for Outstanding Teaching
2016	Princeton Engineering Commendation List for Outstanding Teaching
2015	Princeton Engineering Commendation List for Outstanding Teaching
2010	Finalist for Harvard Society of Fellows (Junior Fellow)
2007	Prešeren award for outstanding undergraduate research, University of Ljubljana
2006	MIT Rosenblith Presidential Fellowship
2001	Silver Medal at International Physics Olympiad
2001	Bronze medal at Mediterranean Regional Mathematics Olympiad
2001	Honorable mention at International Mathematics Tournament of Towns
2001	Bronze medal at Central European Olympiad in Informatics
2000	Honorable mention at International Physics Olympiad
1997–2006	Zoiss Scholarship for talented students, Slovenia

Membership in Professional Societies

American Physical Society (APS)
Society of Engineering Science (SES)

Research Support

Current Support

National Science Foundation DMR-2011750 — 09/01/2020-08/31/2026
MRSEC: Princeton Center for Complex Materials — $18,000,000
Director: L. Schoop — [web link]
Associate Director: A. Košmrlj
IRG-B co-leaders: H. Stone and A. Košmrlj
IRG-B investigators: H. Stone, R. Priestley, B. Bassler, C. Brangwynne, S. Datta, M. Haataja, A. Košmrlj, C. Nelson, A. Panagiotopoulos, R. Register — [web link]
IRG-B: Harnessing Disordered Macromolecular Structures for Living and Soft Matter

National Science Foundation CMMI-2037097 — 12/01/2020-11/30/2026
PI: S. Yang, co-PIs: M. Akbarzadeh, P.T.-Brun, A. Košmrlj, D. Salas-de la Cruz — $4,600,000
FMRG: Threading High-Performance, Self-Morphing Building Blocks Across Scales Toward a Sustainable Futures — [web link]

National Science Foundation CBET-2134935 — 12/01/2021-11/30/2025
PI: C. Nelson, co-PIs: A. Košmrlj, J. Toettcher — $1,500,000
RECODE: Using light and mechanics to monitor and control the differentiation of lung alveolar organoids — [web link]

Completed Support

Princeton Catalysis Initiative — 07/01/2022-06/30/2024
PIs: W. Jacobs, M. Haataja, A. Košmrlj — $240,000
Catalyzing nucleation of multicomponent biomolecular condensates — [web link]

National Science Foundation DMR-1752100 — 02/01/2018-01/31/2023
PI: A. Košmrlj — $563,795
CAREER: Statistical Mechanics of Slender Structures — [web link]

Eric and Wendy Schmidt Transformative Technology Fund — 08/01/2019-07/31/2022
PIs: C. Nelson, A. Košmrlj, J. Toettcher — $655,672
Stress Ball Morphogenesis: Combining Mechanics and Optogenetics to Engineer Tissue Folding — [web link]

National Science Foundation DMR-1420541 — 09/01/2020-08/31/2021
PIs: P.T.-Brun, A. Košmrlj — $60,000
MRSEC SEED: Assembling multilayered fibers via liquid–liquid phase separation — [web link]

National Science Foundation DMR-1420541 — 11/01/2018-10/31/2020
PIs: H. Stone, S. Datta, A. Košmrlj, C. Brangwynne, B. Bassler — $500,000
MRSEC iSuperSeed2: Harnessing the "Rules of Life" to Enable Bio-Inspired Soft Materials — [web link]

Princeton SEAS Project X Innovation Research Grant — 02/01/2019-01/31/2020
PI: A. Košmrlj — $89,710
Modeling large deformations of growing viscoelastic tissues — [web link]

National Science Foundation DMR-1420541 — 03/01/2017-02/28/2019
PIs: H. Stone, M. Haataja, A. Košmrlj — $200,000
MRSEC SuperSeed: Hierarchical Engineering of Soft Materials: From Multiphase Coexistence to Synthetic Nucleosomes — [web link]

Publications

[Google scholar: total citations = 3452; h-index = 31; i10-index = 40; web link]
($^=$ indicates shared first-author contributions, * indicates corresponding authors)
(Superscripts PD, G, UG, REU, and V denote, respectively, postdocs, graduate students, undergraduate students, REU students, and visiting students supervised by me)

in preparation

- S. Liu^G and A. Košmrlj*, *Designing the morphology of DNA-nanostar condensates*
- T. Dethe$^{G=}$, S. Sarkar$^{G=}$, M. Marinčič, P. Zhilkina^{UG}, and A. Košmrlj*, *Symmetry-based classification of phonon bands in periodic elastic media.*
- H. Zhao^{PD}, Q. Yu^G, A. Košmrlj, and S. S. Datta*, *Dynamic instabilities and pattern formation in chemotactic active matter.*
- S. Tong^G and A. Košmrlj*, *Mechanical response of wrinkled structures.*
- M. Bogataj, A. Košmrlj*, and M. Brojan*, *Buckling of warped plates.*

submitted and preprints

- K. Hill, A. H. Griffing, M. A. Palmer, B. Lemma^{PD}, A. Lupo, T. Gamble, N. A. Shylo, A. Košmrlj, P. A. Trainor, and C. M. Nelson*, *Biophysical mechanisms of morphogenesis in lizard lungs*, **bioRxiv 2025.09.01.673487**. [web link]
- T. GrandPre$^=$, Q. Yu$^{G=}$, A. G. T. Pyo, A. Košmrlj*, and N. S. Wingreen*, *Membrane wetting by biomolecular condensates is facilitated by mobile tethers*, **bioRxiv 2024.12.04.626804**. [web link]
- H. Zhao$^{PD=}$, A. R. Strom$^=$, J. E. Eeftens, M. Haataja, A. Košmrlj, and C. P. Brangwynne*, *Condensate-driven chromatin organization via elastocapillary interactions*, **bioRxiv 2025.06.12.659369**. [web link]

- B. Lemma^{PD}, M. Rothstein, P. Zhang, B. Waas, M. Kilwein, S. Topiwala, S. X. Zhang, A. Sudhakar^{G}, K. Goodwin, E. R. Gavis, R. Mallarino, A. Košmrlj, and C. M. Nelson*, *Patterns of Mitochondrial ATP Predict Tissue Folding*, **2025.08.31.673364**. [web link]
- S. Li, J. Bataller i Umbert^{V}, M. Haataja, A. Košmrlj*, H. Wang, and S. Mao*, *The minimum free energy pathway of nucleation in multicomponent mixtures*
- M. E. H. Bahri^{G}, S. Sarkar^{G}, D. A. Matoz-Fernandez, and A. Košmrlj*, *A New Perspective on Thermally Fluctuating Elastic Membranes: Introducing Chiral Odd Elastic Moduli*, **arXiv:2307.05749**. [web link]
- S. Sarkar^{G}, M. E. H. Bahri^{G}, and A. Košmrlj*, *Statistical mechanics of nanotubes*, **arXiv:2305.14602**. [web link]
- M. E. H. Bahri^{G}, S. Sarkar^{G}, and A. Košmrlj*, *Mechanical Properties Of Fluctuating Elastic Membranes Under Uni-Axial Tension*, **arXiv:2209.09350**. [web link]

2025

54. L. Dreier^{G}, T. J. Jones, A. Plummer^{PD}, A. Košmrlj, and P.-T. Brun*, *Beaded metamaterials*, **Nat. Commun. 16**, 7899 (2025). [web link]
53. S. A. Quinodoz$^{=}$, L. Jiang$^{=}$, A. A. Abu-Alfa, T. J. Comi, H. Zhao^{PD}, Q. Yu^{G}, L. W. Wiesner, J. F. Botello, A. Donlic, E. Soehalim, P. Bhat, C. Zorbas, L. Wacheul, A. Košmrlj, D. L. J. Lafontaine*, S. Klinge*, and C. P. Brangwynne*, *Mapping and engineering RNA-driven architecture of the multiphase nucleolus*, **Nature 644**, 557 (2025). [web link] [news]
52. Q. Yu^{G} and A. Košmrlj*, *Pattern formation of lipid domains in bilayer membranes*, **Soft Matter 21**, 4288 (2025). [web link]
51. J. Zhou$^{=}$, R. Huang$^{=}$, N. Moldovan, L. Stan, J. Wen, D. Jin, D. R. Nelson, A. Košmrlj, D. A. Czaplewski, D. Lopez*, *Rippled metamaterials with scale-dependent tailorable elasticity*, **Proc. Natl. Acad. Sci. U.S.A. 122**, e2425200122 (2025). [web link] [news]
50. K. V. S. Chaithanya, J. Rozman, A. Košmrlj*, and R. Sknepnek*, *Cell-level modelling of homeostasis in confined epithelial monolayers*, **J. Elast. 157**, 29 (2025). [web link]

2024

49. A. R. Strom$^{=}$, Y. Kim$^{=}$, H. Zhao^{PD}, Y.-C. Chang, N. Orlovsky, A. Košmrlj, C. Storm, and C. P. Brangwynne*, *Condensate interfacial forces reposition DNA loci and probe chromatin viscoelasticity*, **Cell 187**, 5282 (2024). [web link]
48. S. Vedel*, A. Košmrlj, H. Nunns, and A. Trusina*, *Synergistic and antagonistic effects of deterministic and stochastic cell-cell variations*, **Phys. Rev. E 109**, 054404 (2024). [web link]
47. A. Plummer$^{PD=}$, C. Adkins$^{=}$, J.-F. Louf, A. Košmrlj*, and S. S. Datta*, *Obstructed swelling and fracture of hydrogels*, **Soft Matter 20**, 1425 (2024). [web link]
46. M. Krajnc, C. Fei, A. Košmrlj, M. Kalin, and D. Stopar*, *Mechanical constraints to unbound expansion of B. subtilis on semi-solid surfaces*, **Microbiol. Spectr. 12**, e02740-23 (2024). [web link]

2023

45. J. X. Liu, M. P. Haataja, A. Košmrlj, S. S. Datta, C. B. Arnold, and R. D. Priestley*, *Liquid–liquid phase separation within fibrillar networks*, **Nat. Commun. 14**, 6085 (2023). [web link]
44. H. Zhao^{PD}, A. Košmrlj, and S. S. Datta*, *Chemotactic Motility-Induced Phase Separation*, **Phys. Rev. Lett. 131**, 118301 (2023). [web link] [Selected as Editor's Suggestion]
43. N. Abbasi, J. K. Nunes, Z. Pan, T. Dethe^{G}, H. C. Shum, A. Košmrlj, and H. A. Stone*, *Flows of a nonequilibrated aqueous two-phase system in a microchannel*, **Soft Matter 19**, 3551 (2023). [web link]

42. S. Tong[G], R. Sknepnek*, and A. Košmrlj*, *Linear viscoelastic response of the vertex model with internal and external dissipation: Normal modes analysis*, **Phys. Rev. Res. 5**, 013143 (2023). [web link]

41. J. Zavodnik[V], A. Košmrlj*, and M. Brojan*, *Rate-dependent evolution of wrinkling films due to growth on semi-infinite planar viscoelastic substrates*, **J. Mech. Phys. Solids. 173**, 105219 (2023). [web link]

2022

40. M. A. Heinrich[G=], R. Alert[=], A. E. Wolf[=], A. Košmrlj*, and D. J. Cohen*, *Self-assembly of tessellated tissue sheets by expansion and collision*, **Nat. Commun. 13**, 4026 (2022). [web link]

39. S. Tong[G], N. K. Singh[UG], R. Sknepnek*, and A. Košmrlj*, *Linear viscoelastic properties of the vertex model for epithelial tissues*, **PLoS Comput. Biol. 18**, e1010135 (2022). [web link]

38. P. Ronceray*, S. Mao, A. Košmrlj, and M. P. Haataja*, *Liquid demixing in elastic networks: Cavitation, permeation, or size selection?*, **EPL 137**, 67001 (2022). [web link] [Selected as Editor's Choice]

37. J. M. Jaslove, K. Goodwin, A. Sundarakrishnan, J. W. Spurlin, S. Mao, A. Košmrlj, and C. M. Nelson*, *Transmural pressure signals through retinoic acid to regulate lung branching*, **Development 149**, dev199726 (2022). [web link]

2021

36. M. A. Palmer, B. A. Nerger, K. Goodwin, A. Sudhakar[G], S. B. Lemke, P. T. Ravindran, J. E. Toettcher, A. Košmrlj, and C. M. Nelson*, *Stress ball morphogenesis: How the lizard builds its lung*, **Sci. Adv. 7**, eabk0161 (2021). [web link] [news #1] [news #2]

35. J. Imran Alsous, J. Rozman[V], R. Marmion, A. Košmrlj, and S. Y. Shvartsman*, *Clonal dominance in excitable cell networks*, **Nat. Phys. 17**, 1391 (2021). [web link]

34. S. Sarkar[G], M. Čebron, M. Brojan*, and A. Košmrlj*, *Method of image charges for describing deformation of bounded two-dimensional solids with circular inclusions*, **Phys. Rev. E 103**, 053004 (2021). [web link] [Selected as Editor's Suggestion]

33. S. Sarkar[G], M. Čebron, M. Brojan*, and A. Košmrlj*, *Elastic multipole method for describing deformation of infinite two-dimensional solids with circular inclusions*, **Phys. Rev. E 103**, 053003 (2021). [web link] [Selected as Editor's Suggestion]

32. B. A. Nerger, J. M. Jaslove, H. E. Elashal, S. Mao, A. Košmrlj, A. J. Link, and C. M. Nelson*, *Local accumulation of extracellular matrix regulates global morphogenetic patterning in the developing mammary gland*, **Curr. Biol. 31**, 1903 (2021). [web link]

31. A. Morshedifard[=], M. Ruiz-Garcia[V=], M. J. Abdolhosseini Qomi*, and A. Košmrlj*, *Buckling of thermalized elastic sheets*, **J. Mech. Phys. Solids. 149**, 104296 (2021). [web link]

2020

30. S. Mao[PD=], M. Chakraverti-Wuerthwein[UG=], H. Gaudio[REU], and A. Košmrlj*, *Designing the Morphology of Separated Phases in Multicomponent Liquid Mixtures*, **Phys. Rev. Lett. 125**, 218003 (2020). [web link] [news]

29. M. A. Heinrich[G], R. Alert, J. M. LaChance, T. J. Zajdel, A. Košmrlj, and D. J. Cohen*, *Size-dependent patterns of cell proliferation and migration in freely-expanding epithelia*, **eLife 9**, e58945 (2020). [web link]

28. A. R. Singh, A. Košmrlj, and R. Bruinsma*, *Finite Temperature Phase Behavior of Viral Capsids as Oriented Particle Shells*, **Phys. Rev. Lett. 124**, 158101 (2020). [web link] [Selected as Editor's Suggestion]

27. C. Fei, S. Mao[PD], J. Yan, R. Alert, H. A. Stone, B. L. Bassler, N. S. Wingreen*, and A. Košmrlj*, *Nonuniform growth and surface friction determine bacterial biofilm morphology on soft substrates*, **Proc. Natl. Acad. Sci. U.S.A. 117**, 7622 (2020). [web link] [news]

2019

26. K. Goodwin, S. Mao^{PD}, T. Guyomar^{V}, E. Miller, D. C. Radisky, A. Košmrlj, and C. M. Nelson*, *Smooth muscle differentiation shapes domain branches during mouse lung development*, **Development 146**, dev181172 (2019). [web link]

25. J. Yan$^{=}$, C. Fei$^{=}$, S. Mao$^{PD=}$, A. Moreau, N. S. Wingreen, A. Košmrlj, H. A. Stone*, and B. L. Bassler*, *Mechanical instability and interfacial energy drive biofilm morphogenesis*, **eLife 8**, e43920 (2019). [web link]

24. S. Mao^{PD}, D. Kuldinow^{REU}, M. P. Haataja*, and A. Košmrlj*, *Phase behavior and morphology of multicomponent liquid mixtures*, **Soft Matter 15**, 1297 (2019). [web link]

2018

23. M. Snoussi, J. P. Talledo^{REU}, N.-A. Del Rosario, S. Mohammadi, B.-Y. Ha, A. Košmrlj*, and S. Taheri-Araghi*, *Heterogeneous absorption of antimicrobial peptide LL37 in Escherichia coli cells enhances population survivability*, **eLife 7**, e38174 (2018). [web link] [news #1] [news #2] [news #3]

22. J. Yan, A. Moreau, S. Khodaparast, A. Perazzo, J. Feng, C. Fei, S. Mao^{PD}, S. Mukherjee, A. Košmrlj, N. S. Wingreen, B. L. Bassler*, and H. A. Stone*, *Bacterial Biofilm Materials Properties Enable Removal and Transfer by Capillary Peeling*, **Adv. Mater. 30**, 1804153 (2018). [web link] [news]

21. J. Hu, J. D. Obayemi, K. Malatesta, A. Košmrlj, and W. O. Soboyejo*, *Enhanced cellular uptake of LHRH-conjugated PEG-coated magnetite nanoparticles for specific targeting of triple negative breast cancer cells*, **Mater. Sci. Eng. C 88**, 32 (2018). [web link]

2017

20. S. Nagashima, H. D. Ha, D. H. Kim, A. Košmrlj, H. A. Stone*, and M.-W. Moon*, *Spontaneous formation of aligned DNA nanowires by capillarity-induced skin folding*, **Proc. Natl. Acad. Sci. U.S.A. 114**, 6233 (2017). [web link]

19. M. J. Bowick, A. Košmrlj, D. R. Nelson, and R. Sknepnek, *Non-Hookean statistical mechanics of clamped graphene ribbons*, **Phys. Rev. B 95**, 104109 (2017). [web link]

18. A. Košmrlj* and D. R. Nelson, *Statistical Mechanics of Thin Spherical Shells*, **Phys. Rev. X 7**, 011002 (2017). [web link]

2016

17. S. Vedel, H. Nunns, A. Košmrlj, S. Semsey, and A. Trusina*, *Asymmetric Damage Segregation Constitutes an Emergent Population-Level Stress Response*, **Cell Systems 3**, 187 (2016). [web link]

16. A. Košmrlj* and D. R. Nelson, *Response of thermalized ribbons to pulling and bending*, **Phys. Rev. B 93**, 125431 (2016). [web link]

2007-2015

15. A. Košmrlj, P. Cordsen, A. Kyrsting, D. E. Otzen, L. B. Oddershede*, and M. H. Jensen*, *A monomer-trimer model supports intermittent glucagon fibril growth*, **Sci. Rep. 5**, 9005 (2015). [web link]

14. S. H. Kang, S. Shan, A. Košmrlj, W. L. Noorduin, S. Shian, J. C. Weaver, D. R. Clarke, and K. Bertoldi*, *Complex ordered patterns in mechanical instability induced geometrically frustrated triangular cellular structures*, **Phys. Rev. Lett. 112**, 098701 (2014). [web link] [news]

13. A. Košmrlj and D. R. Nelson*, *Thermal excitations of warped membranes*, **Phys. Rev. E 89**, 022126 (2014). [web link] [Selected as Editor's Suggestion]

12. J. Shim, S. Shan, A. Košmrlj, S. H. Kang, E. R. Chen, J. C. Weaver, and K. Bertoldi*, *Harnessing instabilities for design of soft reconfigurable auxetic/chiral materials*, **Soft Matter 9**, 8198 (2013). [web link]

11. A. Košmrlj and D. R. Nelson*, *Mechanical properties of warped membranes*, **Phys. Rev. E 88**, 012136 (2013). [web link]

10. A. Košmrlj, M. Kardar, and A. K. Chakraborty*, *Statistical Physics of T-Cell Development and Pathogen Specificity*, **Annu. Rev. Condens. Matter Phys. 4**, 339 (2013). [web link]

9. A. Košmrlj, M. Kardar, and A. K. Chakraborty*, *The Influence of T Cell Development on Pathogen Specificity and Autoreactivity*, **J. Stat. Phys. 149**, 203 (2012). [web link]

8. A. Košmrlj=, G. J. Pauschenwein=, G. Kahl, and P. Ziherl*, *Continuum Theory for Cluster Morphologies of Soft Colloids*, **J. Phys. Chem. B 115**, 7206 (2011). [web link]

7. A. Košmrlj*, *Thymic selection of T cells as diffusion with intermittent traps*, **J. Stat. Phys. 142**, 1277 (2011). [web link]

6. A. Košmrlj=, E. L. Read=, Y. Qi, T. M. Allen, M. Altfeld, S. G. Deeks, F. Pereyra, M. Carrington, B. D. Walker, and A. K. Chakraborty*, *Effects of thymic selection of the T-cell repertoire on HLA class I-associated control of HIV infection*, **Nature 465**, 350 (2010). [web link]

5. A. K. Chakraborty* and A. Košmrlj, *Statistical Mechanical Concepts in Immunology*, **Annu. Rev. Phys. Chem. 61**, 283 (2010). [web link]

4. L. Mirny*, M. Slutsky, Z. Wunderlich, A. Tafvizi, J. Leith, and A. Košmrlj, *How a protein searches for its site on DNA: the mechanism of facilitated diffusion*, **J. Phys. A: Math. Theor. 42**, 434013 (2009). [web link]

3. A. Košmrlj, A. K. Chakraborty, M. Kardar*, and E. I. Shakhnovich*, *Thymic Selection of T-Cell Receptors as an Extreme Value Problem*, **Phys. Rev. Lett. 103**, 068103 (2009). [web link]

2. A. Košmrlj, A. K. Jha, E. S. Huseby, M. Kardar, and A. K. Chakraborty*, *How the thymus designs antigen-specific and self-tolerant T cell receptor sequences*, **Proc. Natl. Acad. Sci. U.S.A. 105**, 16671 (2008). [web link]

1. M. A. Glaser, G. M. Grason, R. D. Kamien, A. Košmrlj, C. D. Santangelo, and P. Ziherl, *Soft spheres make more mesophases*, **EPL 78**, 46004 (2007). [web link]

Talks and Presentations

Invited Talks at Universities and Institutes

2023

71. *"Linear viscoelastic properties of the vertex model for biological tissues"*, **Solid Mechanics and Materials Engineering Seminar, Oxford University**, Oxford, United Kingdom, *July 2023.*

70. *"Designing the Morphology of Separated Phases in Multicomponent Liquid Mixtures"*, **Lennard-Jones Centre Seminar, University of Cambridge**, Cambridge, United Kingdom, *July 2023.*

69. *"Pattern formation in biological systems via mechanical instabilities and phase separation"*, **Mathematical Physics Webinar, Rutgers University**, Piscataway Township, NJ, *May 2023.*

68. *"Pattern formation in biological systems via mechanical instabilities and phase separation"*, **Physics and Astronomy Colloquium, Northwestern University**, Evanston, IL, *April 2023.*

2022

67. *"Pattern formation in biological systems via mechanical instabilities and phase separation"*, **Physics Seminar, New Jersey Institute of Technology**, Newark, NJ, *December 2022.*

66. *"Pattern formation in biological systems via mechanical instabilities and phase separation"*, **Solid Mechanics and Materials Engineering Seminar, Oxford University**, Oxford, United Kingdom, *May 2022.*

65. *"Pattern formation in biological systems via mechanical instabilities and phase separation"*, **Mechanical Engineering Seminar, Johns Hopkins University**, Baltimore, MD, *April 2022.*

64. *"Mechanics of wrinkled structures"*, **Memento MechE Colloquium Institute of Mechanical Engineering, École polytechnique fédérale de Lausanne**, Lausanne, Switzerland, *March 2022.*

63. *"Mechanical Instabilities in Growing Biological Systems: Wrinkling and Branching"*, **Physical Mathematics Seminar, Massachusetts Institute of Technology**, Cambridge, MA, *February 2022.*

2021

62. *"Designing the Morphology of Separated Phases in Multicomponent Liquid Mixtures"*, **Chemical and Biomolecular Engineering Colloquium, University of California-Berkeley**, Berkeley, CA, *December 2021.*

61. *"Pattern formation in biological systems via mechanical instabilities and phase separation"*, **Structural Engineering Seminar, University of Illinois at Urbana-Champaign**, Urbana-Champaign, IL, *December 2021.*

60. *"Mechanical Instabilities in Growing Biological Systems: Wrinkling and Branching"*, **Physics Colloquium, University of Ljubljana**, Ljubljana, Slovenia, *November 2021.*

59. *"Pattern formation in biological systems via mechanical instabilities and phase separation"*, **Physics Colloquium, Carnegie Mellon University and University of Pittsburgh**, Pittsburgh, PA, *November 2021.*

58. *"Designing the Morphology of Separated Phases in Multicomponent Liquid Mixtures"*, **Nonlinearity and Disorder in Complex Systems Seminar, Otto von Guericke University Magdeburg**, *October 2021.*

57. *"Pattern formation in biological systems via mechanical instabilities and phase separation"*, **Mechanical and Aerospace Engineering Seminar, Princeton University**, Princeton, NJ, *September 2021.*

56. *"Pattern formation in biological systems via mechanical instabilities and phase separation"*, **Biophysics Seminar, Princeton University**, Princeton, NJ, *September 2021.*

55. *"Pattern formation in biological systems via mechanical instabilities and phase separation"*, **Condensed and Living Matter Seminar, University of Pennsylvania**, Philadelphia, PA, *September 2021.*

2020

54. *"Phase separation in multicomponent liquid mixtures"*, **MPIDS Colloquium, The Max Planck Institute for Dynamics and Self-Organization**, Göttingen, Germany, *December 2020.*

53. *"Phase separation in multicomponent liquid mixtures"*, **Biophysics & Development Seminar, Flatiron Institute**, New York, NY, *October 2020.*

52. *"Phase separation in multicomponent liquid mixtures"*, **Physical Mathematics Seminar, Massachusetts Institute of Technology**, Cambridge, MA, *February 2020.*

51. *"Mechanics of wrinkled structures"*, **Biological Physics Seminar, University of California Los Angeles**, Los Angeles, CA, *January 2020.*

50. *"Mechanics of wrinkled structures"*, **Mechanical Engineering Seminar, California Institute of Technology**, Pasadena, CA, *January 2020.*

2019

49. *"Mechanics of wrinkled structures"*, **Mechanics: Modeling, Experimentation, Computation Seminar, Massachusetts Institute of Technology**, Cambridge, MA, *October 2019.*
48. *"Phase separation in multicomponent liquid mixtures"*, **Soft Matter Physics seminar, New York University**, New York City, NY, *October 2019.*
47. *"Phase separation in multicomponent liquid mixtures"*, **Applied Mathematics Colloquium, New Jersey Institute of Technology**, Newark, NJ, *September 2019.*
46. *"Mechanics of wrinkled structures"*, **Soft Condensed Matter & Physics of Living Systems Seminar, Georgia Institute of Technology**, Atlanta, GA, *August 2019.*
45. *"Phase separation in multicomponent liquid mixtures"*, **Statistical and Bio Seminar, Technion - Israel Institute of Technology**, Haifa, Israel, *March 2019.*
44. *"Phase separation in multicomponent liquid mixtures"*, **Nonlinear Physics Seminar, The Hebrew University of Jerusalem**, Jerusalem, Israel, *March 2019.*
43. *"Phase separation in multicomponent liquid mixtures"*, **Biological and Soft Matter Seminar, Tel Aviv University**, Tel Aviv, Israel, *March 2019.*
42. *"Phase separation in multicomponent liquid mixtures"*, **Clore Seminar on Soft and Biological Physics, Weizmann Institute of Science**, Rehovot, Israel, *March 2019.*
41. *"Phase separation in multicomponent liquid mixtures"*, **Computations in Science Seminar, James Frank Institute**, Chicago, IL, *February 2019.*
40. *"Phase separation in multicomponent liquid mixtures"*, **Biological Physics Seminar, University of California Los Angeles**, Los Angeles, CA, *February 2019.*
39. *"Phase separation in multicomponent liquid mixtures"*, **Statistical and Biological Physics Seminar, Ludwig Maximilian University of Munich**, Munich, Germany, *January 2019.*

2018

38. *"Mechanical instabilities in growing biological systems: wrinkling and branching"*, **Applied Physics Colloquium, Harvard University**, Cambridge, MA, *September 2018.*
37. *"Phase separation in multicomponent systems"*, **Penn Institute for Computational Science Colloquium, University of Pennsylvania**, Philadelphia, PA, *September 2018.*
36. *"Statistical Mechanics of Microscopically Thin Thermalized Structures"*, **Astrophysics and Planetary Science Colloquium, Villanova University**, Philadelphia, PA, *September 2018.*
35. *"Mechanical instabilities in growing biological systems: wrinkling and branching"*, **Physics of Living Systems seminar, Massachusetts Institute of Technology**, Cambridge, MA, *June 2018.*

2017

34. *"Elasticity, Geometry and Buckling"*, **Mechanical Engineering Colloquium, City College of New York**, New York, NY, *March 2017.*
33. *"Elasticity, Geometry and Buckling"*, **Condensed Matter Seminar, University of Massachusetts Amherst**, Amherst, MA, *March 2017.*
32. *"Aggregation of proteins: growth of glucagon fibrils and bacterial growth"*, **Biological Physics Seminar, University of California Los Angeles**, Los Angeles, CA, *February 2017.*
31. *"Aggregation of proteins: growth of glucagon fibrils and bacterial growth"*, **Biophysics Seminar, University of Southern California**, Los Angeles, CA, *January 2017.*

30. *"Elasticity, Geometry and Buckling"*, **IJS Colloquium, Institute Jožef Stefan**, Ljubljana, Slovenia, *January 2017.*

2016

29. *"Aggregation of proteins: growth of glucagon fibrils and bacterial growth"*, **Bioengineering Colloquium, Princeton University**, Princeton, NJ, *April 2016.*
28. *"Elasticity, Geometry and Buckling"*, **Civil and Environmental Engineering Seminar, University of California Irvine**, Irvine, CA, *March 2016.*

2008-2015

27. *"Elasticity, Geometry and Buckling"*, **Physical Mathematics Seminar, Massachusetts Institute of Technology**, Cambridge, MA, *May 2015.*
26. *"Statistical Mechanics of Graphene Membranes and Ribbons"*, **Department of Mechanical and Aerospace Engineering, Princeton University**, Princeton, NJ, *March 2015.*
25. *"Statistical Mechanics of Graphene Membranes and Ribbons"*, **Applied Physics Colloquium, Harvard University**, Cambridge, MA, *February 2015.*
24. *"Elasticity, Geometry and Buckling"*, **LASSP and A&EP Seminar, Cornell University**, Ithaca, NY, *February 2015.*
23. *"Elasticity, Geometry and Buckling"*, **Biological Physics Seminar, University of California San Diego**, San Diego, CA, *February 2015.*
22. *"Elasticity, Geometry and Buckling"*, **Biophysics Seminar, Massachusetts Institute of Technology**, Cambridge, MA, *February 2015.*
21. *"Elasticity, Geometry and Buckling"*, **James Franck Institute, University of Chicago**, Chicago, IL, *January 2015.*
20. *"Statistical Mechanics of Graphene Membranes and Ribbons"*, **Condensed Matter Theory Kid's seminar, Harvard University**, Cambridge, MA, *December 2014.*
19. *"Elasticity, Geometry and Buckling"*, **Department of Physics, Ludwig Maximilian University of Munich**, Munich, Germany, *November 2014.*
18. *"Statistical Mechanics of Ribbons"*, **Laboratory of Atomic and Solid State Physics, Cornell University**, Ithaca, NY, *August 2014.*
17. *"Elasticity, Geometry and Buckling"*, **Department of Physics, Simon Fraser University**, Vancouver, Canada, *March 2014.*
16. *"Elasticity, Geometry and Buckling"*, **Biological Physics Seminar, University of California Los Angeles**, Los Angeles, CA, *February 2014.*
15. *"Elasticity, Geometry and Buckling"*, **Department of Mechanical and Aerospace Engineering and Program in Applied and Computational Mathematics, Princeton University**, Princeton, NJ, *February 2014.*
14. *"Elasticity, Geometry and Buckling"*, **Squishy Physics seminar, Harvard University**, Cambridge, MA, *January 2014.*
13. *"Elasticity, Geometry and Buckling"*, **Theoretical Physics seminar, Institute Jožef Stefan**, Ljubljana, Slovenia, *January 2014.*
12. *"Mechanical Properties of Warped Membranes"*, **Theoretical Physics seminar, Institute Jožef Stefan**, Ljubljana, Slovenia, *June 2013.*
11. *"Mechanism of T cell specificity for pathogens: implications for the influence of host genetics on HIV control"*, **BioComplexity Meetings, Niels Bohr Institute**, Copenhagen, Denmark, *May 2013.*
10. *"Mechanical Properties of Warped Membranes"*, **BioComplexity Meetings, Niels Bohr Institute**, Copenhagen, Denmark, *May 2013.*

9. *"Mechanical Properties of Warped Membranes"*, **Widely Applied Mathematics seminar, Harvard University**, Cambridge, MA, *March 2013.*
8. *"Mechanism of T cell specificity for pathogens: implications for the influence of host genetics on HIV control"*, **Condensed Matter Theory Kid's seminar, Harvard University**, Cambridge, MA, *October 2011.*
7. *"Mechanism of T cell specificity for pathogens: implications for the influence of host genetics on HIV control"*, **Center for Studies in Physics and Biology, Rockefeller University**, New York, NY, *February 2011.*
6. *"Indications of host genetics for T cell development and HIV control"*, **Physics Colloquium, University of Ljubljana**, Ljubljana, Slovenia, *January 2011.*
5. *"Mechanism of T cell specificity for pathogens: implications for the influence of host genetics on HIV control"*, **Widely Applied Mathematics seminar, Harvard University**, Cambridge, MA, *December 2010.*
4. *"Indications of host genetics for T cell development and HIV control"*, **Princeton Center for Theoretical Science, Princeton University**, Princeton, NJ, *November 2010.*
3. *"Effects of thymic selection of the T cell repertoire on HLA-class I associated control of HIV infection"*, **Theoretical Physics, Jožef Stefan Institute**, Ljubljana, Slovenia, *January 2010.*
2. *"How the thymus designs antigen-specific and self-tolerant T cell receptor sequences?"*, **Center for Cell Decision Processes, Massachusetts Institute of Technology**, Cambridge, MA, *September 2008.*
1. *"Model of T cell development in thymus"*, **Theoretical Physics seminar, Institute Jožef Stefan**, Ljubljana, Slovenia, *January 2008.*

Invited Talks at Conferences and Workshops

2025

38. *"Morphogenesis of developing lungs and rheological properties of the vertex model for biological tissues"*, **"Physics of Life, along the Northeast Corrider" workshop**, New York City, NY, *November 2025.*
37. *"Designing the Morphology of Separated Phases in Multicomponent Liquid Mixtures"*, **128th Statistical Mechanics Conference, Rutgers University**, Piscataway Township, NJ, *May 2025.*
36. *"Designing the Morphology of Separated Phases in Multicomponent Liquid Mixtures"*, **Berkeley Statistical Mechanics Meeting, University of California Berkeley**, Berkeley, CA, *January 2025.*

2023

35. *"Designing the Morphology of Separated Phases in Multicomponent Liquid Mixtures"*, **Programme "New statistical physics in living matter: non equilibrium states under adaptive control", Isaac Newton Institute for Mathematical Sciences**, Cambridge, United Kingdom, *July 2023.*
34. *"Linear viscoelastic properties of the vertex model for biological tissues"*, **APS March Meeting**, Las Vegas, NV, *March 2023.*

2022

33. *"Designing the Morphology of Separated Phases in Multicomponent Liquid Mixtures"*, **16th International Symposium on Functionally Graded Materials**, Hartford, CT, *August 2022.*
32. *"Statistical mechanics of microscopically thin thermalized structures"*, **19th U.S. National Congress on Theoretical and Applied Mechanics**, Austin, TX, *June 2022.*

31. *"Designing the Morphology of Separated Phases in Multicomponent Liquid Mixtures"*, **Workshop "Geometry, Topology, and Symmetry in Soft and Living Matter", Simons Center for Geometry and Physics**, Stony Brook, NY, *May 2022.*

2021

30. *"Designing the Morphology of Separated Phases in Multicomponent Liquid Mixtures"*, **Phase Behavior in Soft & Living Matter Meeting**, Princeton, NJ, *November 2021.*
29. *"Designing the Morphology of Separated Phases in Multicomponent Liquid Mixtures"*, **Virtual APS March Meeting**, *March 2021.*

2020

28. *"Designing the morphology of separated phases in multicomponent liquid mixtures"*, **Virtual APS Mid-Atlantic Section Fall Meeting**, *December 2020.*
27. *"Designing morphology of separated phases in multicomponent liquid mixtures"*, **Biological Physics and Physical Biology virtual seminars**, *August 2020.*
26. *"Statistical mechanics of microscopically thin thermalized structures"*, **Virtual SIAM/CAIMS Annual Meeting**, Toronto, Canada, *July 2020.*
25. *"Mechanical instabilities in growing biological systems: wrinkling and branching"*, **APS March Meeting***, Denver, CO, *March 2020.*
*APS March Meeting was canceled due to the COVID-19 pandemic. Invited talk was given during the virtual APS March Meeting.
24. *"Statistical mechanics of microscopically thin thermalized structures"*, **Conference "Low - Dimensional Solids in Hard and Soft Condensed Matter: Mechanics, Thermodynamics, and Electrons", Aspen Center for Physics**, Aspen, CO, *February 2020.*

2019

23. *"Mechanical instabilities in growing biological systems: wrinkling and branching"*, **Workshop "Recent Advances in Mechanics and Mathematics of Materials"**, Rome, Italy, *November 2019.*
22. *"Phase separation in multicomponent liquid mixtures"*, **Meeting "Beyond the Cell Atlas: Theory, Models, and Computation", Chan Zuckerberg Biohub**, San Francisco, CA, *October 2019.*
21. *"Statistical mechanics of microscopically thin thermalized structures"*, **USACM Workshop "Recent Advances in the Modeling and Simulation of the Mechanics of Nanoscale Materials", University of Pennsylvania**, Philadelphia, PA, *August 2019.*
20. *"Mechanical instabilities in growing biological systems: wrinkling and branching"*, **Gordon Research Conference on "Soft Condensed Matter Physics"**, New London, NH, *August 2019.*
19. *"Mechanical instabilities in growing biological systems: wrinkling and branching"*, **4th conference of young Slovenian researchers, Slovenian World Congress**, Ljubljana, Slovenia, *July 2019.*
18. *"Phase separation in multicomponent liquid mixtures"*, **World Congress of Slovenian Physicists, University of Ljubljana**, Ljubljana, Slovenia, *July 2019.*
17. *"Phase separation in multicomponent liquid mixtures"*, **Princeton Institute for Science and Technology of Materials (PRISM) Annual Research Symposium**, Princeton, NJ, *March 2019.*
16. *"Phase separation in multicomponent liquid mixtures"*, **Princeton Center for Theoretical Science Workshop "Transport in Disordered Environments", Princeton University**, Princeton, NJ, *January 2019.*

2018

15. *"Phase separation in multicomponent liquid mixtures"*, **120th Statistical Mechanics Conference, Rutgers University**, Piscataway Township, NJ, *December 2018.*
14. *"Phase separation in multicomponent liquid mixtures"*, **Workshop "Multi-scale Materials Under the Nanoscope", Georgetown University**, Washington, DC, *December 2018.*
13. *"Capillarity-induced Folding of Wrinkled Skin"*, **SIAM Conference on Mathematical Aspects of Materials Science**, Portland, OR, *July 2018.*
12. *"Statistical Mechanics of Microscopically Thin Thermalized Structures"*, **International Workshop "Localization, Interactions and Superconductivity", Landau Institute for Theoretical Physics**, Moscow, Russia, *June 2018.*
11. *"Mechanical instabilities in growing biological systems: wrinkling and branching"*, **Workshop on "Geometry of Soft Matter", International Institute of Physics**, Natal, Brazil, *May 2018.*
10. *"Mechanical instabilities in growing biological systems: wrinkling and branching"*, **Workshop on "Modeling Biological Phenomena from Nano to Macro Scales", The Fields Institute**, Toronto, Canada, *May 2018.*
9. *"Branching morphogenesis in developing lungs"*, **Princeton Center for Theoretical Science Workshop "Regular Patterns in Biology: Causes and Consequences", Princeton University**, Princeton, NJ, *April 2018.*

2017

8. *"Elasticity, Geometry and Buckling"*, **Applied Math Seminar, Courant Institute of Mathematical Sciences, New York University**, New York, NY, *April 2017.*
7. *"Statistical Mechanics of Microscopically Thin Thermalized Structures"*, **70th New England Workshop on Complex Fluids, Yale University**, New Haven, CT, *March 2017.*
6. *"Statistical mechanics of microscopically thin thermalized shells"*, **APS March Meeting**, New Orleans, LA, *March 2017.*

2016

5. *"Statistical mechanics of thin structures"*, **1st symposium of Slovenian researchers from abroad**, Ljubljana, Slovenia, *December 2016.*
4. *"Complex pattern formation in solid structures induced by buckling"*, **Workshop "Self-assembly from atoms to life" in honor of Bill Gelbart's 70th birthday, Mesoamerican Centre for Theoretical Physics in Tuxtla Gutierrez**, Chiapas, Mexico, *October 2016.*
3. *"Statistical Mechanics of Ribbons and Thin Spherical Shells"*, **KITP Workshop "Geometry, Elasticity, Fluctuations, and Order in 2D Soft Matter", University of California Santa Barbara**, Santa Barbara, CA, *February 2016.*
2. *"Statistical Mechanics of Thin Spherical Shells"*, **5th Northeast Complex Fluids and Soft Matter Workshop, New York University**, New York, NY, *January 2016.*

2015

1. *"Mechanism of T cell specificity for pathogens: implications for the influence of host genetics on HIV control"*, **Conference on "Sensing, Information and Decision at the Cellular Level", The Abdus Salam International Center for Theoretical Physics**, Trieste, Italy, *July 2015.*

Contributed Talks (Talks were given by the first authors.)

(Superscripts PD, G, UG, REU, and V denote, respectively, postdocs, graduate students, undergraduate students, REU students, and visiting students supervised by me)

2025

174. L. Dreier^{G}, A. Košmrlj, and P.-T. Brun, *"Beaded networks"*, **Society of Engineering Science (SES) Annual Technical Meeting**, Atlanta, GA, *October, 2025.*

173. Q.Yu^{G}, N. S. Wingreen, and A. Košmrlj, *"Condensate wetting and localization mediated by mobile membrane-anchored tethers"*, **Soft Materials Coffee Hour, Princeton University**, Princeton, NJ, *September, 2025.*

172. S. Liu^{G} and A. Košmrlj, *"Designing the Surface Energy and Morphology of DNA Condensates"*, **Phase Group meeting, Princeton University**, Princeton, NJ, *April 2025.*

171. Q. Yu^{G} and A. Košmrlj, *"Condensate-membrane interactions: pattern formation, wetting, prewetting, and nucleation"*, **Bioengineering Lunch & Learnmeeting, Princeton University**, Princeton, NJ, *April 2025.*

170. Y. Shen^{G} and A. Košmrlj, *"Inverse Design for Muscle-Epithelial Bilayer Morphing System"*, **APS Global Physics Summit**, Anaheim, CA, *March 2025.*

169. S. Liu^{G} and A. Košmrlj, *"Statistical Mechanics of Doubly Curved Membranes"*, **APS Global Physics Summit**, Anaheim, CA, *March 2025.*

168. H. Zhao^{PD}, A. R. Strom, M. Haataja, A. Košmrlj, and C. Brangwynne, *"Elastocapillary interaction between condensate and chromatin"*, **APS Global Physics Summit**, Anaheim, CA, *March 2025.*

167. T. Dethe^{G}, A. Root^{G}, and A. Košmrlj, *"Buckling controls Wave Propagation in Elastic Phononic Crystals"*, **APS Global Physics Summit**, Anaheim, CA, *March 2025.*

166. L. Dreier^{G}, T. Marzin, A. Košmrlj, and P.-T. Brun, *"Not so soft: incorporating rigid elements in textiles"*, **APS Global Physics Summit**, Anaheim, CA, *March 2025.*

165. B. Lemma^{PD}, A. Košmrlj, and C. M. Nelson, *"Connecting Mitochondrial ATP and Apical Constriction during Tissue Morphogenesis"*, **Developmental Biology Colloquium, Princeton University**, Princeton, NJ, *February 2025.*

164. Q. Yu^{G}, Y. A. Polyachenko, N. S. Wingreen, M. Haataja, W. M. Jacobs, and A. Košmrlj, *"Nucleation pathways in multicomponent biomolecular condensates"*, **19th Northeast Complex Fluids and Soft Matter Workshop, New Jersey Institute of Technology**, Newark, NJ, *January 2025.*

163. L. Dreier^{G}, A. Košmrlj, and P.-T. Brun, *"Beaded Metamaterials"*, **19th Northeast Complex Fluids and Soft Matter Workshop, New Jersey Institute of Technology**, Newark, NJ, *January 2025.*

2024

162. L. Dreier^{G}, A. Košmrlj, and P.-T. Brun, *"Metastable elastic networks"*, **Soft Materials Coffee Hour, Princeton University**, Princeton, NJ, *December, 2024.*

161. A. Root^{G}, T. Dethe^{G}, and A. Košmrlj, *"Simulations of Piezoelectric Phononic Crystals for Soft Reconfigurable Devices "*, **MRS Fall Meeting**, Boston, MA, *December 2024.*

160. T. Dethe^{G}, N. Abbasi, H. A. Stone, and A. Košmrlj, *"Liquid-liquid phase-separated pattern propagation in ternary mixtures"*, **77th Annual Meeting of the Division of Fluid Dynamics, APS**, Salt Lake City, UT, *November, 2024.*

159. Q. Yu^{G}, Y. A. Polyachenko, N. S. Wingreen, M. Haataja, W. M. Jacobs, and A. Košmrlj, *"Nucleation pathways in multicomponent biomolecular condensates"*, **Rutgers-Princeton Biomolecular Condensates Day**, Piscataway Township, NJ, *September 2024.*

158. R. Huang, J. Zhou, D. R. Nelson, D. A. Czaplewski, D. Lopez, and A. Košmrlj, *"Statistical mechanics of warped membranes"*, **APS March Meeting**, Minneapolis, MN, *March 2024.*

157. S. Liu[G] and A. Košmrlj, *"Designing the Morphology of Phase-Separated DNA Condensates"*, **APS March Meeting**, Minneapolis, MN, *March 2024.*

156. Q. Yu[G], Y. A. Polyachenko, N. S. Wingreen, M. Haataja, W. M. Jacobs, and A. Košmrlj, *"Nucleation pathways of multicomponent biomolecular condensates: a cautionary tale of the classical nucleation theory"*, **APS March Meeting**, Minneapolis, MN, *March 2024.*

155. T. Dethe[G], A. Root[G], and A. Košmrlj, *"Representation Theory for Wave Propagation through Buckled Phononic Crystals"*, **APS March Meeting**, Minneapolis, MN, *March 2024.*

154. H. Zhao[PD], A. R. Strom, J. Eeftens, N. Orlovsky, M. Haataja, C. Brangwynne, and A. Košmrlj, *"Condensate-mediated chromatin organization through elastocapillary interactions"*, **APS March Meeting**, Minneapolis, MN, *March 2024.*

153. Y. Shen[G] and A. Košmrlj, *"Gradient Based Optimization for Muscle-Epithelial Bilayer Morphing System"*, **APS March Meeting**, Minneapolis, MN, *March 2024.*

152. A. Sudhakar[G], M. Akbari, M. Akbarzadeh, and A. Košmrlj, *"Modeling self-folding of large-scale structures"*, **APS March Meeting**, Minneapolis, MN, *March 2024.*

151. A. Plummer[PD], L. Molefe, J. M. Kolinski, and A. Košmrlj, *"Clustering of micropillars in soft solids"*, **APS March Meeting**, Minneapolis, MN, *March 2024.*

150. A. Root[G], T. Dethe[G], and A. Košmrlj, *"Manipulating Piezoelectric Phononic Crystals to Create Phononic Devices"*, **APS March Meeting**, Minneapolis, MN, *March 2024.*

149. L. Dreier[G], T. Marzin, A. Košmrlj, and P.-T. Brun, *"Soft to solid: unraveling the mechanics of discrete textile networks"*, **APS March Meeting**, Minneapolis, MN, *March 2024.*

148. R. Sknepnek, C. J. Weijer, S. E. Henkes, J. Rozman, K. V. S. Chaithanya, J. Yeomans, and A. Košmrlj, *"Cell-level modelling of active forces in early-stage development"*, **APS March Meeting**, Minneapolis, MN, *March 2024.*

2023

147. B. Lemma[PD], S. Zhang, S. Topiwala, D. Roman, K. Goodwin, A. Košmrlj, and C. Nelson, *"Coupling energy metabolism to morphogenesis in the developing lung"*, **Cell Bio joint meeting of the American Society for Cell Biology (ASCB) and European Molecular Biology Organization (EMBO)**, Boston, MA, *December, 2023.*

146. T. Dethe[G], N. Abbasi, H. A. Stone, and A. Košmrlj, *"Diffusion-mediated Spinodal Decomposition in Ternary Mixtures"*, **76th Annual Meeting of the Division of Fluid Dynamics, APS**, Washington D.C., DC, *November, 2023.*

145. N. Abbasi, M. Parada, T. Wimmer, J. K. Nunes, J. Eshima, T. Dethe[G], H. C. Shum, A. Košmrlj, and H. A. Stone, *"Liquid-liquid phase separation within a co-axial flow system"*, **76th Annual Meeting of the Division of Fluid Dynamics, APS**, Washington D.C., DC, *November, 2023.*

144. H. Zhao[PD], A. Košmrlj, and S. Datta, *"Chemotactic motility-induced phase separation"*, **AIChE Annual Meeting**, Orlando, FL, *November 2023.*

143. A. Plummer[PD], Lebo Molefe, John Kolinski, and A. Košmrlj, *"Clustering of micropillars in soft solids"*, **Society of Engineering Science (SES) Annual Technical Meeting**, Minneapolis, MN, *October, 2023.*

142. A. Root[G], T. Dethe[G], and A. Košmrlj, *"Manipulating Quasi-Two-Dimensional Piezoelectric Phononic Crystals with Electric Fields to Create Phononic Devices"*, **Society of Engineering Science (SES) Annual Technical Meeting**, Minneapolis, MN, *October, 2023.*

141. T. Dethe[G], A. Root[G], and A. Košmrlj, *"Representation Theory for Wave Propagation through Buckled Phononic Crystals"*, **Society of Engineering Science (SES) Annual Technical Meeting**, Minneapolis, MN, *October, 2023.*

140. Q. Yu[G] and A. Košmrlj, *"Pattern formation of phase-separated lipid domains in membranes"*, **Rutgers-Princeton Biomolecular Condensates Day, Princeton University**, Princeton, NJ, *September, 2023.*

139. B. Lemma[PD], A. Košmrlj, and C. Nelson, *"Connections between energy metabolism and morphogenesis in the developing lung"*, **EMBO Workshop "Developmental metabolism: flows of energy, matter, and information"**, Heidelberg, Germany, *September, 2023.*

138. B. Lemma[PD], A. Košmrlj, and C. Nelson, *"Coupling energy metabolism to morphogenesis in the developing lung"*, **Society for Developmental Biology 82nd Annual Meeting**, Chicago, IL, *July, 2023.*

137. A. Plummer[PD], C. Adkins, A. Košmrlj, and S. Datta, *"Obstructed swelling and fracture of hydrogels"*, **Soft Materials Coffee Hour, Princeton University**, Princeton, NJ, *April, 2023.*

136. L. Dreier[G], T. J. Jones, A. Košmrlj, and P.-T. Brun, *"Beading is the new jamming"*, **Soft Materials Coffee Hour, Princeton University**, Princeton, NJ, *March, 2023.*

135. A. Plummer[PD], C. Adkins, A. Košmrlj, and S. Datta, *"Obstructed swelling and fracture of hydrogels"*, **APS March Meeting**, Las Vegas, NV, *March 2023.*

134. H. Zhao[PD], A. Košmrlj, and S. Datta, *"Chemotactic motility-induced phase separation"*, **APS March Meeting**, Las Vegas, NV, *March 2023.*

133. H. Zhao[PD], A. R. Strom, Y. Kim, A. Košmrlj, C. Storm, and C. Brangwynne, *"Spatiotemporal control of condensates via oligomerization-dependent phase separation"*, **APS March Meeting**, Las Vegas, NV, *March 2023.*

132. A. Root[G], T. Dethe[G], and A. Košmrlj, *"Symmetry Breaking via Buckling in a Soft Piezoelectric Phononic Crystal"*, **APS March Meeting**, Las Vegas, NV, *March 2023.*

131. T. Dethe[G], A. Root[G], and A. Košmrlj, *"Exploiting Buckling-induced Symmetry Breaking for Tunable Wave Propagation through Elastic Phononic Crystals"*, **APS March Meeting**, Las Vegas, NV, *March 2023.*

130. Q. Yu[G] and A. Košmrlj, *"Pattern formation of phase-separated lipid domains in membranes"*, **APS March Meeting**, Las Vegas, NV, *March 2023.*

129. J. X. Liu, M. Haataja, A. Košmrlj, S. S. Datta, C. Arnold, and R. Priestley, *"Liquid-liquid phase separation within fibrillar networks"*, **APS March Meeting**, Las Vegas, NV, *March 2023.*

128. L. Dreier[G], T. J. Jones, A. Košmrlj, and P.-T. Brun, *"Beading is the new jamming: leveraging compliance and rigidity in discrete shape morphing structures"*, **APS March Meeting**, Las Vegas, NV, *March 2023.*

127. M. El Hedi Bahri[G], S. Sarkar, D. Matoz-Fernandez, and A. Košmrlj, *"Scaling of Moduli of Active and Thermal Elastic Membranes"*, **APS March Meeting**, Las Vegas, NV, *March 2023.*

126. Y. Shen[G] and A. Košmrlj, *"Optimal Design for Artificial Organoids: Inverse Design of Muscle-Epithelial Bilayer Morphing System"*, **APS March Meeting**, Las Vegas, NV, *March 2023.*

125. A. Sudhakar[G], M. Akbari, M. Akbarzadeh, and A. Košmrlj, *"Modeling self-folding of large-scale structures"*, **APS March Meeting**, Las Vegas, NV, *March 2023.*

124. A. Plummer[PD], C. Adkins, S. Datta, and A. Košmrlj, *"Obstructed swelling and fracture of hydrogels"*, **18th Northeast Complex Fluids and Soft Matter Workshop, Columbia University**, New York, NJ, *January 2023.*

123. A. Root[G] and A. Košmrlj, *"Manipulating Piezoelectric Phononic Crystals with Electric Fields for Engineering Devices"*, **18th Northeast Complex Fluids and Soft Matter Workshop, Columbia University**, New York, NJ, *January 2023.*

2022

122. H. Zhao[PD], A. Košmrlj, and C. Brangwynne, *"Modeling spatiotemporal control of condensates and chromatin environment"*, **Phase Group meeting, Princeton University**, Princeton, NJ, *December, 2022.*

121. H. Zhao^{PD}, A. Košmrlj, and S. Datta, *"Chemotactic motility-induced phase separation"*, **Bioengineering Colloquium, Princeton University**, Princeton, NJ, *September, 2022.*

120. L. Dreier^{G}, A. Eujayl, R. Vogeley, A. Košmrlj, and P.-T. Brun, *"Building with blobs: harnessing liquid thread instability to assemble regular structures"*, **75th Annual Meeting of the Division of Fluid Dynamics, APS**, Indianapolis, IN, *November, 2022.*

119. N. Abbasi, J.K. Nunes, Z. Pan, T. Dethe^{G}, A. Košmrlj, and H.A. Stone, *"Bi-stability of non-equilibrated aqueous two-phase flows in microchannels"*, **75th Annual Meeting of the Division of Fluid Dynamics, APS**, Indianapolis, IN, *November, 2022.*

118. Q. Yu^{G} and A. Košmrlj, *"Pattern formation of phase-separated lipid domains in membranes"*, **Soft Materials Coffee Hour, Princeton University**, Princeton, NJ, *October, 2022.*

117. A. Plummer^{PD}, C. Adkins, S. Datta, and A. Košmrlj, *"Self-rupture of Swelling Hydrogels Under Confinement"*, **Society of Engineering Science (SES) Annual Technical Meeting**, College Station, TX, *October 2022.*

116. T. Dethe^{G}, A. Root^{G}, S. Sarkar^{G}, and A. Košmrlj, *"Control of Wave Propagation through Phononic Crystals via Buckling-induced Symmetry Breaking"*, **Society of Engineering Science (SES) Annual Technical Meeting**, College Station, TX, *October 2022.*

115. H. Zhao^{PD}, A. Košmrlj, and S. Datta, *"Chemotactic motility-induced phase separation"*, **Soft Materials Coffee Hour, Princeton University**, Princeton, NJ, *September, 2022.*

114. T. Dethe^{G}, S. Sarkar^{G}, and A. Košmrlj, *"Controlling Acoustic Wave Propagation in Periodic Elastic Materials via Buckling-induced Symmetry Breaking"*, **Mechanical and Aerospace Engineering Research Day, Princeton University**, Princeton, NJ, *September 2022.*

113. A. Plummer^{PD}, C. Adkins, S. Datta, and A. Košmrlj, *"Self-rupture of Swelling Hydrogels Under Confinement"*, **17th Northeast Complex Fluids and Soft Matter Workshop, Stevens Institute of Technology**, Hoboken, NJ, *June 2022.*

112. T. Dethe^{G} and A. Košmrlj, *"Using Representation Theory to Understand Acoustic Wave Propagation through Deformable Phononic Crystals"*, **19th U.S. National Congress on Theoretical and Applied Mechanics**, Austin, TX, *June 2022.*

111. Q. Yu^{G} and A. Košmrlj, *"Modeling the wetting transition of the nucleus"*, **QCB Colloquium, Princeton University**, Princeton, NJ, *April 2022.*

110. A. Plummer^{PD}, C. Adkins, S. Datta, and A. Košmrlj, *"Hydrogel swelling in confined geometries"*, **APS March Meeting**, Chicago, IL, *March 2022.*

109. M. El Hedi Bahri^{G}, S. Sarkar, D. Matoz-Fernandez, A. Ban^{UG}, and A. Košmrlj, *"Statistical Mechanics of Thermalized Odd Elastic Membranes"*, **APS March Meeting**, Chicago, IL, *March 2022.*

108. S. Tong^{G}, R. Sknepnek, and A. Košmrlj, *"Rheology of the cellular vertex model with external and internal dissipation"*, **APS March Meeting**, Chicago, IL, *March 2022.*

107. A. Košmrlj, J. Bataller i Umbert^{V}, M. Haataja, and S. Mao, *"Nucleation in multicomponent liquid mixtures"*, **APS March Meeting**, Chicago, IL, *March 2022.*

106. T. Dethe^{G} and A. Košmrlj, *"Tuning of band diagrams via elastic deformation of 2D phononic crystals"*, **APS March Meeting**, Chicago, IL, *March 2022.*

105. L. Dreier^{G}, T. J. Jones, A. Košmrlj, and P.-T. Brun, *"Think big: overcoming gravity in large scale shape morphing structures"*, **APS March Meeting**, Chicago, IL, *March 2022.*

104. A. Sudhakar^{G}, M. Akbari, M. Akbarzadeh, and A. Košmrlj, *"Modeling self-folding of large-scale structures"*, **APS March Meeting**, Chicago, IL, *March 2022.*

103. L. Dreier^{G}, A. Košmrlj, and P.-T. Brun, *"'Beading' gravity"*, **16th Northeast Complex Fluids and Soft Matter Workshop, Princeton University**, *January, 2022.*

2021

102. E. Jambon-Puillet, A. Košmrlj, and P.-T. Brun, *"Hydrogel triggered liquid-liquid phase separation in ternary mixtures"*, **74th Annual Meeting of the APS Division of Fluid Dynamics**, Phoenix, AZ, *November 2021.*

101. T. Dethe^{G}, N. Abbasi, H. A. Stone, and A. Košmrlj, *"Thermodynamically Consistent Phase-Field Cahn-Hilliard Navier-Stokes Models for Aqueous Phase Separating Multiphase Flow Systems"*, **74th Annual Meeting of the APS Division of Fluid Dynamics**, Phoenix, AZ, *November 2021.*

100. N. Abbasi, J. K. Nunes, Z. Pan, T. Dethe^{G}, A. Košmrlj, and H. A. Stone, *"Buoyancy-driven co-flow of miscible solutions in a microchannel"*, **74th Annual Meeting of the APS Division of Fluid Dynamics**, Phoenix, AZ, *November 2021.*

99. A. Sudhakar^{G} and A. Košmrlj, *"Stress ball morphogenesis: how the lizard builds its lung"*, **Soft Materials Coffee Hour, Princeton University**, Princeton, NJ, *October, 2021.*

98. A. Sudhakar^{G} and A. Košmrlj, *"Stress ball morphogenesis: how the lizard builds its lung"*, **Mechanical and Aerospace Engineering Research Day, Princeton University**, Princeton, NJ, *September 2021.*

97. A. Košmrlj and S. Tong^{G}, *"Mechanical response of wrinkled structures"*, **25th International Congress of Theoretical and Applied Mechanics**, Milano, Italy, *August, 2021.*

96. T. Dethe^{G} and A. Košmrlj, *"Symmetry-based classification of phonon bands in periodic elastic media"*, **Virtual Summer School on Soft Solids and Complex Fluids, University of Massachusetts Amherst**, Amherst, MA, *June 2021.*

95. S. Tong^{G} and A. Košmrlj, *"Linear Viscoelastic Properties of the Vertex Model for Epithelial Tissues"*, **Soft Materials Coffee Hour, Princeton University**, Princeton, NJ, *April, 2021.*

94. S. Sarkar^{G}, M. E. H. Bahri^{G}, and A. Košmrlj, *"Statistical mechanics of nanotubes"*, **Virtual APS March Meeting**, *March, 2021.*

93. M. E. H. Bahri^{G}, S. Sarkar^{G}, and A. Košmrlj, *"Statistical mechanics of 2D sheets under uniaxial tension"*, **Virtual APS March Meeting**, *March, 2021.*

92. T. Dethe^{G}, S. Sarkar^{G}, M. Marinčič^{V}, P. Zhilkina^{UG}, and A. Košmrlj, *"Predicting Degeneracy and Topological Properties in 2D Phononic Band Diagrams"*, **Virtual APS March Meeting**, *March, 2021.*

91. S. Tong^{G}, N. Singh^{UG}, R. Sknepnek, and A. Košmrlj, *"Viscoelastic properties of tissues in the vertex model"*, **Virtual APS March Meeting**, *March, 2021.*

90. A. Sudhakar^{G} and A. Košmrlj, *"Morphing of growing sheets via active contractions of muscle cells"*, **Virtual APS March Meeting**, *March, 2021.*

89. M. Heinrich^{G}, A. Wolf, D. Cohen, and A. Košmrlj, *"Multi-tissue mosaics of homotypic and heterotypic cell monolayers"*, **Virtual APS March Meeting**, *March, 2021.*

88. P. Ronceray, S. Mao, A. Košmrlj, and M. Haataja, *"Elastically limited liquid-liquid phase separation"*, **Virtual APS March Meeting**, *March, 2021.*

2020

87. T. Dethe^{G} and A. Košmrlj, *"Effect of Crystal Symmetry-breaking on Wave Propagation through Phononic Crystals"*, **Soft Materials Coffee Hour, Princeton University**, Princeton, NJ, *October, 2020.*

86. A. Košmrlj, S. Mao^{PD}, M. Chakraverti-Wuerthwein^{UG}, and H. Gaudio^{REU}, *"Designing morphology of separated phases in multicomponent mixtures*"*, **Virtual Society of Engineering Science (SES) technical meeting**, *September, 2020.*
* Talk was selected for the live presentation

85. M. Heinrich^{G}, A. Košmrlj, and D. Cohen, *"Tissue-tissue interactions at the boundaries of colliding expanding cell monolayers*"*, **Virtual Society of Engineering Science (SES) technical meeting**, *September, 2020.*
* Talk was selected for the pre-recorded presentation.

84. T. Dethe[G], S. Sarkar[G], M. Marinčič[V], P. Zhilkina[UG], and A. Košmrlj, *"Effect of Crystal Symmetries on Wave Propagation through 2D Phononic Crystals*"*, **Virtual Society of Engineering Science (SES) technical meeting**, *September, 2020.*
* Talk was selected for the pre-recorded presentation.

83. S. Sarkar[G] and A. Košmrlj, *"Statistical mechanics of nanotubes*"*, **Virtual Society of Engineering Science (SES) technical meeting**, *September, 2020.*
* Talk was selected for the pre-recorded presentation.

82. M. Bahri[G] and A. Košmrlj, *"Influence of Thermal Fluctuations on the Mechanical Properties of 2D Materials Under Uni-Axial Tension*"*, **Virtual Society of Engineering Science (SES) technical meeting**, *September, 2020.*
* Talk was selected for the pre-recorded presentation.

81. S. Tong[G], R. Sknepnek, and A. Košmrlj, *"Viscoelastic properties of tissues in the vertex model*"*, **Virtual Society of Engineering Science (SES) technical meeting**, *September, 2020.*
* Talk was selected for the pre-recorded presentation.

80. A. Sudhakar[G] and A. Košmrlj, *"Morphing of growing sheets via active contractions of muscle cells*"*, **Virtual Society of Engineering Science (SES) technical meeting**, *September, 2020.*
* Talk was selected for the pre-recorded presentation.

79. S. Tong[G], R. Sknepnek, and A. Košmrlj, *"Viscoelastic properties of tissues in the vertex model"*, **13th Northeast Complex Fluids and Soft Matter Workshop, The City College of New York**, *June, 2020.*

78. T. Dethe[G], S. Sarkar[G], and A. Košmrlj, *"Effect of Symmetry Breaking on Phononic Crystal Band Structures"*, **13th Northeast Complex Fluids and Soft Matter Workshop, The City College of New York**, *June, 2020.*

77. T. Dethe[G] and A. Košmrlj, *"How can symmetry properties help understand phononic crystal band structures?"*, **Virtual Summer School on Soft Solids and Complex Fluids, University of Massachusetts Amherst**, *June 2020.*

76. A. Košmrlj, M. S. Chakraverti-Wuerthwein[UG], S. Mao[PD], H. Gaudio[REU], and M. Haataja, *"Designing morphology of separated phases in multicomponent liquid mixtures"*, **APS March Meeting***, Denver, CO, *March, 2020.*
*APS March Meeting was canceled due to the COVID-19 pandemic. Talk was given during the virtual APS March Meeting.

75. M. Heinrich[G], J. Strain, A. Košmrlj, and D. Cohen, *"Tissue-Tissue Interactions at Boundaries of Colliding Monolayers"*, **APS March Meeting***, Denver, CO, *March, 2020.*
*APS March Meeting was canceled due to the COVID-19 pandemic. Talk was given during the virtual APS March Meeting.

74. S. Mao[PD], M. Haataja, and A. Košmrlj, *"Size selection of phase-separated liquid droplets in strain-stiffening elastic networks"*, **APS March Meeting***, Denver, CO, *March, 2020.*
*APS March Meeting was canceled due to the COVID-19 pandemic.

73. S. Tong[G] and A. Košmrlj, *"Mechanical response of wrinkled structures"*, **APS March Meeting***, Denver, CO, *March, 2020.*
*APS March Meeting was canceled due to the COVID-19 pandemic.

72. M. E. H. Bahri[G] and A. Košmrlj, *"Statistical mechanics of 2D sheets under uniaxial tension"*, **APS March Meeting***, Denver, CO, *March, 2020.*
*APS March Meeting was canceled due to the COVID-19 pandemic.

71. S. Sarkar[G] and A. Košmrlj, *"Statistical mechanics of nanotubes"*, **APS March Meeting***, Denver, CO, *March, 2020.*
*APS March Meeting was canceled due to the COVID-19 pandemic.

70. T. Dethe[G], S. Sarkar[G], M. Marinčič[V], and A. Košmrlj, *"Tuning of 2D Phononic Band Structures via Buckling Instability"*, **APS March Meeting***, Denver, CO, *March, 2020.*
*APS March Meeting was canceled due to the COVID-19 pandemic.

2019

69. S. Sarkar[G] and A. Košmrlj, *"Mechanical properties of thermalized cylindrical shells"*, **Soft Materials Coffee Hour, Princeton University**, Princeton, NJ, *November 2019.*

68. M. E. H. Bahri[G] and A. Košmrlj, *"Influence of Thermal Fluctuations on the Mechanical Properties of 2D Anisotropic Materials"*, **56th Society of Engineering Science (SES) annual technical meeting**, St. Louis, MO, *October 2019.*

67. S. Mao[PD], D. Kuldinow[REU], M. Haataja, and A. Košmrlj, *"Phase behavior and morphology of multicomponent mixtures"*, **56th Society of Engineering Science (SES) annual technical meeting**, St. Louis, MO, *October 2019.*

66. S. Tong[G] and A. Košmrlj, *"Mechanical response of wrinkled structures"*, **56th Society of Engineering Science (SES) annual technical meeting**, St. Louis, MO, *October 2019.*

65. M. Heinrich[G], J. LaChance, T. Zajdel, D. Cohen, and A. Košmrlj, *"Growth Dynamics of Large, Freely Expanding Epithelial Monolayers"*, **56th Society of Engineering Science (SES) annual technical meeting**, St. Louis, MO, *October 2019.*

64. C. Fei, S. Mao[PD], J. Yan, R. Alert, H. Stone, B. Bassler, N. Wingreen, and A. Košmrlj, *"Mechanical principles of biofilm morphodynamics"*, **56th Society of Engineering Science (SES) annual technical meeting**, St. Louis, MO, *October 2019.*

63. A. Košmrlj, K. Goodwin, S. Mao[PD], T. Guyomar[V], and C. M. Nelson, *"Mechanical model of branching morphogenesis during lung development"*, **56th Society of Engineering Science (SES) annual technical meeting**, St. Louis, MO, *October 2019.*

62. M. Heinrich[G], A. Košmrlj, and D. Cohen, *"Growth Dynamics of Large, Freely Expanding Epithelial Monolayers"*, **Mechanical and Aerospace Engineering Research Day, Princeton University**, Princeton, NJ, *September 2019.*

61. M. Heinrich[G], A. Košmrlj, and D. Cohen, *"Cell Cycle and Growth Dynamics of Large, Unconstrained Tissues"*, **Soft Materials Coffee Hour, Princeton University**, Princeton, NJ, *August 2019.*

60. A. Košmrlj, *"Mechanical instabilities in growing biological systems: wrinkling and branching"*, **KITP Workshop "Morphogenesis in Animals and Plants: Search for Principles", University of California Santa Barbara**, Santa Barbara, CA, *July 2019.*

59. S. Mao[PD], D. Kuldinow[REU], M. Haataja, and A. Košmrlj, *"Phase behavior and morphology of multicomponent mixtures"*, **StatPhys 27**, Buenos Aires, Argentina, *July 2019.*

58. S. Tong[G] and A. Košmrlj, *"Mechanical response of wrinkled structures"*, **Frontiers in Applied & Computational Mathematics held jointly with the 11th Northeast Complex Fluids and Soft Matter Workshop, New Jersey Institute of Technology**, Newark, NJ, *May 2019.*

57. M. Heinrich[G], A. Košmrlj, and D. Cohen, *"Hurricanes and Watermelons: Expansion dynamics and cell cycle in expanding tissues"*, **Princeton Bioengineering Colloquium**, Princeton, NJ, *March 2019.*

56. S. Mao[PD], D. Kuldinow[REU], M. Haataja, and A. Košmrlj, *"Phase behavior and morphology of multicomponent mixtures"*, **APS March Meeting**, Boston, MA, *March 2019.*

55. A. Morshedifard, M. Ruiz Garcia[V], M. J. Abdolhosseini Qomi, and A. Košmrlj, *"Buckling of thermalized sheets"*, **APS March Meeting**, Boston, MA, *March 2019.*

54. A. Košmrlj and D. R. Nelson, *"Buckling of thermalized cylindrical shells"*, **APS March Meeting**, Boston, MA, *March 2019.*

53. S. Tong[G] and A. Košmrlj, *"Mechanical response of wrinkled structures"*, **APS March Meeting**, Boston, MA, *March 2019.*

52. S. Sarkar[G], M. Čebron, M. Brojan, and A. Košmrlj, *"Elastic multipole method for describing deformation of 2D solid structures with circular holes and inclusions"*, **APS March Meeting**, Boston, MA, *March 2019.*

51. M. Heinrich[G], D. Cohen and A. Košmrlj, *"Growth dynamics of expanding circular tissues"*, **APS March Meeting**, Boston, MA, *March 2019*.

50. M. E. H. Bahri[G] and A. Košmrlj, *"Statistical mechanics of anisotropic 2D sheets"*, **APS March Meeting**, Boston, MA, *March 2019*.

49. M. Čebron, M. Brojan, and A. Košmrlj, *"Mechanics of interconnected balloon networks"*, **APS March Meeting**, Boston, MA, *March 2019*.

48. K. Goodwin, A. Košmrlj, and C. Nelson, *"Patterned smooth muscle constrains and constricts the airway epithelium during branching morphogenesis"*, **APS March Meeting**, Boston, MA, *March 2019*.

47. C. Fei, S. Mao[PD], J. Yan, R. Alert, H. A. Stone, B. Bassler, A. Košmrlj, and N. Wingreen, *"Mechanical Principles Underlying Development of Bacterial Biofilm Morphology"*, **APS March Meeting**, Boston, MA, *March 2019*.

46. S. Tong[G] and A. Košmrlj, *"Mechanical response of wrinkled structures"*, **Soft Materials Coffee Hour, Princeton University**, Princeton, NJ, *February 2019*.

45. A. Košmrlj, S. Mao[PD], D. Kuldinow[REU], and M. P. Haataja, *"Morphology of multicomponent liquid mixtures"*, **10th Northeast Complex Fluids and Soft Matter Workshop, Rutgers University**, Piscataway Township, NJ, *January 2019*.

44. S. Mao[PD], D. Kuldinow[REU], M. P. Haataja, and A. Košmrlj, *"Convex hull procedure for constructing phase diagrams of multicomponent mixtures"*, **10th Northeast Complex Fluids and Soft Matter Workshop, Rutgers University**, Piscataway Township, NJ, *January 2019*.

2018

43. M. E. H. Bahri[G] and A. Košmrlj, *"Renormalization of elastic moduli of 2-D crystals"*, **120th Statistical Mechanics Conference, Rutgers University**, Piscataway Township, NJ, *December 2018*.

42. M. E. H. Bahri[G] and A. Košmrlj, *"Influence of Thermal Fluctuations on the Elastic Moduli of a 2-D Anisotropic Crystal"*, **Soft Materials Coffee Hour, Princeton University**, Princeton, NJ, *November 2018*.

41. A. Košmrlj, K. Goodwin, S. Mao[PD], T. Guyomar[V], and C. M. Nelson, *"Branching morphogenesis in developing lungs"*, **55th Society of Engineering Science (SES) annual technical meeting**, Madrid, Spain, *October 2018*.

40. A. Košmrlj, S. Nagashima, H. D. Ha, D. H. Kim, H. A. Stone, and M.-W. Moon, *"Capillarity-induced folding of wrinkled skin films"*, **Solvay Workshop on "Mechanics of slender structures in physics, biology and engineering: from failure to functionality"**, Brussels, Belgium, *August 2018*.

39. A. Košmrlj, *"Phase separation in systems with many components"*, **Fascination with fluctuations, correlations, and disorder: a celebration of Mehran Kardar's 60th birthday, Massachusetts Institute of Technology**, Cambridge, MA, *June 2018*.

38. A. Košmrlj, S. Nagashima, H. D. Ha, D. H. Kim, H. A. Stone, and M.-W. Moon, *"Capillarity-induced folding of wrinkled skin films"*, **75th New England Complex Fluids Meeting, Massachusetts Institute of Technology**, Cambridge, MA, *June 2018*.

37. S. Mao[PD], H. Stone, A. Košmrlj, and J. Yan, *"Mechanical Instabilities in Growing Bacterial Biofilms"*, **18th U.S. National Congress for Theoretical and Applied Mechanics**, Chicago, IL, *June 2018*.

36. A. Košmrlj and D. Nelson, *"Statistical Mechanics of Microscopically Thin Thermalized Structures"*, **18th U.S. National Congress for Theoretical and Applied Mechanics**, Chicago, IL, *June 2018*.

35. J. Yan, S. Mao[PD], A. Košmrlj, and H. Stone, *"Mechanomorphogenesis of V. cholerae Biofilms"*, **18th U.S. National Congress for Theoretical and Applied Mechanics**, Chicago, IL, *June 2018*.

34. S. Mao^{PD}, M. P. Haataja, and A. Košmrlj, *"Multi-component phase behavior inspired by membraneless compartmentalization"*, **Soft Materials Coffee Hour, Princeton University**, Princeton, NJ, *April 2018.*

33. M. Heinrich^{G}, and A. Košmrlj, *"Using Physical Models of Epithelial Sheets to Study Collective Behaviors of Cells"*, **APS March Meeting**, Los Angeles, CA, *March 2018.*

32. P. Talledo^{REU}, S. Sarkar^{G}, S. Taheri-Araghi, and A. Košmrlj, *"Modeling Population Dynamics of Antimicrobial Peptides in Bacterial Culture"*, **APS March Meeting**, Los Angeles, CA, *March 2018.*

31. S. Taheri-Araghi, M. Snoussi, P. Talledo^{REU}, B.-Y. Ha, and A. Košmrlj, *"Population Dynamics of Antimicrobial Peptides are Driven by Single-cell Heterogeneities and Retention of Peptides in Dead Cells"*, **APS March Meeting**, Los Angeles, CA, *March 2018.*

30. A. Košmrlj, T. Guyomar^{V}, K. Goodwin, and C. Nelson, *"Branching morphogenesis of growing tubes"*, **APS March Meeting**, Los Angeles, CA, *March 2018.*

29. S. Sarkar^{G}, and A. Košmrlj, *"Image Charges in 2D Linear Elasticity"*, **APS March Meeting**, Los Angeles, CA, *March 2018.*

28. S. Tong^{G}, and A. Košmrlj, *"Mechanics of Wrinkled Structures"*, **APS March Meeting**, Los Angeles, CA, *March 2018.*

27. M. E. H. Bahri^{G}, M. Ruiz Garcia^{V}, A. Morshedifard, M.J. Abdolhosseini Qomi, and A. Košmrlj, *"Buckling of 2-d Thermalized Material Under Bi-Axial Loading"*, **APS March Meeting**, Los Angeles, CA, *March 2018.*

26. S. Mao^{PD}, M. P. Haataja, and A. Košmrlj, *"Multi-component phase behavior inspired by membraneless compartmentalization"*, **APS March Meeting**, Los Angeles, CA, *March 2018.*

25. A. Košmrlj, S. Nagashima, H. D. Ha, D. H. Kim, H. A. Stone, and M.-W. Moon, *"Capillarity-induced folding of wrinkled skin films"*, **8th Northeast Complex Fluids and Soft Matter Workshop, Columbia University**, New York, NJ, *January 2018.*

24. S. Mao^{PD}, M. P. Haataja, and A. Košmrlj, *"Multi-component phase behavior inspired by membraneless compartmentalization"*, **8th Northeast Complex Fluids and Soft Matter Workshop, Columbia University**, New York, NJ, *January 2018.*

23. S. Sarkar^{G} and A. Košmrlj, *"Image charges in 2D linear elasticity"*, **8th Northeast Complex Fluids and Soft Matter Workshop, Columbia University**, New York, NJ, *January 2018.*

2017

22. S. Mao^{PD}, M. P. Haataja, and A. Košmrlj, *"Modeling multicomponent phase behavior inspired by membraneless compartmentalization in cells"*, **118th Statistical Mechanics Conference, Rutgers University**, Piscataway Township, NJ, *December 2017.*

21. M. Heinrich^{G} and A. Košmrlj, *"Modeling Epithelia- flocking, coordinated U-turns, sticky/slippery walls, and more"*, **Princeton Bioengineering Colloquium**, Princeton, NJ, *October 2017.*

20. M. Čebron, S. Sarkar^{G}, A. Košmrlj, and M. Brojan, *"Elastic multipole method for describing deformation of 2D solid structures"*, **3rd International Conference on Multiscale Computational Methods for Solids and Fluids**, Ljubljana, Slovenia, *September 2017.*

19. S. Mao^{PD} and A. Košmrlj, *"Particle aggregation during receptor-mediated endocytosis"*, **54th Society of Engineering Science (SES) annual technical meeting, Northeastern University**, Boston, MA, *July 2017.*

18. A. Košmrlj and D.R. Nelson, *"Statistical Mechanics of Microscopically Thin Thermalized Structures"*, **54th Society of Engineering Science (SES) annual technical meeting, Northeastern University**, Boston, MA, *July 2017.*

17. M. Heinrich^{G} and A. Košmrlj, *"Motility of epithelial sheets in the presence of sticky or slippery walls"*, **7th Northeast Complex Fluids and Soft Matter Workshop, Princeton University**, Princeton, NJ, *May 2017.*

16. M. Ruiz-Garcia^{V} and A. Košmrlj, *"Buckling of thermalized sheets"*, **7th Northeast Complex Fluids and Soft Matter Workshop, Princeton University**, Princeton, NJ, *May 2017.*

15. M. Ruiz-Garcia^{V} and A. Košmrlj, *"Buckling of thermalized sheets"*, **18th Mid-Atlantic Soft Matter Workshop, University of Pennsylvania**, Philadelphia, PA, *May 2017.*

14. A. Košmrlj and D.R. Nelson, *"Statistical Mechanics of Thin Spherical Shells"*, **18th Mid-Atlantic Soft Matter Workshop, University of Pennsylvania**, Philadelphia, PA, *May 2017.*

13. S. Mao^{PD} and A. Košmrlj, *"Particle aggregation during receptor-mediated endocytosis"*, **APS March Meeting**, New Orleans, LA, *March 2017.*

12. S. Sarkar^{G} and A. Košmrlj, *"Elastic multipole method for describing deformation of 2D solid structures"*, **APS March Meeting**, New Orleans, LA, *March 2017.*

11. S. Mao^{PD} and A. Košmrlj, *"Particle aggregation during receptor-mediated endocytosis"*, **6th Northeast Complex Fluids and Soft Matter Workshop, Stevens Institute of Technology**, Hoboken, NJ, *January 2017.*

10. S. Sarkar^{G} and A. Košmrlj, *"Elastic multipole method for describing deformation of 2D solid structures"*, **6th Northeast Complex Fluids and Soft Matter Workshop, Stevens Institute of Technology**, Hoboken, NJ, *January 2017.*

2016

9. A. Košmrlj, M.J. Bowick, D.R. Nelson, and R. Sknepnek, *"Statistical mechanics of ribbons"*, **Conference "Active and Smart Matter: A New Frontier for Science and & Engineering", Syracuse University**, Syracuse, NY, *June 2016.*

8. A. Košmrlj, *"Intermittent Growth of Glucagon Fibrils"*, **Conference "Physics of Development and Disease", Aspen Center for Physics**, Aspen, CO, *April 2016.*

7. A. Košmrlj and D.R. Nelson, *"Statistical Mechanics of Thin Spherical Shells"*, **APS March Meeting**, Baltimore, MD, *March 2016.*

2009-2015

6. A. Košmrlj, D.R. Nelson, J. C. Weaver, J. Vlassak, and K. Xiao, *"Mechanical Properties of 3D Printed Warped Membranes"*, **APS March Meeting**, San Antonio, TX, *March 2015.*

5. A. Košmrlj, D.R. Nelson, J. C. Weaver, J. Vlassak, and K. Xiao, *"Mechanical Properties of Warped Membranes"*, **APS March Meeting**, Denver, CO, *March 2014.*

4. A. Košmrlj and D.R. Nelson, *"Elastic free energy of deformations for warped membranes"*, **Statistical Mechanics Conference, Rutgers University**, Piscataway Township, NJ, *December 2011.*

3. A. Košmrlj, M. Kardar and A. K. Chakraborty, *"Thymic selection of T cells as a diffusion with intermittent traps"*, **Statistical Mechanics Conference, Rutgers University**, Piscataway Township, NJ, *May 2010.*

2. A. Košmrlj, A. K. Chakraborty, M. Kardar, and E.I. Shakhnovich, *"Thymic Selection of T-Cell Receptors as an Extreme Value Problem"*, **APS March Meeting**, Portland, OR, *March 2010.*

1. A. Košmrlj, M. Kardar and A. K. Chakraborty, *"Thymic Selection of T-Cell Receptors as an Extreme Value Problem"*, **Statistical Mechanics Conference, Rutgers University**, Piscataway Township, NJ, *May 2009.*

Poster Presentations (Posters were presented by the first authors.)

(Superscripts PD, G, UG, REU, and V denote, respectively, postdocs, graduate students, undergraduate students, REU students, and visiting students supervised by me)

2025

56. L. Dreier^{G}, A. Košmrlj, and P.-T. Brun, *"Beaded networks"*, **Society of Engineering Science (SES) Annual Technical Meeting**, Atlanta, GA, *October, 2025.*
55. S. Liu^{G}, and A. Košmrlj, *"Predicting the Interfacial Energy and Morphology of DNA condensates"*, **Omenn-Darling Bioengineering Institute Retreat**, Princeton, NJ, *September 2025.*
54. Q. Yu^{G}, T. GrandPre, A. G. T. Pyo, N. S. Wingreen, and A. Košmrlj, *"Condensate-membrane interactions: pattern formation, wetting, and prewetting"*, **Omenn-Darling Bioengineering Institute Retreat**, Princeton, NJ, *September 2025.*
53. Q. Yu^{G}, N. S. Wingreen, and A. Košmrlj, *"Tether-mediated membrane wetting and prewetting by biomolecular condensates"*, **Gordon Research Conference (GRC) on Soft Condensed Matter**, New London, NH, *August 2025.*
52. Q. Yu^{G}, T. GrandPre, A. G. T. Pyo, A. Košmrlj, and N. S. Wingreen, *"Condensate-membrane interactions: pattern formation, wetting, and prewetting"*, **Kavli Institute for Theoretical Physics (KITP) Conference on Biological Physics of Biomolecular Condensates**, Santa Barbara, CA, *June 2025.*
51. T. Dethe^{G}, N. Abbasi, H. A. Stone, and A. Košmrlj, *"Liquid-liquid phase-separated pattern propagation in ternary mixtures"*, **APS Global Physics Summit**, Anaheim, CA, *March 2025.*
50. Q. Yu^{G}, Y. A. Polyachenko, N. S. Wingreen, M. Haataja, W. M. Jacobs, and A. Košmrlj, *"Nucleation pathways of multicomponent biomolecular condensates"*, **APS Global Physics Summit**, Anaheim, CA, *March 2025.*
49. Q. Yu^{G}, Y. Polyachenko, N. S. Wingreen, M. Haataja, W. M. Jacobs, and A. Košmrlj, *"Nucleation pathways in multicomponent biomolecular condensates"*, **Gordon Research Conference on Stochastic Physics in Biology**, Ventura, CA, *January 2025.*

2024

48. A. Root^{G}, T. Dethe^{G}, and A. Košmrlj, *"Simulations of Piezoelectric Phononic Crystals for Soft Reconfigurable Devices"*, **Materials Research Society (MRS) Fall Meeting**, Boston, MA, *December 2024.*
47. E. Wang^{UG}, Q. Yu^{G}, and A. Košmrlj, *"Modeling Stress Granule Dynamics: A Quantitative Biophysical Framework for Therapeutic Intervention in Neurodegenerative Diseases"*, **American Institute of Chemical Engineers (AIChE) Annual Meeting**, San Diego, CA, *October 2024.*
46. B. Lemma^{PD}, S. Topiwala, K. Goodwin, A. Košmrlj, and C. M. Nelson, *"Coupling mitochondrial energy metabolism to the mechanics of tissue morphogenesis in the developing avian lung"*, **Biomedical Engineering Society (BMES) Annual Meeting**, Baltimore, MD, *October 2024.*
45. Q. Yu^{G}, Y. Polyachenko, N. S. Wingreen, M. Haataja, W. M. Jacobs, and A. Košmrlj, *"Nucleation pathways in multicomponent biomolecular condensates"*, **Center for Soft and Living Matter Kickoff Meeting, University of Pennsylvania**, Philadelphia, PA, *June 2024.*
44. H. Zhao^{PD}, A. Strom, C. Brangwynne, S. Datta, and A. Košmrlj, *"Phase Separation in Living Matter"*, **Center for Soft and Living Matter Kickoff Meeting, University of Pennsylvania**, Philadelphia, PA, *June 2024.*
43. T. Dethe^{G}, H. A. Stone, and A. Košmrlj, *"Pattern Formation for Functionality in Soft Matter Systems – Buckled Phononic Crystals and Liquid-Liquid Phase Separation in Flow"*, **Center for Soft and Living Matter Kickoff Meeting, University of Pennsylvania**, Philadelphia, PA, *June 2024.*

42. B. Lemma^{PD}, S. Zhang, S. Topiwala, D. Roman, K. Goodwin, A. Košmrlj, and C. Nelson, *"Coupling mitochondrial energy metabolism to branching morphogenesis in the developing avian lung"*, **Society for Developmental Biology Northeast Regional Meeting**, Woods Hole, MA, *April, 2024*.

41. T. Dethe^{G}, N. Abbasi, H. A. Stone, and A. Košmrlj, *"Diffusion-mediated Spinodal Decomposition in Ternary Mixtures"*, **APS March Meeting**, Minneapolis, MN, *March 2024*.

40. A. Root^{G}, T. Dethe^{G}, and A. Košmrlj, *"Manipulating Piezoelectric Phononic Crystals to Create Phononic Devices"*, **APS March Meeting**, Minneapolis, MN, *March 2024*.

2023

39. T. Dethe^{G}, A. Root^{G}, and A. Košmrlj, *"Representation Theory for Wave Propagation through Buckled Phononic Crystals"*, **Society of Engineering Science (SES) Annual Technical Meeting**, Minneapolis, MN, *October, 2023*.

38. H. Zhao^{PD}, A. Strom, J. Eeftens, N. Orlovsky, A. Košmrlj, and C. Brangwynne, *"Biomolecular condensates in chromatin environment"*, **Rutgers-Princeton Biomolecular Condensates Day**, Princeton, NJ, *September 2023*.

37. A. Plummer^{PD}, C. Adkins, S. Datta, and A. Košmrlj, *"Obstructed swelling and fracture of hydrogels"*, **Gordon Research Conference on "Soft Condensed Matter Physics"**, New London, NH, *August 2023*.

36. A. Plummer^{PD}, C. Adkins, S. Datta, and A. Košmrlj, *"Obstructed swelling and fracture of hydrogels"*, **Princeton Materials Institute Symposium, Princeton University**, Princeton, NJ, *April 2023*.

35. H. Zhao^{PD}, A. Košmrlj, and S. Datta, *"Chemotactic motility-induced phase separation"*, **Princeton Materials Institute Symposium, Princeton University**, Princeton, NJ, *April 2023*.

34. Q. Yu^{G} and A. Košmrlj, *"Pattern formation of phase-separated lipid domains in membranes"*, **Gordon Research Conference on "Stochastic Physics in Biology"**, Ventura, CA, *January 2023*.

33. A. Plummer^{PD}, C. Adkins, S. Datta, and A. Košmrlj, *"Obstructed swelling and fracture of hydrogels"*, **18th Northeast Complex Fluids and Soft Matter Workshop, Columbia University**, New York, NY, *January 2023*.

2022

32. L. Dreier^{G}, T. Jones, A. Košmrlj, and P.-T. Brun, *"Leveraging compliance and rigidity in discrete shape-morphing structures"*, **Princeton Center for Theoretical Science Workshop "Physics of Morphing Matter", Princeton University**, Princeton, NJ, *December 2022*.

31. A. Sudhakar^{G}, M. Akbari, M. Akbarzadeh, and A. Košmrlj, *"Modeling self-folding of large-scale structures"*, **Princeton Center for Theoretical Science Workshop "Physics of Morphing Matter", Princeton University**, Princeton, NJ, *December 2022*.

2020

30. M. Heinrich^{G}, J. Strain, S. Gonzalez, A. Košmrlj, and D. Cohen, *"Tissue-tissue interactions at boundaries of colliding growing monolayers of varying size, shape, and cell density"*, **Princeton Center for Theoretical Science Workshop "The Physics of Collective Cell Migration", Princeton University**, Princeton, NJ, *January 2020*.

29. O. Canton, D. Cohen, A. Košmrlj, and R. Alert, *"Modeling vortex formation in spreading epithelial monolayers"*, **Princeton Center for Theoretical Science Workshop "The Physics of Collective Cell Migration", Princeton University**, Princeton, NJ, *January 2020*.

2019

28. S. Sarkar[G] and A. Košmrlj, *"Buckling of thermalized cylindrical shells"*, **56th Society of Engineering Science (SES) annual technical meeting**, St. Louis, MO, *October 2019*.

27. M. E. H. Bahri[G] and A. Košmrlj, *"Influence of thermal fluctuations on the elastic moduli of 2-D anisotropic crystals"*, **USACM Workshop "Recent Advances in the Modeling and Simulation of the Mechanics of Nanoscale Materials", University of Pennsylvania**, Philadelphia, PA, *August 2019*.

26. S. Sarkar[G] and A. Košmrlj, *"Mechanical properties of thermalized cylindrical shells"*, **USACM Workshop "Recent Advances in the Modeling and Simulation of the Mechanics of Nanoscale Materials", University of Pennsylvania**, Philadelphia, PA, *August 2019*.

25. S. Mao[PD], D. Kuldinow[REU], M. Haataja, and A. Košmrlj, *"Phase separation in multicomponent liquid mixtures"*, **Gordon Research Conference on "Soft Condensed Matter Physics"**, New London, NH, *August 2019*.

24. S. Mao[PD], C. Fei, J. Yan, R. Alert, H. A. Stone, B. L. Bassler, N. S. Wingreen, and A. Košmrlj, *"Mechanical Principles of Biofilm Morphodynamics"*, **Frontiers in Applied & Computational Mathematics held jointly with the 11th Northeast Complex Fluids and Soft Matter Workshop, New Jersey Institute of Technology**, Newark, NJ, *May 2019*.

23. S. Sarkar[G] and A. Košmrlj, *"Buckling of Thermalized Cylindrical Shells"*, **Frontiers in Applied & Computational Mathematics held jointly with the 11th Northeast Complex Fluids and Soft Matter Workshop, New Jersey Institute of Technology**, Newark, NJ, *May 2019*.

22. M. E. H. Bahri[G] and A. Košmrlj, *"Influence of Thermal Fluctuations on the Mechanical Properties of 2D Anisotropic Materials"*, **Frontiers in Applied & Computational Mathematics held jointly with the 11th Northeast Complex Fluids and Soft Matter Workshop, New Jersey Institute of Technology**, Newark, NJ, *May 2019*.

21. P. Talledo[REU], M. Snoussi, N. Del Rosario, B.-Y. Ha, A. Košmrlj and S. Taheri-Araghi , *"Heterogeneous Absorption of Antimicrobial Peptide LL37 in Escherichia coli Cells Enhances Population Survivability"*, **APS March Meeting**, Boston, MA, *March 2019*.

20. S. Mao[PD], D. Kuldinow[REU], M. Haataja, and A. Košmrlj, *"Phase separation in multicomponent liquid mixtures"*, **Gordon Research Conference on "Complex Active & Adaptive Material Systems"**, Ventura, CA, *January 2019*.

2018

19. S. Tong[G] and A. Košmrlj, *"Mechanics of wrinkled structures"*, **Summer School on Soft Solids and Complex Fluids, University of Massachusetts Amherst**, Amherst, MA, *May 2018*.

18. S. Sarkar[G] and A. Košmrlj, *"Elastic multipole method for describing deformation of 2D solid structures"*, **Summer School on Soft Solids and Complex Fluids, University of Massachusetts Amherst**, Amherst, MA, *May 2018*.

17. S. Mao[PD], M. Haataja, and A. Košmrlj, *"Multi-component phase behavior inspired by membraneless compartmentalization"*, **Princeton Institute for the Science and Technology of Materials Annual Research Symposium, Princeton University**, Princeton, NJ, *March 2018*.

16. S. Sarkar[G] and A. Košmrlj, *"Elastic multipole method for describing deformation of 2D solid structures"*, **Princeton Institute for the Science and Technology of Materials Annual Research Symposium, Princeton University**, Princeton, NJ, *March 2018*.

15. S. Mao[PD], M. Haataja, and A. Košmrlj, *"Multi-component phase behavior inspired by membraneless compartmentalization"*, **Princeton Center for Complex Materials Poster Night, Princeton University**, Princeton, NJ, *February 2018*.

14. S. Sarkar[G] and A. Košmrlj, *"Elastic multipole method for describing deformation of 2D solid structures"*, **Princeton Center for Complex Materials Poster Night, Princeton University**, Princeton, NJ, *February 2018*.

2017

13. A. Košmrlj and D.R. Nelson, *"Statistical mechanics of microscopically thin thermalized structures"*, **Gordon Research Conference on "Soft Condensed Matter Physics"**, New London, NH, *August 2017.*

12. M. Heinrich^G, A. Košmrlj, *"Cell motility in the presence of sticky or slippery walls"*, **Summer School on Soft Solids and Complex Fluids, University of Massachusetts Amherst**, Amherst, MA, *May 2017.*

11. S. Sarkar^G and A. Košmrlj, *"Elastic multipole method for describing deformation of 2D solid structures"*, **Summer School on Soft Solids and Complex Fluids, University of Massachusetts Amherst**, Amherst, MA, *May 2017.*

10. A. Košmrlj and D.R. Nelson, *"Statistical mechanics of microscopically thin thermalized structures"*, **Gordon Research Conference on "Complex Active & Adaptive Material Systems"**, Ventura, CA, *January 2017.*

2016

9. S. Sarkar^G and A. Košmrlj, *"Elastic multipole method for describing patterns in mechanically deformed structures"*, **Summer School on Physics and Mechanics of Soft Complex Materials**, Cargese, France, *August 2016.*

2008-2015

8. A. Košmrlj and D.R. Nelson, *"Statistical Mechanics of Ribbons"*, **Gordon Research Conference on "Soft Condensed Matter Physics"**, New London, NH, *August 2015.*

7. A. Košmrlj and D.R. Nelson, *"Mechanical Properties of Warped Membranes"*, **Gordon Research Conference on "Soft Condensed Matter Physics"**, New London, NH, *August 2013.*

6. A. Košmrlj, A. K. Chakraborty, and M. Kardar, *"Thymic selection of T cells as diffusion with intermittent traps"*, **Mini Stat Mech Meeting, University of California Berkeley**, Berkeley, CA, *January 2011.*

5. C. C. Govern, A. Košmrlj, E. L. Read, and A. K. Chakraborty, *"How the T cell repertoire sees antigen; implications for control of HIV and autoimmunity"*, **NIH Director's Pioneer Award Symposium**, Bethesda, MD, *September 2010.*

4. A. Košmrlj, E. L. Read, T. M. Allen, M. Altfeld, M. Carrington, B. D. Walker, and A. K. Chakraborty, *"Effects of thymic selection of the T cell repertoire on HLA-class I associated control of HIV infection"*, **Mini Stat Mech Meeting, University of California Berkeley**, Berkeley, CA, *January 2010.*

3. A. Košmrlj, E. L. Read, T. M. Allen, M. Altfeld, M. Carrington, B. D. Walker, and A. K. Chakraborty, *"Effects of thymic selection of the T cell repertoire on HLA-class I associated control of HIV infection"*, **NIH Director's Pioneer Award Symposium**, Bethesda, MD, *September 2009.*

2. A. Košmrlj, M. Kardar, A. K. Chakraborty, *"How the thymus designs antigen-specific, yet cross-reactive, T cell receptor sequences"*, **Mini Stat Mech Meeting, University of California Berkeley**, Berkeley, CA, *January 2009.*

1. A. Košmrlj, A.K. Jha, E.S. Huseby, M. Kardar, and A. K. Chakraborty, *"How the thymus designs antigen-specific and self-tolerant T cell receptor sequences"*, **NIH Director's Pioneer Award Symposium**, Bethesda, MD, *September 2008.*

Administrative Service

AY25-26	MAE Director of Graduate Studies MAE Undergraduate Committee Academic Advisor for MAE Class of 2028 Associate Director of the Princeton Center for Complex Materials Director of the Princeton Center for Complex Material's REU program Princeton Materials Institute Search Officer Executive Committee for Princeton Center for Theoretical Science Executive Committee for Program in Materials Science and Engineering Co-organizing Soft Matter Coffee Hour (SMatCH) seminars Faculty Fellow for the Men's and Women's Volleyball teams
AY24-25	MAE Director of Graduate Studies MAE Undergraduate Committee Associate Director of the Princeton Center for Complex Materials Director of the Princeton Center for Complex Material's REU program Princeton Materials Institute Search Officer Executive Committee for Princeton Center for Theoretical Science Executive Committee for Program in Materials Science and Engineering Selection Committee for PBI2 Distinguished Postdoctoral Fellows in the Omenn-Darling Bioengineering Institute Co-organizing Soft Matter Coffee Hour (SMatCH) seminars Faculty Fellow for the Men's and Women's Volleyball teams
AY23-24	MAE Director of Graduate Studies MAE Undergraduate Committee Academic Advisor for MAE Class of 2024 Academic Advisor for MAE Sophomores Princeton Materials Institute Search Officer Executive Committee for Princeton Center for Theoretical Science Executive Committee for Program in Materials Science and Engineering Faculty Fellow for the Men's and Women's Volleyball teams
AY22-23	Academic Advisor for MAE Class of 2024 Academic Advisor for MAE Sophomores MAE Climate and Inclusion Committee MAE Search Officer MAE Undergraduate Committee Biophysics Graduate Admissions Committee Executive Committee for Princeton Center for Theoretical Science Executive Committee for Program in Materials Science and Engineering Selection Committee for the Princeton Center for Complex Material's REU program Faculty Fellow for the Men's and Women's Volleyball teams
AY21-22	Academic Advisor for MAE Class of 2022 Freshman Academic Advisor MAE Undergraduate Committee Executive Committee for Program in Materials Science and Engineering Faculty Fellow for the Men's and Women's Volleyball teams MAE Graduate Admissions – First Round Reader SEAS Innovation Grant Proposal Review Committee Selection Committee for PBI2 Distinguished Postdoctoral Fellows Director of the Princeton Center for Complex Material's REU program

AY20-21	Academic Advisor for MAE Class of 2022 Freshman Academic Advisor MAE Undergraduate Committee Executive Committee for Program in Materials Science and Engineering Faculty Fellow for the Men's and Women's Volleyball teams MAE Graduate Admissions – First Round Reader
AY19-20	Academic Advisor for MAE Class of 2020 Freshman Academic Advisor MAE Undergraduate Committee Executive Committee for Program in Materials Science and Engineering Faculty Fellow for the Men's and Women's Volleyball teams MAE Graduate Admissions – First Round Reader SEAS Innovation Grant Proposal Review Committee
AY18-19	Academic Advisor for MAE Class of 2020 Freshman Academic Advisor MAE Undergraduate Committee MAE Lecturer Reappointment Committee SEAS Bioengineering Senior Faculty Search Committee Executive Committee for Program in Materials Science and Engineering Faculty Fellow for the Men's and Women's Volleyball teams MAE Graduate Admissions – First Round Reader
AY17-18	Academic Advisor for MAE Class of 2018 Freshman Academic Advisor SEAS Bioengineering Senior Faculty Search Committee Executive Committee for Program in Materials Science and Engineering Organizing PRISM seminars PRISM Lecturer Search Committee Faculty Fellow for the Men's and Women's Volleyball teams MAE Graduate Admissions – First Round Reader
AY16-17	Academic advisor for MAE Class of 2018 MAE Junior Faculty Search Committee Organizing PRISM seminars Executive Committee for Program in Materials Science and Engineering MAE Graduate Admissions – First Round Reader
AY15-16	MAE Lecturer Search Committee MAE Graduate Admissions – First Round Reader

Courses Taught

Princeton University

2025	MAE223	Modern Solid Mechanics	scheduled
	MAE503	Directed Research	scheduled
	MAE513	Master of Engineering Independent Project I	scheduled
	MAE595	Extramural Research Project	scheduled
	MAE597	Graduate Seminar in MAE	scheduled
	MAE515	Extramural Summer Project	7 students
	MAE550/ MSE560	Lessons from Biology for Engineering Tiny Devices* (* Commendation for Outstanding Teaching)	33 students (4.6 rating)
	MAE503	Directed Research* (* Commendation for Outstanding Teaching)	35 students (4.9 rating)
	MAE598	Graduate Seminar in MAE* (* Commendation for Outstanding Teaching)	34 students (4.7 rating)
2024	MAE223	Modern Solid Mechanics	81 students (4.1 rating)
	MAE503	Directed Research* (* Commendation for Outstanding Teaching)	32 students (4.8 rating)
	MAE597	Graduate Seminar in MAE* (* Commendation for Outstanding Teaching)	35 students (4.6 rating)
2023	MAE223	Modern Solid Mechanics	97 students (4.1 rating)
	MAE503	Directed Research* (* Commendation for Outstanding Teaching)	22 students (4.8 rating)
	MAE513	Master of Engineering Independent Project I	6 students (5.0 rating)
	MAE597	Graduate Seminar in MAE* (* Commendation for Outstanding Teaching)	27 students (4.8 rating)
	MAE550/ MSE560	Lessons from Biology for Engineering Tiny Devices* (* Commendation for Outstanding Teaching)	54 students (4.5 rating)
2022	MAE550/ MSE560	Lessons from Biology for Engineering Tiny Devices* (* Commendation for Outstanding Teaching)	34 students (4.3 rating)
2021	MAE223	Modern Solid Mechanics	52 students (4.4 rating)
	MAE550/ MSE560	Lessons from Biology for Engineering Tiny Devices	7 students (5.0 rating)
2020	MAE223	Modern Solid Mechanics* (* Commendation for Outstanding Teaching)	57 students (4.5 rating)
	MAE550/ MSE560	Lessons from Biology for Engineering Tiny Devices* (* Commendation for Outstanding Teaching)	10 students (4.9 rating)

2019	MAE223	Modern Solid Mechanics* (* Commendation for Outstanding Teaching)	61 students (4.5 rating)
	MAE545	Lessons from Biology for Engineering Tiny Devices* (* Commendation for Outstanding Teaching)	20 students (4.8 rating)
2018	MAE223	Modern Solid Mechanics	71 students (4.4 rating)
	MAE545	Lessons from Biology for Engineering Tiny Devices* (* Commendation for Outstanding Teaching)	11 students (4.9 rating)
2017	MAE223	Modern Solid Mechanics	75 students (4.3 rating)
	MAE545	Lessons from Biology for Engineering Tiny Devices* (* Commendation for Outstanding Teaching)	11 students (4.9 rating)
2016	MAE223	Modern Solid Mechanics* (* Commendation for Outstanding Teaching)	52 students (4.7 rating)
2015	MAE545	Lessons from Biology for Engineering Tiny Devices* (* Commendation for Outstanding Teaching)	6 students (4.7 rating)

Previous Institutions

2010	5.70/10.546/20.465	Statistical Thermodynamics (teaching assistant)	MIT
2009	8.592	Statistical Physics in Biology (teaching assistant)	MIT

Professional Activities

External Editor for the Proceedings of the National Academy of Sciences of the United States of America

Referee for the following Journals: Science; Nature; Nature Communications; Nature Methods; Physical Review Letters; Physical Review X; PRX Life; Physical Review E; Physical Review B; Physical Review Applied; Physical Review Fluids; Physical Review Research; Proceedings of the National Academy of Sciences of the United States of America; Journal of Physical Chemistry; Journal of the Mechanics and Physics of Solids; Extreme Mechanics Letters; Materials Today; Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences; Philosophical Transactions of the Royal Society B: Biological Sciences; Soft Matter; eLife; ACS Nano; Journal of Chemical Physics; Journal of Statistical Physics; Annals of Physics; PLOS Computational Biology; Physica D; Journal of Theoretical Biology; Journal of Molecular Biology; Computer Methods in Applied Mechanics and Engineering; Entropy; Europhysics Letters; European Physical Journal E; Journal of Engineering Mechanics; Micromachines; Mathematical Problems in Engineering; Materialia; Biomechanics and Modeling in Mechanobiology

Ad hoc Referee for proposals submitted to: National Science Foundation (NSF); Army Research Office (ARO); Department of Energy (DOE); National Aeronautics and Space Administration (NASA); Alfred P. Sloan Foundation; Simons Foundation; ACS Petroleum Research Fund; Israel Science Foundation (ISF); French National Funding Agency (ANR); Netherlands Organization for Scientific Research (NWO); ACM Symposium on Computational Fabrication

Selection committee for: Fulbright Scholarships (2021), Uroš Seljak Award for best publication among Undergraduate and Masters students in Slovenia (2021-present)

Coordinating Fellowship programs for the American Slovenian Education Foundation (ASEF). Serving on the ASEF Board of Directors (2016-present). [web link]

Member of the Development Council of the Republic of Slovenia (2022-present)

Member of the Executive Committee for Northeast Complex Fluids and Soft Matter workshops (2018-present). [web link]

Member of the Organizing Team for Biological Physics & Physical Biology Seminar (2023-present). [web link]

Sorting abstracts for the APS March Meetings (2017-2023).

2025 Co-organizer (with M. Krajnc, J. Rozman, A. Šarić, R. Sknepnek, P. Ziherl), **International Workshop** *"Coarse-Graining Tissue Mechanics"*, Ljubljana, Slovenia [web link]

Co-organizer (with A. Bernevig, W. Cheng, K. Esteki, X. Mao, C. Prodan, S. Vishveshwara), **Princeton Center for Theoretical Science (PCTS) Workshop** *"Topological Dynamics"*, Princeton, NJ [web link]

2024 Co-organizer (with J. Kolinski, C.-Y. Lai, R. Moini, A. Plummer), **Princeton Center for Theoretical Science (PCTS) Workshop** *"Fracture across fields: insights from materials science, biology, and geophysics"*, Princeton, NJ [web link]

2023 Co-organizer (with A. Plummer), **Focus Session** *"Pattern formation in biological systems"*, **American Physical Society (APS) March Meeting** [web link M10, Z10]

Co-organizer (with P.-T. Brun), **Focus Session** *"Morphing matter: from soft robotics to 4D printing"*, **APS March Meeting** [web link B14, D14]

Co-organizer (with S. Banavar, C. Nelson, J. Toettcher), **Princeton Center for Theoretical Science (PCTS) Workshop** *"Biophysics of Organoids"*, Princeton, NJ [web link]

2022 Co-organizer (with P.-T. Brun, E. Davidson, G. Paulino), **Princeton Center for Theoretical Science (PCTS) Workshop** *"Physics of Morphing Matter"*, Princeton, NJ [web link]

Co-organizer (with Y. Alexander, O. Steinbock, R. Simon), **NASA's Virtual Mini-workshop** *"Non-Newtonian Fluids & Rheology to define next generation research in Space"*

Organizer, **Panel** *"Materials at the Heart of Bioengineering"* **Princeton Institute of Materials Annual Research Symposium**, Princeton, NJ

Co-organizer (with A. Plummer), **Focus Session** *"Pattern formation in biological systems"*, **American Physical Society (APS) March Meeting** [web link W02, Z03]

Co-organizer (with Z. Chen), **Focus Session** *"Morphogenesis"*, **APS March Meeting** [web link D05, K05]

Co-organizer (with P.-T. Brun), **Focus Session** *"Morphing matter: from soft robotics to 4D printing"*, **APS March Meeting** [web link A21, B21, K21]

Co-organizer (with P.-T. Brun, S. Datta, E. Davidson), **16th Northeast Complex Fluids and Soft Matter Workshop**, Princeton, NJ [web link]

2021 *Invited white paper* in the field of complex fluids and soft matter to facilitate **NASA's Decadal Survey on Biological and Physical Sciences Research in Space 2023-2032**

Co-organizer (with M. Deserno, C. Marques, R. Dimova), **Virtual Kavli Institute for Theoretical Physics (KITP) Program** *"Physics of Elastic Films: From Biological Membranes to Extreme Mechanics"*, University of California Santa Barbara, Santa Barbara, CA [web link]

Co-organizer (with ASEF, U.S. Embassy Ljubljana), **Slovenian-American Virtual Academic Symposium** [web link]

Co-organizer (with Z. Chen), **Focus Session** *"Morphogenesis"*, **Virtual APS March Meeting** [web link J11, R11]

Co-organizer (with P.-T. Brun), **Focus Session** *"Morphing matter: from soft robotics to 4D printing"*, **Virtual APS March Meeting** [web link C07]

2020 Co-organizer (with ASEF, U.S. Embassy Ljubljana), **Slovenian-American Virtual Academic Symposium** [web link]

Co-organizer (with J. Morris, C. Colosqui, G. Drazer, Y.-N. Young), **13th Northeast Complex Fluids and Soft Matter Virtual Workshop** [web link]

Organized a **Tutorial** on *"Introduction to FEniCS for solving PDEs"* for the **Virtual KITP program** *"Symmetry, Thermodynamics and Topology in Active Matter"*, University of California Santa Barbara, Santa Barbara, CA [web link]

Co-organizer (with Z. Chen), **Focus Session** *"Morphogenesis"*, **APS March Meeting***, Denver, CO [web link X23, G26]
*APS March Meeting was canceled due to the COVID-19 pandemic. Focus Session was organized during the virtual APS March Meeting.

Co-organizer (with P.-T. Brun), **Focus Session** *"Morphing matter: from soft robotics to 4D printing"*, **APS March Meeting***, Denver, CO [web link A30, B30]
*APS March Meeting was canceled due to the COVID-19 pandemic. Focus Session was organized during the virtual APS March Meeting.

2019 Co-organizer (with F. Vernerey, C. Neu, O. Peleg, Z. Chen), **Symposium** *"Mechanics of growth, morphogenesis and evolution of biological solids"*, **Society of Engineering Science (SES) Annual Technical Meeting**, St. Louis, MO [web link]

Co-organizer (with Z. Chen), **Focus Session** *"Morphogenesis"*, **APS March Meeting**, Boston, MA [web link A66, B66, C66, E66]

Co-organizer (with S. Datta, I. Bourg), **Princeton Center for Theoretical Science (PCTS) Workshop** *"Transport in Disordered Environments"*, Princeton, NJ [web link]

2018 Organizer, **Session** *"Soft Materials for Polymer and Biological Systems"*, **Princeton Institute for the Science and Technology of Materials (PRISM) Annual Research Symposium**, Princeton, NJ

Co-organizer (with Z. Chen), **Focus Session** *"Morphogenesis"*, **APS March Meeting**, Los Angeles, CA [web link E50, F50]

Co-organizer (with C. Nelson, S. Shvartsman, L. Manning), **Princeton Center for Theoretical Science (PCTS) Workshop** *"Mechanics in Morphogenesis"*, Princeton, NJ [web link]

2017 Co-organizer (with H. A. Stone), **7th Northeast Complex Fluids and Soft Matter Workshop**, Princeton, NJ [web link]

Organizer, **Invited Session** *"Mechanics in Morphogenesis"*, **APS March Meeting**, New Orleans, LA [web link R49]

Outreach Activities

2024 Lectured in the **Princeton University Materials Academy (PUMA)**, which targets high school students from under-served communities and young women. [web link]

2023 Lectured at the **"Research Experience for Undergraduates"** program in the Princeton Center for Complex Materials. [web link]

Lectured at **"The Physics of Life Summer School"** organized by the Center for the Physics of Biological Function at Princeton University. [web link]

Lectured at the **DSOFT Short Course "Computing Soft Matter Across Scales"** during the APS March Meeting. [web link]

2022 Lectured at the **"Research Experience for Undergraduates"** program in the Princeton Center for Complex Materials. [web link]

Lectured at **"The Physics of Life Summer School"** organized by the Center for the Physics of Biological Function at Princeton University. [web link]

2021 Lectured at the **"Teachers as Scholars"** program for high school teachers. [web link]

2020 Lectured in the **Princeton University Materials Academy (PUMA)**, which targets high school students from under-served communities and young women. [web link]

Lectured at **"The Physics of Life Online Summer School"** organized by the Center for the Physics of Biological Function at Princeton University. [web link]

2019 Lectured at the **"Research Experience for Undergraduates"** program in the Princeton Center for Complex Materials. [web link]

Lectured at the **"Tower to Town Talk"** event in the Princeton Public Library. [web link]

Participated at the **"Science day/Dia de la Ciencia"** event in Princeton, NJ. [web link]

Lectured at the **TRIO Upward Bound** program for high school students in Trenton, NJ. [web link]

2018 Lectured at the **"Teachers as Scholars"** program for high school teachers. [web link]

Lectured in **Princeton University Materials Academy (PUMA)**, which targets high school students from under-served communities and young women. [web link]

Participated at the **"Science day/Dia de la Ciencia"** event in the Princeton Public Library. [web link]

Professional Development Talk about *"Guidelines for giving good talks"* for graduate students at Princeton University in the Mechanical and Aerospace Engineering department. [web link]

Lectured at the **College Bound Conference** for high school students in New Jersey.

Juror for the **National Young Physicists' Tournament**, which is a team-oriented competition for high school students involving research, and presenting and defending the research results. [web link]

2017 Participated at the **"Materials Science Day"** event in the Princeton Public Library. [web link]

Lectured in **Princeton University Materials Academy (PUMA)**, which targets high school students from under-served communities and young women. [web link]

Lectured at the **"Research Experience for Undergraduates"** program in the Princeton Center for Complex Materials. [web link]

Participated at the **"Spring Science Expo"** event in the Princeton Public Library. [web link]

2016 Lectured at the **"Teachers as Scholars"** program for high school teachers. [web link]

Participated at the **"Materials Science Day"** event in the Princeton Public Library. [web link]

Lectured in **Princeton University Materials Academy (PUMA)**, which targets high school students from under-served communities and young women. [web link]

Postdoctoral Trainees [4 total; 1 current]

Bezia Lemma
(2021-present)

Research topic: mechanics and energetics in morphogenesis
co-advised with C. Nelson

- NSF Postdoctoral Research Fellowships in Biology (2023)
- Second Best Postdoctoral Poster at Society for Developmental Biology Northeast Regional Meeting (2024)
- Second Place Presentation Award at the Society for Developmental Biology 82nd Annual Meeting (2023)

Hongbo Zhao
(2021-2024)

Princeton Bioengineering Initiative - Innovators (PBI2) Postdoctoral Fellow
Research topic: intracellular phase transition, active matter
co-advised with C. Brangwynne and S. Datta

Current position: Assistant Professor of Physics and Chemistry, UC San Diego

Abigail Plummer
(2021-2023)

Princeton Center for Complex Materials Postdoctoral Fellow
Research topic: mechanics in morphogenesis
Current position: Assistant Professor of Mechanical Engineering, Boston University

- Second Poster Prize at the Princeton Materials Institute Symposium (2023)
- Invited presenter at the *Rising Stars in Soft and Biological Matter Symposium* at the University of Chicago (2021)

Sheng Mao
(2016-2019)

Postdoctoral Associate
Research topic: mechanics in morphogenesis, intracellular phase transition
Current position: Assistant Professor of Mechanics and Engineering Science, Peking University

- Best Poster Award at the FACM '19 held jointly with the 11th NCS workshop (2019)
- Finalist for the APS GSNP Postdoctoral Speaker Award (2018)

Graduate Students, Thesis [12 total; 6 current]

Sihan Liu
(2022-present)

Ph.D., Mechanical and Aerospace Engineering (expected)
Research topic: phase separation

- Phillips Second Year Fellowship (2023-24)

Qiwei Yu
(2022-present)

Ph.D., Quantitative and Computational Biology (expected)
Research topic: phase separation
co-advised with N. Wingreen

- Harold W. Dodds Fellowship (2024-25)
- Best Poster Award at the Gordon Research Conference on Stochastic Physics in Biology (2025)
- APS DSNP Image of the Month (2025)

Alison Root
(2022-present)

Ph.D., Electrical and Computer Engineering (expected)
Research topic: acoustic metamaterials

Lauren Dreier
(2021-present)

Ph.D., Architecture (expected)
Research topic: soft robotics
co-advised with P.-T. Brun

- Most Innovative Student Poster Award at the Society of Engineering Science Annual Technical Meeting (2025)
- APS/DFD Milton van Dyke Award (2023)

Yenan (Daniel) Shen (2021-present)	Ph.D., Mechanical and Aerospace Engineering (expected) Research topic: soft robotics co-advised with N. Leonard
Tejas Dethe (2019-present)	Ph.D., Mechanical and Aerospace Engineering (expected) Research topic: phase separation, acoustic metamaterials co-advised with H. Stone • Quin Morton Teaching Fellow (2025-26) • Prison Teaching Initiative Graduate Fellowship in Pedagogy (2023) • Summerfield Second Year Fellowship (2020-21)
Anvitha Sudhakar (2019-2025)	Ph.D., Mechanical and Aerospace Engineering (2025) Thesis: *Computational Methods for Morphing Matter: From Embryos to Self-Folding Architecture* Current position: Boston Consulting Group
Lohit Malik (2022-2023)	M.S.E., Mechanical and Aerospace Engineering (2023) Thesis: *Towards designing a lockable self-folding origami* Current position: Ph.D. student, Cornell University
Sijie Tong (2016-2023)	Ph.D., Mechanical and Aerospace Engineering (2023) Thesis: *Mechanical response of soft matter systems: biological tissues and wrinkled structures* Current position: Clear Street • Summerfield Second Year Fellowship (2017-18)
Mohamed El Hedi Bahri (2017-2023)	Ph.D., Mechanical and Aerospace Engineering (2023) Thesis: *Thermal Fluctuations of Active and Anisotropic Elastic Membranes* Current position: Postdoc, Rutgers University • NSF GRFP Honorable Mention (2017)
Matthew A. Heinrich (2016-2021)	Ph.D., Mechanical and Aerospace Engineering (2021) Thesis: *Macroscopic tissue growth, expansion, and collision: Biophysical insights toward tissue sheet engineering strategies* co-advised with D. Cohen Current position: Regeneron • APS DBIO Shirley Chan Student Travel Grant Award (2019)
Siddhartha Sarkar (2015-2021)	Ph.D., Electrical and Computer Engineering (2021) Thesis: *Multipoles, symmetry representations and thermal fluctuations in elastic systems* Current position: Postdoc, Max Planck Institute for the Physics of Complex Systems, Germany

Graduate Students, Visiting Researchers [10 total; 1 current]

Tomaž Jurkovič (Aug-Oct 2025)	M.S., Mechanical Engineering, University of Ljubljana, Slovenia (expected) Research topic: mechanical metamaterials • American Slovenian Education Foundation (ASEF) fellow
Domen Škerlep (Mar-May 2025)	M.S., Mechanical Engineering, University of Ljubljana, Slovenia (expected) Research topic: mechanical metamaterials • American Slovenian Education Foundation (ASEF) fellow

Nicholas Carrillo (Jun-Aug 2019)	M.S., Physics, California State University, Northridge (2019) Research topic: statistical mechanics of thermalized shells Current position: Physics and Math Tutor at C2 Educational Centers • PRISM/PCCM Research Experience for Undergraduates
Jan Zavodnik (Aug-Oct 2018)	M.S., Mechanical Engineering, University of Ljubljana, Slovenia (2019) Research topic: mechanics of growing viscoelastic tissues Current position: Postdoc, SISSA, Italy • American Slovenian Education Foundation (ASEF) fellow
Matevž Marinčič (Jul-Aug 2018)	M.S., Physics, University of Ljubljana, Slovenia (2018) Research topic: acoustic metamaterials Current position: Ph.D. student, University of Ljubljana, Slovenia • American Slovenian Education Foundation (ASEF) fellow
Luka Starčevič (Sep-Oct 2017)	M.S., Mechanical Engineering, University of Maribor, Slovenia (2018) Research topic: acoustic metamaterials Current position: Engineer CAE Vehicle safety at MAGNA STEYR Fahrzeugtechnik, Austria • American Slovenian Education Foundation (ASEF) fellow
Žiga Gosar (Aug-Sep 2017)	M.S., Physics, University of Ljubljana, Slovenia (2019) Research topic: acoustic metamaterials Current position: ELVEZ • American Slovenian Education Foundation (ASEF) fellow
Tristan Guyomar (May-Jul 2017)	M.S., Physics, Ecole Normale Superieure de Lyon, France (2019) Research topic: lung morphogenesis Current position: Postdoc, University of Geneva, Switzerland
Miguel Ruiz Garcia (Apr-May 2017)	Ph.D., Physics, Universidad Carlos III de Madrid, Spain (2017) Research topic: statistical mechanics of microscopic sheets Current position: Ramón y Cajal Assistant Professor in the School of Physical Sciences, the Complutense University of Madrid, Spain
Veronika Cencen (Sep-Oct 2016)	M.S., Biomedical Engineering, University of Ottawa, Canada (2017) Research topic: receptor mediated endocytosis Current position: Postdoc, Weill Cornell Medicine • American Slovenian Education Foundation (ASEF) fellow

Research assistants [1 total; 0 current]

Andreia Fenley (2017-2018)	Research topic: statistical mechanics of sheets Current position: Ph.D. student, Cornell University

Undergraduate Students, Senior Thesis [12 total; 0 current]

Emily Wang (2024-2025)	B.S.E., Chemical and Biological Engineering (2025) Thesis: *Modeling Stress Granule Dynamics: A Quantitative Biophysical Framework Linking Condensate Behavior to Neurodegenerative Pathogenesis* Current position: Ph.D. student, University of Pennsylvania • NSF Graduate Research Fellowship Award (2025) • Outstanding Senior Thesis Award in Materials Science and Engineering (2025)

Liora Nasi (2023-2024)	B.S.E., Mechanical and Aerospace Engineering (2024) Thesis: *Programmable Actuation in Bubble-Cast Soft Robotics* co-advised with P.-T. Brun Current position: Medtronic, Inc. • Co-winner of Donald J. Dike Award for Excellence in Undergraduate Research (2024)
Sydney Hsu (2021-2022)	B.S.E., Mechanical and Aerospace Engineering (2022) Thesis: *Development of an Origami Deployable CubeSat Aeroshell* Current position: Mechanical Engineer at SpaceX • Sigma Xi Book Award (2022)
Cassidy Crone (2020-2021)	B.S.E., Mechanical and Aerospace Engineering (2021) Thesis: *Formation and Simulation of Tunable Dimples on the Surface of a Symmetrical Airfoil* Current position: Arizona Talking Book Library
Jessica Fan (2019-2020)	B.S.E., Mechanical and Aerospace Engineering (2020) Thesis: *Designing a transitional NuFlex element for orthopedic walker boots for better recovery of lower leg injuries* Current position: Ph.D. student, University of Pennsylvania • Enoch J. Durbine Prize for Engineering Innovation (2020) • Outstanding Senior Thesis in Materials (2020)
Hassaan Khan (2019-2020)	B.S.E., Mechanical and Aerospace Engineering (2020) Thesis: *Mechanical Characterization of Self-Folding Thermoplastic Polystyrene Sheets* Current position: Mechanical Design Engineer at Precision Combustion, Inc.
Lydon Kersting (2018-2019)	B.S.E., Mechanical and Aerospace Engineering (2019) Thesis: *xPLOR: An Expandable Pack for Lightweight Outdoor Refuge* Current position: Mechanical Engineer at Amazon Project Kuiper • Enoch J. Durbine Prize for Engineering Innovation (2019)
Bartosz Kaczmarski (2018-2019)	B.S.E., Mechanical and Aerospace Engineering (2019) Thesis: *Mechanical Behavior of Pressurized Rods: 3D Shape Transformations of Rod Networks via Local Curvature Control* co-advised with P.-T. Brun Current position: Ph.D. student, Stanford University • First Prize Morgan W. McKinzie '93 Senior Thesis Prize (2019) • Co-winner Sau-Hai Lam *58 Prize in Mechanical and Aerospace Engineering (2019)
Emily Achterkirch (2018-2019)	B.S.E., Mechanical and Aerospace Engineering (2019) Thesis: *Analysis of Hockey Skate Blade Holders: An Investigation into Broken Skates by Reverse Engineering* Current position: Associate Mechanical Engineer at BAE Systems
Dylan Baroody (2018-2019)	B.S.E., Mechanical and Aerospace Engineering (2019) Thesis: *Analysis of Soft Phononic Crystals: Using Machine Learning to Predict Compression using Transmission Data* Current position: Software Engineer at WHOOP
Yinan Zheng (2018-2019)	A.B., Physics (2019) Thesis: *Buckling of Geometrically Frustrated Frames: Spin Model Approaches and Finite Element Analysis* Current position: M.D. student, Vanderbilt University

M. Cecilia Stoner (2016-2017)	B.S.E., Mechanical and Aerospace Engineering (2017) Thesis: *Design and Analysis of Tunable Phononic Structures* Current position: NASA Langley Research Center and Ph.D student, University of Virginia • Second Prize Donald J. Dike Award for Excellence in Undergraduate Research (2017) • Outstanding Leadership Award in Materials (2017)

Undergraduate Students, Senior Project [3 total; 1 current]

2025-2026	Kellia Gatete (MAE), Susan Zhang (MAE) topic: *soft robotics* co-advised with A. Majumdar
2019-2020	Divyanshu Pachisia (MAE), Evan Quinn (MAE), Beimnet Shitaye (MAE), Jocelyn Wang (MAE) Project: *Soft Eversion Robots in Application of Minimally Invasive Subsurface Drip Irrigation* co-advised with A. Majumdar
2017-2018	Santiago Aguirre (MAE), Joshua Freeman (MAE), Colin Reilly (MAE), Benjamin Shi (MAE), Maxwell Schwegman (MAE) Project: *Design and Development of a Compact Martian Solar Array* • Finalists for the 2018 NASA Big Idea Challenge

Undergraduate Students, Independent Work [11 total; 0 current]

Meryl Liu (Spring 2025)	A.B., Physics (2025) Independent Work (Program of Applied and Computational Mathematics): *Wetting and pre-wetting phase transitions in membrane-bulk coupling* Current position: Ph.D. student, Caltech
Neha Ayyalapu (Spring 2025)	A.B., Physics (expected) Independent Work (Bioengineering): *Design of Biomolecular Condensates*
Meryl Liu (Spring 2024)	A.B., Physics (2025) Independent Work (JP): *Landau analysis of surface density phase separation in membrane-bulk coupling* Current position: Ph.D. student, Caltech
Emily Wang (Spring 2024)	B.S.E., Chemical and Biological Engineering (2025) Independent Work: *Evaluating Biophysical Frameworks for Stress Granule Assembly Dynamics* Current position: Ph.D. student, University of Pennsylvania
Ron Shvartsman (Fall 2023)	A.B., Physics (2025) Independent Work (JP): *Constructing a Phenomenological Model for Biofilm Wrinkling* Current position: Ph.D. student, Courant Institute of Mathematical Sciences at NYU
Emily Wang (Fall 2023)	B.S.E., Chemical and Biological Engineering (2025) Independent Work: *Building Towards a Coarse-Grained Model for Active Stress Granule Assembly* Current position: Ph.D. student, University of Pennsylvania

Amanda Cai (Fall 2023)	B.S.E., Chemical and Biological Engineering (2025) Independent Work: *Modeling the Branching Morphogenesis of a Chicken Lung*
Wenyuan Hou (Fall 2019)	B.S.E., Mechanical and Aerospace Engineering (2021) Independent Work: *Mechanics of wrinkled structures* Current position: Ph.D. student, Massachusetts Institute of Technology • Co-winner Sau-Hai Lam *58 Prize in Mechanical and Aerospace Engineering (2021) • Lore von Jaskowsky Memorial Prize, SEAS (2021) • Outstanding Materials Student Award (2021)
Milena Chakraverti-Wuerthwein (Spring 2019)	A.B., Physics (2020) Independent Work (JP): *Phase Separation in Multi-Component Liquid Mixtures* Current position: Ph.D. student, University of Chicago • Hertz Fellowship Award (2021) • NSF Graduate Research Fellowship Award (2021)
Yinan Zheng (Spring 2018)	A.B., Physics (2019) Independent Work (JP): *Buckling of Geometrically Frustrated Frames using Spin Models* Current position: M.D. student, Vanderbilt University
Beni Snow (Spring 2017)	B.S.E., Mechanical and Aerospace Engineering (2019) Independent Work: *Mechanical Properties of Randomly Crumpled Thin Sheets* Current position: Design Engineer at Blue Origin

Undergraduate Teams in Competitions/Challenges [4 total; 0 current]

2020-2021	**NASA Big Idea Challenge** Abhinav Agarwal (MAE), Saad Ayub (MAE), Benjamin Benjadol (MAE), Edoardo Contente (PHY), Daisy Bissonette (AST), Inci Karaaslan (PHY), Savannah Pobre (AST), Ethan Sample (CBE), Devdigvijay Singh (MAE), and Aditya Gandotra (PHY) Project: *LIGHTSABER: A Lunar Dust Removal Technology*
2019-2020	**NASA Revolutionary Aerospace Systems Concepts Academic Linkage** Polina Zhilkina (MAE), Jacob Essig (WWS), Alex Essig (WWS), Nina Arcot (MAE), Hoang Le (ELE), Cindy Li (ELE), Nadine Duursma (visiting student from TU Delft), Naomi Oke (MAE), Sarah Witzman (MAE), Nancy Diallo (MAE), Shannen Prindle (MAE) Project: *SELENE*
2018-2019	**NASA Micro-g Neutral Buoyancy Experiment Design Teams challenge** Nina Arcot (MAE), Alex Rogers (MAE), Whitney Huang (MAE), Kyle Johnson (ELE), Cindy Li and Hoang Le (Prospective ELE's '22), Alexander Essig (Woodrow Wilson), Jacob Essig and Elizabeth Petrov (Prospective COS's '22), Thomas McBride, Shaylee McBride, and Andrew Xu (Prospective MAE's '22). Project: *Soft Robotic Gripper for Ocean Worlds* • Among the 4 teams invited to the second phase of the challenge
2017-2018	**NASA Big Idea Challenge** Santiago Aguirre (MAE), Joshua Freeman (MAE), Colin Reilly (MAE), Benjamin Shi (MAE), Maxwell Schwegman (MAE) Project: *Design and Development of a Compact Martian Solar Array* • Among the 5 finalists invited to the NASA's Big Idea Forum

Other Undergraduate Student Researchers [36 total; 0 current]

(Includes REU students, summer interns, and visitors)

Jaya Choudhary (Jun-Jul 2025)	B.S.E., Mechanical and Aerospace Engineering, Princeton University (expected) Research topic: self-folding origami • MAE Summer Practical Research Experience
Stanford Cramer (Jun-Jul 2025)	B.S.E., Mechanical and Aerospace Engineering, Princeton University (expected) Research topic: acoustic metamaterials • MAE Summer Practical Research Experience
Ali Muslim (Jun-Jul 2023)	B.A., Psychology, Rutgers University (2024) Research topic: acoustic metamaterials • Research Experience for Undergraduates: Computational Biology Research, Gateway to STEM
Liora Nasi (Jun-Jul 2023)	B.S.E., Mechanical and Aerospace Engineering, Princeton University (2024) Research topic: soft robotics Current position: Medtronic, Inc. • Princeton Bioengineering Summer Undergraduate Research Experience (BE-SURE)
Soloman Khan-Syed (Jun-Jul 2023)	B.S.E., Mechanical and Aerospace Engineering, Princeton University (expected) Research topic: self-folding origami • MAE Summer Practical Research Experience
Rosy Monaghan (Jun-Jul 2022)	B.S.E., Mechanical and Aerospace Engineering, Princeton University (2024) Research topic: self-folding origami • MAE Summer Practical Research Experience
Raphael Vogeley (Jun-Jul 2022) (with P.-T. Brun)	B.S.E., Mechanical and Aerospace Engineering, Princeton University (2025) Research topic: 3D printing • MAE Summer Practical Research Experience
Aman Eujayl (Jun-Jul 2022) (with P.-T. Brun)	B.Sc., Mechanical Engineering, Rice University (2023) Research topic: 3D printing • PRISM/PCCM Research Experience for Undergraduates Current position: Ph.D. student, Caltech
Arthur Berberyan (Jun-Jul 2022)	B.Sc., Astrophysics, California State University, Northridge (2023) Research topic: acoustic metamaterials • PRISM/PCCM Research Experience for Undergraduates Current position: Ph.D. student, UCSD
Josep Battaler i Umbert (Feb 2021-May 2022)	B.A., Mathematics & Engineering Physics, Polytechnic University of Catalonia (2022) Research topic: phase separation in multicomponent mixtures
Alexander Ban (Jun 2021 - May 2022)	B.S.E., Mechanical and Aerospace Engineering, Princeton University (2023) Research topic: statistical mechanics of sheets • MAE Summer Practical Research Experience Current position: Pratt & Whitney

Yujin Angolio (Jun-Aug 2021)	B.S.E., Mechanical and Aerospace Engineering, Princeton University (2023) Research topic: self-folding origami • MAE Summer Practical Research Experience Current position: Cognex Corporation
Lauren Rawson (Jun-Aug 2021)	B.S.E., Mechanical and Aerospace Engineering, Princeton University (2023) Research topic: soft robotics • MAE Summer Practical Research Experience Current position: Lawrence Livermore National Laboratory
Isa Kessinger (Jun-Aug 2021)	B.S.E., Mechanical and Aerospace Engineering, Princeton University (2024) Research topic: morphogenesis • MAE Summer Practical Research Experience Current position: Newell Brands, Sharpie
Kathryn-Alexa Kennedy (Jun-Aug 2021)	B.S.E., Mechanical and Aerospace Engineering, Princeton University (2023) Research topic: acoustic metamaterials • MAE Summer Practical Research Experience Current position: Solar Landscape
Michael Hwang (Jun-Aug 2021)	B.S.E., Mechanical and Aerospace Engineering, Princeton University (2025) Research topic: self-folding origami • MAE Summer Practical Research Experience Current position: Ph.D. student, Caltech
Bryan O. Rivera-Rivera (Jun-Aug 2021)	B.Sc., Physics Applied to Electronics, University of Puerto Rico-Humacao (2022) Research topic: acoustic metamaterials • PRISM/PCCM Research Experience for Undergraduates Current position: LUMA Energy
Steven K. Contreras (Jun-Aug 2021)	B.A., Economics, Rutgers University Research topic: rheology of tissues • Research Experience for Undergraduates: Computational Biology Research, Gateway to STEM
Sarah Fry (Dec 2020 - May 2021)	B.S.E., Mechanical and Aerospace Engineering, Princeton University (2024) Research topic: statistical mechanics of nanotubes Current position: Ph.D. student, MIT
Pranav Iyer (Sep 2020 - May 2021)	B.S.E., Mechanical and Aerospace Engineering, Princeton University (2022) Research topic: rheology of growing tissues Current position: Cleveland Clinic
Navreeta Singh (Jun 2020 - Jun 2021)	B.S.E., Mechanical and Aerospace Engineering, Princeton University (2022) Research topic: rheology of vertex model tissues • MAE Summer Practical Research Experience
Polina Zhilkina (Jun 2020 - Jun 2021)	B.S.E., Mechanical and Aerospace Engineering, Princeton University (2022) Research topic: acoustic metamaterials • MAE Summer Practical Research Experience Current position: Ph.D. student, UCSB

Ritvik Agnihotri (Jun-Aug 2020)	B.S.E., Mechanical and Aerospace Engineering, Princeton University (2022) Research topic: statistical mechanics of sheets • MAE Summer Practical Research Experience Current position: McKinsey & Company Inc.
Marie Li (Jun-Aug 2020)	B.S.E., Operations Research and Financial Engineering, Princeton University (2023) Research topic: soft robotics • MAE Summer Practical Research Experience Current position: Scout Clean Energy
Hunter Gaudio (Jun-Aug 2019) (with M. Haataja)	B.Sc., Mechanical Engineering, Villanova University (2020) Research topic: morphology of multicomponent liquid mixtures Current position: Translational Research Bioinformatics Engineer at Children's Hospital of Philadelphia Research Institute • PRISM/PCCM Research Experience for Undergraduates Current position: Ph.D. student, Cornell
Katherine Mumm (Jun-Aug 2019)	B.S.E., Mechanical and Aerospace Engineering, Princeton University (2021) Research topic: morphogenesis Current position: GTS LLC • MAE Summer Practical Research Experience
Tomisin Fasawe (Jun-Aug 2019)	B.S.E., Mechanical and Aerospace Engineering, Princeton University (2021) Research topic: acoustic metamaterials Current position: Program Manager at Microsoft • MAE Summer Practical Research Experience
Ekin Gurgen (Jun-Aug 2019)	B.S.E., Mechanical and Aerospace Engineering, Princeton University (2021) Research topic: mechanics of wrinkled structures • MAE Summer Practical Research Experience Current position: Remedy Robotics
Alfred Yoon (Jun-Aug 2019)	B.S.E., Mechanical and Aerospace Engineering, Princeton University (2022) Research topic: self-folding origami • MAE Summer Practical Research Experience Current position: Naval Sea Systems Command
Derek Kuldinow (Jun-Aug 2018)	B.Sc., Physics, Yale University (2021) Research topic: intracellular phase separations co-advised with M. Haataja • PRISM/PCCM Research Experience for Undergraduates Current position: Ph.D. student, Stanford
Jessica Fan (Jun-Aug 2018)	B.S.E., Mechanical and Aerospace Engineering, Princeton University (2020) Research topic: epithelial sheets co-advised with D. Cohen Current position: Ph.D. student, University of Pennsylvania • MAE Summer Practical Research Experience

Bora Kiyan (Jun-Aug 2018)	B.S.E., Mechanical and Aerospace Engineering, Princeton University (2020) Research topic: acoustic metamaterials • MAE Summer Practical Research Experience Current position: Bain & Company, Inc.
Jerry Xiang (Jun-Aug 2018)	B.S.E., Mechanical and Aerospace Engineering, Princeton University (2020) Research topic: acoustic metamaterials Current position: Research Assistant at Princeton Nuenergy • MAE Summer Practical Research Experience Current position: AmWINS Group
Paul Talledo (Jun-Aug 2017)	B.Sc., Physics, California State University, Northridge (2017) Research topic: antimicrobial peptides • PRISM/PCCM Research Experience for Undergraduates Current position: Lucira Health
Julian Castellon (Jun-Aug 2017)	B.S.E., Mechanical and Aerospace Engineering, Princeton University (2020) Research topic: acoustic metamaterials Current position: Augmental Tech • MAE Summer Practical Research Experience
Jan Rozman (Jun-Aug 2016)	B.Sc., Physics, University of Ljubljana, Slovenia (2016) Research topic: development of drosophila oocytes Current position: Postdoc, Oxford University • Princeton International Student Internship Program (ISIP) • American Slovenian Education Foundation (ASEF) fellow

Student and Postdoc Awards (UG - undergraduate student, G - graduate student, PD - postdoc)

2025	Lauren Dreier	G	Most Innovative Student Poster Award at the Society of Engineering Science Annual Technical Meeting
	Qiwei Yu	G	APS DSNP Image of the Month
	Emily Wang	UG	NSF Graduate Research Fellowship Award
	Emily Wang	UG	Outstanding Senior Thesis Award in Materials Science and Engineering
	Tejas Dethe	G	Quin Morton Teaching Fellow
	Qiwei Yu	G	Best Poster Award at the Gordon Research Conference on Stochastic Physics in Biology
2024	Qiwei Yu	G	Harold W. Dodds Fellowship
	Liora Nasi	UG	Co-winner of Donald J. Dike Award for Excellence in Undergraduate Research
	Bezia Lemma	PD	Second Best Postdoctoral Poster at Society for Developmental Biology Northeast Regional Meeting

2023	Lauren Dreier	G	APS/DFD Milton van Dyke Award
	Bezia Lemma	PD	Second Place Presentation Award at the Society for Developmental Biology 82nd Annual Meeting
	Sihan Liu	G	Phillips Second Year Fellowship
	Tejas Dethe	G	Prison Teaching Initiative Graduate Fellowship in Pedagogy
	Liora Nasi	UG	Princeton Bioengineering Summer Undergraduate Research Fellowship
	Rodrigo Fernandez	UG	Mechanical and Aerospace Engineering Undergraduate Academic Support Award
	Bezia Lemma	PD	NSF Postdoctoral Research Fellowships in Biology (PRFB)
	Abigail Plummer	PD	Second Poster Prize at the Princeton Materials Institute Symposium
	Anvitha Sudhakar	G	University Administrative Fellowship
2022	Sydney Hsu	UG	Sigma Xi Book Award
2021	Abigail Plummer	PD	Rising Stars in Soft and Biological Matter
	Milena Chakraverti-Wuerthwein	UG	Hertz Fellowship Award
	Milena Chakraverti-Wuerthwein	UG	NSF Graduate Research Fellowship Award
	Wenyuan Hou	UG	Co-winner Sau-Hai Lam *58 Prize in Mechanical and Aerospace Engineering
	Wenyuan Hou	UG	Lore von Jaskowsky Memorial Prize, SEAS
	Wenyuan Hou	UG	Outstanding Materials Student Award
2020	Tejas Dethe	G	Summerfield Second Year Fellowship
	Jessica Fan	UG	Enoch J. Durbine Prize for Engineering Innovation
	Jessica Fan	UG	Outstanding Senior Thesis Award in Materials Science and Engineering
2019	Sheng Mao	PD	Best Poster Award at the FACM '19 held jointly with the 11th NCS workshop
	Matthew A. Heinrich	G	APS DBIO Shirley Chan Student Travel Grant Award
	Lydon Kersting	UG	Enoch J. Durbine Prize for Engineering Innovation
	Bartosz Kaczmarski	UG	First prize Morgan W. McKinzie '93 Senior Thesis Prize
	Bartosz Kaczmarski	UG	Co-winner Sau-Hai Lam *58 Prize in Mechanical and Aerospace Engineering
2018	Sheng Mao	PD	Finalist for the APS GSNP Postdoctoral Speaker Award
2017	Sijie Tong	G	Summerfield Second Year Fellowship
	M. Cecilia Stoner	UG	Second Prize Donald J. Dike Award for Excellence in Undergraduate Research
	M. Cecilia Stoner	UG	Outstanding Leadership Award in Materials

Thesis Committees (as non-advisor) [36 total; 21 current]

2025-present	Alice Fergerson	Ph.D., Chemical and Biological Engineering (expected) Advisor: Emily Davidson
2025-present	Daniel Ellison	Ph.D., Mechanical and Aerospace Engineering (expected) Advisor: Mikko P. Haataja
2025-present	Hemish Thakkar	Ph.D., Mechanical and Aerospace Engineering (expected) Advisor: Emily Davidson and Howard A. Stone
2025-present	Matthew Chertok	Ph.D., Chemical and Biological Engineering (expected) Advisor: Michael Webb and Howard A. Stone
2025-present	Kevin Liu	Ph.D., Civil and Environmental Engineering (expected) Advisor: Glaucio Paulino
2024-present	Tae Yeun Yang	Ph.D., Chemical and Biological Engineering (expected) Advisor: Emily Davidson

2024-present	Benjamin Garcia de Figueiredo	Ph.D., Biophysics (expected) Advisor: Josh Shaevitz
2024-present	Abir George	Ph.D., Biophysics (expected) Advisor: Gautam Reddy and Ned S. Wingreen
2024-present	Jingtao Tan	Ph.D., Mechanical and Aerospace Engineering (expected) Advisor: Saien Xie
2024-present	Gauri Wadhwa	Ph.D., Mechanical and Aerospace Engineering (expected) Advisor: Howard A. Stone
2024-present	Daniel Paluku	Ph.D., Mechanical and Aerospace Engineering (expected) Advisor: Craig B. Arnold
2023-present	Sameeksha Rao	Ph.D., Mechanical and Aerospace Engineering (expected) Advisor: Daniel J. Cohen
2023-present	Niles Huang	Ph.D., Quantitative and Computational Biology (expected) Advisor: Celeste M. Nelson
2023-present	Amala Akkiraju	Ph.D., Chemical and Biological Engineering (expected) Advisor: Athanassios Z. Panagiotopoulos
2023-present	Yuchen Xi	Ph.D., Chemical and Biological Engineering (expected) Advisor: Pierre-Thomas Brun
2023-present	Hannah Kim	Ph.D., Mechanical and Aerospace Engineering (expected) Advisor: Daniel J. Cohen
2023-present	Ji Qi	Ph.D., Mechanical and Aerospace Engineering (expected) Advisor: Mikko P. Haataja
2023-present	Joshua Arrington	Ph.D., Mechanical and Aerospace Engineering (expected) Advisor: Mikko P. Haataja
2023-present	Jonghyun Hwang	Ph.D., Mechanical and Aerospace Engineering (expected) Advisor: Howard A. Stone
2022-present	Isabel Moreira de Oliveira	Ph.D., Civil and Environmental Engineering (expected) Advisors: Sigrid Adriaenssens
2022-present	M. Shaharyar Wani	Ph.D., Mechanical and Aerospace Engineering (expected) Advisor: Craig B. Arnold
2021-2025	Isaac Breinyn	Ph.D., Quantitative and Computational Biology Advisors: Daniel J. Cohen
2022-2025	Andrew Pyo	Ph.D., Physics Advisors: Ned S. Wingreen
2023-2025	Emily Alcazar	Ph.D., Civil and Environmental Engineering Advisor: Glaucio Paulino
2023-2023	Sohit Miglani	Ph.D., Quantitative and Computational Biology (expected) Advisor: Mona Singh and Ned S. Wingreen
2019-2023	Ruoyao Zhang	Ph.D., Mechanical and Aerospace Engineering Advisor: Mikko P. Haataja
2019-2023	Niki Abbasi	Ph.D., Mechanical and Aerospace Engineering Advisor: Howard A. Stone
2018-2023	Jessica L. Wilson	Ph.D., Mechanical and Aerospace Engineering Advisor: Howard A. Stone
2019-2023	Gawoon Shim	Ph.D., Mechanical and Aerospace Engineering Advisor: Daniel J. Cohen
2018-2023	Trevor J. Jones	Ph.D., Chemical and Biological Engineering Advisor: Pierre-Thomas Brun

2018-2023	Xiaohan Du	Ph.D., Mechanical and Aerospace Engineering Advisor: Craig B. Arnold
2018-2022	Chenyi Fei	Ph.D., Quantitative and Computational Biology Advisors: Ned S. Wingreen and Bonnie L. Bassler
2018-2022	Juliane I. Preimesberger	Ph.D., Mechanical and Aerospace Engineering Advisor: Craig B. Arnold
2017-2021	Yang Xia	Ph.D., Mechanical and Aerospace Engineering Advisor: Mikko P. Haataja
2016-2021	Bryan A. Nerger	Ph.D., Chemical and Biological Engineering Advisor: Celeste M. Nelson
2016-2019	Renato Pagliara Vasquez	Ph.D., Mechanical and Aerospace Engineering Advisors: Naomi E. Leonard and Phil Holmes

PhD Thesis reader [19 total]

2025	Aaron R. Bourque	Ph.D., Quantitative and Computational Biology Advisor: Joshua W. Shaevitz
2025	Emily Alcazar	Ph.D., Civil and Environmental Engineering Advisor: Glaucio Paulino
2023	Danielle Chase	Ph.D., Mechanical and Aerospace Engineering Advisor: Howard A. Stone
2023	Daniel Shaw	Ph.D., Mechanical and Aerospace Engineering Advisor: Luc Deike
2023	Jason X. Liu	Ph.D., Mechanical and Aerospace Engineering Advisor: Rodney D. Priestley and Craig B. Arnold
2021	Julienne M. LaChance	Ph.D., Mechanical and Aerospace Engineering Advisor: Daniel J. Cohen
2021	Nikita S. Dutta	Ph.D., Mechanical and Aerospace Engineering Advisor: Craig B. Arnold
2020	Thomas Hodson	Ph.D., Mechanical and Aerospace Engineering Advisor: Daniel A. Steingart
2020	Yingxian Estella Yu	Ph.D., Mechanical and Aerospace Engineering Advisor: Howard A. Stone
2020	Xinyi Minnie Liu	Ph.D., Mechanical and Aerospace Engineering Advisor: Craig B. Arnold
2019	Renato Pagliara Vasquez	Ph.D., Mechanical and Aerospace Engineering Advisors: Naomi E. Leonard and Phil Holmes
2018	Ching-Yao Lai	Ph.D., Mechanical and Aerospace Engineering Advisor: Howard A. Stone
2018	Jingjie Hu	Ph.D., Mechanical and Aerospace Engineering Advisor: Winston O. Soboyejo
2017	Yuanda Xu	Ph.D., Program in Applied and Computational Mathematics Advisor: Mikko P. Haataja
2017	Alta Fang	Ph.D., Mechanical and Aerospace Engineering Advisor: Mikko P. Haataja
2017	Jesse T. Ault	Ph.D., Mechanical and Aerospace Engineering Advisor: Howard A. Stone
2017	Tanya Gupta	Ph.D., Mechanical and Aerospace Engineering Advisor: Daniel A. Steingart

2017	Suin Shim	Ph.D., Mechanical and Aerospace Engineering Advisor: Howard A. Stone
2016	David J. Luet	Ph.D., Mechanical and Aerospace Engineering Advisor: Luigi Martinelli

Examiner on Final Public Oral exams [16 total]

2025	Isaac Breinyn	Ph.D., Quantitative and Computational Biology Advisors: Daniel J. Cohen
2025	Andrew Pyo	Ph.D., Physics Advisors: Ned S. Wingreen
2024	Marcel M. Louis	Ph.D., Mechanical and Aerospace Engineering Advisor: Howard A. Stone
2024	Ruoyao Zhang	Ph.D., Mechanical and Aerospace Engineering Advisor: Mikko P. Haataja
2023	Niki Abbasi	Ph.D., Mechanical and Aerospace Engineering Advisor: Howard A. Stone
2023	Jessica L. Wilson	Ph.D., Mechanical and Aerospace Engineering Advisor: Howard A. Stone
2023	Gawoon Shim	Ph.D., Mechanical and Aerospace Engineering Advisor: Daniel J. Cohen
2023	Trevor J. Jones	Ph.D., Chemical and Biological Engineering Advisor: Pierre-Thomas Brun
2022	Chenyi Fei	Ph.D., Quantitative and Computational Biology Advisors: Ned S. Wingreen and Bonnie L. Bassler
2022	Juliane I. Preimesberger	Ph.D., Mechanical and Aerospace Engineering Advisor: Craig B. Arnold
2021	Yang Xia	Ph.D., Mechanical and Aerospace Engineering Advisor: Mikko P. Haataja
2021	Bryan A. Nerger	Ph.D., Chemical and Biological Engineering Advisor: Celeste M. Nelson
2019	Rebecca Gray	Ph.D., Mechanical and Aerospace Engineering Advisor: Naomi E. Leonard
2019	Elizabeth N. Davison	Ph.D., Mechanical and Aerospace Engineering Advisor: Naomi E. Leonard
2018	Jasmin Imran Alsous	Ph.D., Chemical and Biological Engineering Advisor: Stanislav Shvartsman
2018	Farzan Beroz	Ph.D., Physics Advisor: Ned S. Wingreen