

Lining Yao - Curriculum Vitae

Assistant Professor

Mechanical Engineering, College of Engineering, UC Berkeley

Zheng-White Berkeley Engineering Faculty Fellow

Executive Committee, Jacobs Institute for Design Innovation (JIDI) University of California, Berkeley

Human-Computer Interaction Institute, School of Computer Science (courtesy), Carnegie Mellon University

<https://morphingmatter.org/member/lining-yao>

(857) 253-9354

liningy@berkeley.edu

liningy@cs.cmu.edu

Director of Morphing Matter Lab ([link](#))

Co-founder of MorphingMatter4Girls Initiative ([link](#))

University advisory board, the Future Manufacturing Institute ([link](#))

Core faculty member, Softbotics Initiative ([link](#))

Director, 4D Printing Society ([link](#))

Research Interests - Sustainable Morphing Matter

To adapt to a sustainable lifestyle that supports ‘human-nature-symbiosis’, we must re-examine and re-invent the way we design, manufacture, transport, use and recycle physical materials. In Morphing Matter Lab, we explore the positive impact of active and morphing materials to sustainable design across different scales and contexts. Research focuses on the discovery and study of morphing material mechanisms, and algorithms for their computational design and fabrication pipelines. We also focus on several application domains, with a particular focus on sustainability.

Education

Massachusetts Institute of Technology, Media Arts and Science, 2017

Ph.D., Computer Science / Human Computer Interaction

Thesis: Shape changing composite material design for interactions

Massachusetts Institute of Technology, Media Arts and Science, 2012

M.E., Computer Science / Human Computer Interaction

Zhejiang University, School of Computer Science, 2008

B.E., Computer Science / Industrial Design

Employment

UC Berkeley

2024-present, Berkeley, CA. Assistant Professor. Director of the Morphing Matter Lab, Mechanical Engineering, College of Engineering.

Carnegie Mellon University

2024-present, Pittsburgh, PA. Affiliated Professor. Human-Computer Interaction Institute, School of Computer Science.

Carnegie Mellon University

2023-2024, Pittsburgh, PA. Cooper-Siegel Associate Professor. Director of the Morphing Matter Lab in Human-Computer Interaction Institute, School of Computer Science.

Carnegie Mellon University

2017-2023, Pittsburgh, PA. Cooper-Siegel Assistant Professor. Director of the Morphing Matter Lab in Human-Computer Interaction Institute, School of Computer Science.

Autodesk

2017, San Francisco, CA. Artist in Residency. Focus: Advanced Manufacturing and 4D Printing.

The University of Tokyo

2016, Tokyo, Japan. Research Staff, University of Tokyo. Focus: nano-fabrication of micro-ratchet driven by microorganisms, multi-material printing of functional graded mechanical metamaterials.

Samsung Research

2012, San Jose, CA. Intern. Conceptualization and development of the first Samsung Gear. Gained multiple patents.

Awards and Honors

Professional Awards

2024, Recipient of IAAM Scientist Medal, by the International Association of Advanced Materials and the 60th assembly of the Advanced Materials Congress (AMC)
2023, Winner for the Falling Walls breakthrough of the year 2023 in the Category of Engineering & Technology
2023-2028, Recipient of Zheng-White Faculty Fellow in the College of Engineering, UC Berkeley
2022, Recipient of the Cooper-Siegel Junior Professorship (the only female out of the four recipients from CMU in 2022 for 'delivering exceptional research and education at the cutting-edge of innovation and collaboration.')

2021, NSF Faculty Early Career Development Program (**NSF CAREER**) award
2021, Provost's Inclusive Teaching Fellow (20 recipients from CMU in 2022)
2021, Microsoft Research Faculty Fellowship Finalist
2020-2022, Ars Electronica **STARTs** Prize Advisor
2018, Appointed Instructor by United Nation Industrial Development Organization (**UNIDO**) for the Eco-Design Leading Talent Training Program
2015, Wired UK Innovation Fellow, London, UK

Academic Paper Awards (Top 1% of submitted papers in ACM CHI and UIST.)

2025, Top Viewed Article in Advanced Functional Materials, Wiley
2023, Best Paper Honorable Mention Award, ACM Symposium on User Interface Software and Technology (UIST).
2023, Two Best Paper Honorable Mention Award, The ACM conference on Designing Interactive Systems (DIS).
2023, Best Paper Honorable Mention Award, ACM Conference on Human Factors in Computing Systems (CHI).
2022, Best of Advanced Materials Technologies 2022, Advanced Materials Technologies, Wiley
2022, Best Paper Honorable Mention Award, ACM Conference on Human Factors in Computing Systems (CHI).
2022, Best Paper Honorable Mention Award, ACM Conference on Augmented Humans.
2022, Best Paper Award, the Smart Materials, Adaptive Structures, and Intelligent Systems Division (SMASIS).
2021, Best Paper Honorable Mention Award, ACM CHI.
2019, Best Paper Award, WISS.
2015, Best Conference Talk Award, ACM CHI.
2015, Best Paper Honorable Mention Award, ACM CHI.
2013, Best Paper Award, ACM Symposium on User Interface Software and Technology (UIST).
2013, Best Demo Award, ACM UIST.

Art and Design: Press and Public Awards

2024, Fast Company's World Changing Ideas
2022, 2019, 2017, Five Fast Company's Innovation by Design Awards, New York
2020, South by South West (SXSW)'s Innovation Awards Finalist
2019, Dezeen Design Longlist
2019, Honorable Mention, Creative Food Cycles
2018, Ars Electronica STARTS award, Linz, Austria
2017, YouFab Global Creative Award, Tokyo, Japan
2016, Golden, Silver and Platinum A' Design Award, Como, Italy
2015, IxDA Interaction Award, USA
2015, Core 77 Community Choice Award and Interaction Student Notable Nomination
2015, 2009, 2010, iF Student Design Award, Red Dot "Best of the Best" Design Award, Germany
2014-2015, MIT Art Council Award, Cambridge, USA

Art and Design: Gallery, Museums and Exhibitions

2025, Next Nature Magazine in the Next Nature Museum in Eindhoven, Netherlands (bioLogic)
2025, Garden Futures exhibition by Vitra Museum and V&A Dundee in UK (E-seed & Sustainflatable)
2025, 13th Biennale Internationale Design Saint-Étienne, France (E-seed project)

2023, London Design Week.
 2021, Supermarket of the Future exhibition, the Embassy of Food, Dutch Design Week.
 2020, South by South West (SXSW), Austin, Texas, USA (for ElectroDermis w/ students).
 2020, Commissioned documentary for Ars Electronica's online show: Morphing Matter Lab in Pandemic.
 2020, MIT Museum, Boston, MA, USA (for bioLogic w/ Hiroshi Ishii).
 2018, "Future Humanity – Our Shaped Planet" at the Hyundai Beijing, China
 2018, Bozar Museum, Brussels, Belgium (for Printed Paper Actuator w/ students).
 2018, "Error", Ars Electronica Festival, Linz, Austria
 2017, "Mutations / Créations", Center Pompidou, Paris, France (for bioLogic w/ Hiroshi Ishii).
 2016, Ars Electronica, Linz, Austria (bioLogic, jamSheets and. PneuUI w/ Hiroshi Ishii).
 2016, Design Week, Dubai, United Arab Emirates (bioLogic w/ Hiroshi Ishii).
 2016, Museum of Fine Art, Fashion Tech Styles, Boston, MA, USA (bioLogic w/ Hiroshi Ishii).
 2015, MIT Media Lab, 30's Anniversary, Cambridge, MA, USA (Second Skin w/ Hiroshi Ishii).
 2015, Museum of Fine Art, Fashion4ward, Cambridge, MA, USA (bioLogic w/ Hiroshi Ishii).
 2010 – 2012, Red Dot Design museum, Essen, Germany.

Refereed Publications

I publish in both physical sciences and computer science venues. For **physical sciences**, I publish in journals including **Nature**, **Science Advances**, **Advanced Materials**, **Advanced Materials Technologies**, etc. In computer science, conferences are the premier venues (~ 20% acceptance rates). In **Human-Computer Interaction**, the top venues include the ACM CHI Conference on Human Factors in Computing Systems (**CHI**), the ACM User Interface Software and Technology Symposium (**UIST**), the ACM conference on Designing Interactive Systems (**DIS**), and the ACM International Conference on Ubiquitous Computing (**UbiComp**).

Representative Papers

- [1]  Danli Luo, Aditi Maheshwari, Andreea Danielescu, Jiaji Li, Yue Yang, Ye Tao, Lingyun Sun, Guanyun Wang, Shu Yang, Teng Zhang, **Lining Yao**. 2023. Autonomous Self-Drilling Seed Carriers for Aerial Seeding with Superior Success Rates. **Nature**: 10.1038/s41586-022-05656-3. **Cover Story**. [[project link](#)]
- [2]  Ye Tao, Yi-Chin Lee, Haolin Liu, Xiaoxiao Zhang, Jianxun Cui, Catherine Mondo, Mahnoush Babaei, Jasio Santillan, Guanyun Wang, Danli Luo, Di Liu, Humphrey Yang, Youngwook Do, Lingyun Sun, Wen Wang, Teng Zhang, and **Lining Yao**. 2021. Morphing pasta and beyond. **Science Advances** 7, 19: eabf4098. **Cover Story**.
- [3]  Dinesh K. Patel, Xiaonan Huang, Yichi Luo, Mrunmayi Mungekar, M. Khalid Jawed, **Lining Yao***, and Carmel Majidi*. 2022. Highly dynamic bistable soft actuator for reconfigurable multimodal soft robots. **Advanced Materials Technologies**: 2201259. **Cover Story**.
- [4]  Humphrey Yang, Tate Johnson, Ke Zhong, Dinesh Patel, Gina Olson, Carmel Majidi, Mohammad Islam, and **Lining Yao**. 2022. ReCompFig: Designing Dynamically Reconfigurable Kinematic Devices Using Compliant Mechanisms and Tensioning Cables. In CHI Conference on Human Factors in Computing Systems (CHI '22). 1–14. **[Best Paper Nominee]**
- [5]  Sijia Wang, Cathy Mengying Fang, Yiyao Yang, Kexin Lu, Maria Vlachostergiou, and **Lining Yao**. 2022. Morphace: an integrated approach for designing customizable and transformative facial prosthetic makeup. In Augmented Humans 2022, 58–67. **[Best Paper Nominee]**
- [6]  Mason Zadan, Dinesh K. Patel, Mohammad H. Malakooti, **Lining Yao**, and Carmel Majidi. 2022. Fabrication of 3d printed thermoelectric devices for integration into liquid crystal elastomer actuators. In ASME 2022 Conference on Smart Materials, Adaptive Structures and Intelligent Systems, V001T01A011. **[Best Paper]**
- [7]  Lea Albaugh, James McCann, Scott E Hudson, and **Lining Yao**. 2021. Engineering Multifunctional Spacer Fabrics Through Machine Knitting. In Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems (CHI '21), 1–15. **[Best Paper Nominee]**
- [8]  Koya Narumi, Fang Qin, Siyuan Liu, Huai-Yu Cheng, Jianzhe Gu, Yoshihiro Kawahara, Mohammad Islam, and **Lining Yao**. 2019. Self-healing UI: Mechanically and Electrically Self-healing Materials for Sensing and Actuation Interfaces. In the 27th Workshop on Interactive Systems and Software (WISS'19). **[Best Paper]**
- [9]  **Lining Yao**, Jifei Ou, Chin-Yi Cheng, Helene Steiner, Wen Wang, Guanyun Wang, and Hiroshi Ishii. 2015. bioLogic: Natto Cells as Nanoactuators for Shape Changing Interfaces. In Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems (CHI '15), 1–10. **[Best Paper Nominee] [Best Talk]**

- [10]  **Lining Yao**, Ryuma Niiyama, Jifei Ou, Sean Follmer, Clark Della Silva, and Hiroshi Ishii. 2013. PneUI: pneumatically actuated soft composite materials for shape changing interfaces. In Proceedings of the 26th annual ACM symposium on User interface software and technology (UIST '13), 13-22. **[Best Paper] [Best Demo]**

Journal Papers

- [1] Danli Luo, Aditi Maheshwari, Andreea Danielescu, Jiaji Li, Yue Yang, Ye Tao, Lingyun Sun, Guanyun Wang, Shu Yang, Teng Zhang, Lining Yao. 2022. Autonomous Self-Drilling Seed Carriers for Aerial Seeding with Superior Success Rates. **Nature**: 10.1038/s41586-022-05656-3. **Cover Story**.
- [2] Dinesh K. Patel, Xiaonan Huang, Yichi Luo, Mrunmayi Mungekar, M. Khalid Jawed, Lining Yao, and Carmel Majidi. 2022. Highly dynamic bistable soft actuator for reconfigurable multimodal soft robots. **Advanced Materials Technologies**: 2201259. **Cover Story**.
- [3] Maria Stang, Joshua Tashman, Daniel Shiowski, Humphrey Yang, Lining Yao, and Adam Feinberg. Embedded 3D Printing of Thermally-Cured Thermoset Elastomers and the Interdependence of Rheology and Machine Pathing. **Advanced Materials Technologies** 2200984.
- [4] Zach J. Patterson, Dinesh K. Patel, Sarah Bergbreiter, Lining Yao, and Carmel Majidi. 2022. A method for 3d printing and rapid prototyping of fieldable untethered soft robots. **Soft Robotics**: soro.2022.0003.
- [5] Mason Zadan, Dinesh K. Patel, Andrew P. Sabelhaus, Jiahe Liao, Anthony Wertz, Lining Yao, and Carmel Majidi. 2022. Liquid Crystal Elastomer with Integrated Soft Thermoelectrics for Shape Memory Actuation and Energy Harvesting. **Advanced Materials** 34, 23: 2200857.
- [6] Yuxuan Yu, Kuanren Qian, Humphrey Yang, Lining Yao, and Yongjie Jessica Zhang. 2022. Hybrid IGA-FEA of fiber reinforced thermoplastic composites for forward design of AI-enabled 4D printing. **Journal of Materials Processing Technology** 302: 117497.
- [7] Ye Tao, Yi-Chin Lee, Haolin Liu, Xiaoxiao Zhang, Jianxun Cui, Catherine Mondoa, Mahnoush Babaei, Jasio Santillan, Guanyun Wang, Danli Luo, Di Liu, Humphrey Yang, Youngwook Do, Lingyun Sun, Wen Wang, Teng Zhang, and Lining Yao. 2021. Morphing pasta and beyond. **Science Advances** 7, 19: eabf4098. **Cover Story**.
- [8] Wenhuan Sun, Saul Schaffer, Kevin Dai, Lining Yao, Adam Feinberg, and Victoria Webster-Wood. 2021. 3d printing hydrogel-based soft and biohybrid actuators: a mini-review on fabrication techniques, applications, and challenges. **Frontiers in Robotics and AI** 8: 673533.
- [9] Yuxuan Yu, Haolin Liu, Kuanren Qian, Humphrey Yang, Matthew McGehee, Jianzhe Gu, Danli Luo, Lining Yao, and Yongjie Jessica Zhang. 2020. Material characterization and precise finite element analysis of fiber reinforced thermoplastic composites for 4D printing. **Computer-Aided Design** 122: 102817.
- [10] Marianna Obrist, Yunwen Tu, Lining Yao, Carlos Velasco. Space Food Experiences: Designing Passenger's Eating Experiences for Future Space Travel Scenarios. 2019. **Frontiers in Computer Science**. 1,3.
- [11] Wen Wang, Lining Yao, Chin-Yi Cheng, Teng Zhang, Hiroshi Atsumi, Luda Wang, Guanyun Wang, Oksana Anilionyte, Helene Steiner, Jifei Ou, Kang Zhou, Chris Wawrousek, Katherine Petrecca, Angela M. Belcher, Rohit Karnik, Xuanhe Zhao, Daniel I. C. Wang, Hiroshi Ishii. 2017. Harnessing the Hygroscopic and Biofluorescent Behaviors of Genetically Tractable Microbial Cells to Design Biohybrid Wearables. 2017. **Science Advances** 3, 5: e1601984.
- [12] Lining Yao, Jifei Ou, Guanyun Wang, Chin-Yi Cheng, Wen Wang, Helene Steiner, and Hiroshi Ishii. 2015. bioPrint: A Liquid Deposition Printing System for Natural Actuators. **3D Printing and Additive Manufacturing**. December 2015, 2(4): 168-179.

Major Conference Papers

- [13]  Humphrey Yang, Tate Johnson, Ke Zhong, Dinesh Patel, Gina Olson, Carmel Majidi, Mohammad Islam, and Lining Yao. 2022. ReCompFig: Designing Dynamically Reconfigurable Kinematic Devices Using Compliant Mechanisms and Tensioning Cables. In CHI Conference on Human Factors in Computing Systems (CHI '22). 1–14. **[Best Paper Nominee]**
- [14]  Sijia Wang, Cathy Mengying Fang, Yiyao Yang, Kexin Lu, Maria Vlachostergiou, and Lining Yao. 2022. Morphace: an integrated approach for designing customizable and transformative facial prosthetic makeup. In **Augmented Humans 2022**, 58–67. **[Best Paper Nominee]**
- [15]  Mason Zadan, Dinesh K. Patel, Mohammad H. Malakooti, Lining Yao, and Carmel Majidi. 2022. Fabrication of 3d printed thermoelectric devices for integration into liquid crystal elastomer actuators. In **ASME 2022 Conference on Smart Materials, Adaptive Structures and Intelligent Systems**, V001T01A011. **[Best Paper]**

- [16] Jianzhe Gu, Yuyu Lin, Qiang Cui, Xiaoqian Li, Jiaji Li, Lingyun Sun, Cheng Yao, Fangtian Ying, Guanyun Wang, and Lining Yao. 2022. PneuMesh: Pneumatic-driven Truss-based Shape Changing System. In CHI Conference on Human Factors in Computing Systems (CHI '22), 1–12.
- [17] Cathy Mengying Fang, Jianzhe Gu, Lining Yao, and Chris Harrison. 2022. Electripop: low-cost, shape-changing displays using electrostatically inflated mylar sheets. In CHI Conference on Human Factors in Computing Systems (CHI '22), 1–15.
- [18] Rachel Ann Arredondo, Ofri Dar, Kylon Chiang, Arielle Blonder, and Lining Yao. 2022. Blue ceramics: co-designing morphing ceramics for seagrass meadow restoration. In Creativity and Cognition, 392–405.
- [19] Michelle Chang, Chenyi Shen, Aditi Maheshwari, Andreea Danielescu, and Lining Yao. 2022. Patterns and opportunities for the design of human-plant interaction. In Designing Interactive Systems Conference (DIS'22), 925–948.
- [20] Harshika Jain, Kexin Lu, and Lining Yao. 2021. Hydrogel-based DIY underwater morphing artifacts. In Designing Interactive Systems Conference 2021(DIS '21), 1242–1252.
- [21]  Lea Albaugh, James McCann, Scott E Hudson, and Lining Yao. 2021. Engineering Multifunctional Spacer Fabrics Through Machine Knitting. In Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems (CHI '21), 1–15. **[Best Paper Nominee]**
- [22] Lea Albaugh, Scott E. Hudson, Lining Yao, and Laura Devendorf. 2020. Investigating underdetermination through interactive computational handweaving. In Proceedings of the 2020 ACM Designing Interactive Systems Conference (DIS '20), 1033–1046.
- [23] Humphrey Yang, Danli Luo, Kuanren Qian, and Lining Yao. 2021. Freeform fabrication of fluidic edible materials. In Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems (CHI '21), 1–10.
- [24] Lingyun Sun, Jiaji Li, Yu Chen, Yue Yang, Zhi Yu, Danli Luo, Jianzhe Gu, Lining Yao, Ye Tao, and Guanyun Wang. 2021. FlexTruss: A Computational Threading Method for Multi-material, Multi-form and Multi-use Prototyping. In Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems (CHI '21), 1–15.
- [25] Lingyun Sun, Yue Yang, Yu Chen, Jiaqi Li, Danli Luo, Haolin Liu, Lining Yao, Ye Tao, and Guanyun Wang. 2021. ShrinCage: 3D Printed Accessories that Self-Adapt by Shrink-Fitting. In Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems (CHI '21), 1–16.
- [26] Humphrey Yang, Kuanren Qian, Haolin Liu, Yuxuan Yu, Jianzhe Gu, Matthew McGehee, Yongjie Jessica Zhang, and Lining Yao. 2020. SimuLearn: Fast and Accurate Simulator to Support Morphing Materials Design and Workflows. In Proceedings of the 33rd Annual ACM Symposium on User Interface Software and Technology (UIST '20), 71–84.
- [27] Danli Luo, Jianzhe Gu, Fang Qin, Guanyun Wang, and Lining Yao. 2020. E-seed: Shape-Changing Interfaces that Self Drill. In Proceedings of the 33rd Annual ACM Symposium on User Interface Software and Technology (UIST '20), 45–57.
- [28] Tingyu Cheng, Koya Narumi, Youngwook Do, Yang Zhang, Tung D. Ta, Takuya Sasatani, Eric Markvicka, Yoshihiro Kawahara, Lining Yao, Gregory D. Abowd, and HyunJoo Oh. 2020. Silver tape: inkjet-printed circuits peeled-and-transferred on versatile substrates. In Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies 4, 1: 1–17.
- [29] Lea Albaugh, Scott E. Hudson, Lining Yao, and Laura Devendorf. 2020. Investigating Underdetermination Through Interactive Computational Handweaving. In Proceedings of the 2020 ACM Designing Interactive Systems Conference (DIS '20), 1033–1046.
- [30] Koya Narumi, Fang Qin, Siyuan Liu, Huai-Yu Cheng, Jianzhe Gu, Yoshihiro Kawahara, Mohammad Islam, and Lining Yao. 2019. Self-healing UI: Mechanically and Electrically Self-healing Materials for Sensing and Actuation Interfaces. In Proceedings of the 32nd Annual ACM Symposium on User Interface Software and Technology (UIST '19), 293–306.
- [31]  Koya Narumi, Fang Qin, Siyuan Liu, Huai-Yu Cheng, Jianzhe Gu, Yoshihiro Kawahara, Mohammad Islam, and Lining Yao. 2019. Self-healing UI: Mechanically and Electrically Self-healing Materials for Sensing and Actuation Interfaces. In the 27th Workshop on Interactive Systems and Software (WISS'19). **[Best Paper]**
- [32] Guanyun Wang, Ye Tao, Ozguc Bertug Capunaman, Humphrey Yang, and Lining Yao. 2019. A-line: 4D Printing Morphing Linear Composite Structures. In Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems (CHI '19), 12 pages.

- [33] Eric Markvicka, Guanyun Wang, Yi-Chin Lee, Gierad Laput, Carmel Majidi, and Lining Yao. 2019. ElectroDermis: Fully Untethered, Stretchable, and Highly-Customizable Electronic Bandages. In Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems (CHI '19), 1–10.
- [34] Lea Albaugh, Scott Hudson, and Lining Yao. 2019. Digital Fabrication of Soft Actuated Objects by Machine Knitting. In Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems (CHI '19), 1–13.
- [35] Jack Forman, Taylor Tabb, Youngwook Do, Meng-Han Yeh, Adrian Galvin, and Lining Yao. 2019. ModiFiber: Two-Way Morphing Soft Thread Actuators for Tangible Interaction. In Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems (CHI '19), 1–11.
- [36] Jianzhe Gu, David E. Breen, Jenny Hu, Lifeng Zhu, Ye Tao, Tyson Van de Zande, Guanyun Wang, Yongjie Jessica Zhang, and Lining Yao. 2019. Geodesy: Self-rising 2.5D Tiles by Printing along 2D Geodesic Closed Path. In Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems (CHI '19), 1–10.
- [37] Guanyun Wang, Humphrey Yang, Zeyu Yan, Nurcan Gecer Ulu, Ye Tao, Jianzhe Gu, Levent Burak Kara, and Lining Yao. 2018. 4DMesh: 4D Printing Morphing Non-Developable Mesh Surfaces. In Proceedings of the 31st Annual ACM Symposium on User Interface Software and Technology (UIST '18), 623–635.
- [38] Guanyun Wang, Tingyu Cheng, Youngwook Do, Humphrey Yang, Ye Tao, Jianzhe Gu, Byoungkwon An, and Lining Yao. 2018. Printed Paper Actuator: A Low-cost Reversible Actuation and Sensing Method for Shape Changing Interfaces. 2018. In Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems (CHI '18), 1–10.
- [39] Byoungkwon An, Ye Tao, Jianzhe Gu, Tingyu Cheng, Xiang 'Anthony' Chen, Xiaoxiao Zhang, Wei Zhao, Youngwook Do, Shigeo Takahashi, Hsiang-Yun Wu, Teng Zhang, and Lining Yao. 2018. Thermorph: Democratizing 4D Printing of Self-Folding Materials and Interfaces. In Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems (CHI '18), 1–12.
- [40] Hyunjoo Oh, Tung D. Ta, Ryo Suzuki, Mark D. Gross, Yoshihiro Kawahara, and Lining Yao. 2018. PEP (3D Printed Electronic Papercrafts): An Integrated Approach for 3D Sculpting Paper-Based Electronic Devices. In Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems (CHI '18), 1–12.
- [41] Wen Wang, Lining Yao, Teng Zhang, Chin-Yi Cheng, Daniel Levine, and Hiroshi Ishii. 2017. Transformative Appetite: Shape-Changing Food Transforms from 2D to 3D by Water Interaction through Cooking. 2017. In Proceedings of the 2017 CHI Conference on Human Factors in Computing Systems (CHI '17), 6123-6132.
- [42] Guanyun Wang, Lining Yao, Wen Wang, Jifei Ou, Chin-Yi Cheng, and Hiroshi Ishii. 2016. xPrint: A Modularized Liquid Printer for Smart Materials Deposition. In Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems (CHI '16), 5743-5752. 1.
- [43]  Lining Yao, Jifei Ou, Chin-Yi Cheng, Helene Steiner, Wen Wang, Guanyun Wang, and Hiroshi Ishii. 2015. bioLogic: Natto Cells as Nanoactuators for Shape Changing Interfaces. In Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems (CHI '15), 1–10. **[Best Paper Nominee] [Best Talk]**
- [44] Ryuma Niiyama, Xu Sun, Lining Yao, Hiroshi Ishii, Daniela Rus, and Sangbae Kim. 2015. Sticky Actuator: Free-Form Planar Actuators for Animated Objects. In Proceedings of the Ninth International Conference on Tangible, Embedded, and Embodied Interaction (TEI '15), 77-84. 18.
- [45] Ryuma Niiyama, Lining Yao, and Hiroshi Ishii. 2014. Weight and volume changing device with liquid metal transfer. In Proceedings of the 8th International Conference on Tangible, Embedded and Embodied Interaction (TEI '14). ACM, New York, NY, USA, 49-52.
- [46] Jifei Ou, Lining Yao, Daniel Tauber, Jürgen Steimle, Ryuma Niiyama, and Hiroshi Ishii. 2014. jamSheets: thin interfaces with tunable stiffness enabled by layer jamming. In Proceedings of the 8th International Conference on Tangible, Embedded and Embodied Interaction (TEI '14), 65-72.
- [47]  Lining Yao, Ryuma Niiyama, Jifei Ou, Sean Follmer, Clark Della Silva, and Hiroshi Ishii. 2013. PneuUI: pneumatically actuated soft composite materials for shape changing interfaces. In Proceedings of the 26th annual ACM symposium on User interface software and technology (UIST '13), 13-22. **[Best Paper] [Best Demo]**
- [48] Lining Yao, Anthony DeVincenzi, Anna Pereira, and Hiroshi Ishii. 2013. FocalSpace: multimodal activity tracking, synthetic blur and adaptive presentation for video conferencing. In Proceedings of the 1st symposium on Spatial user interaction (SUI '13), 73-76.

- [49] Lining Yao, Sayamindu Dasgupta, Nadia Cheng, Jason Spingarn-Koff, Ostap Rudakevych, and Hiroshi Ishii. 2011. Rope Revolution: tangible and gestural rope interface for collaborative play. In Proceedings of the 8th International Conference on Advances in Computer Entertainment Technology (ACE '11), 1-6.
- [50] Xiao Xiao, Michael S. Bernstein, Lining Yao, David Lakatos, Lauren Gust, Kojo Acquah, and Hiroshi Ishii. 2011. PingPong++: community customization in games and entertainment. In Proceedings of the 8th International Conference on Advances in Computer Entertainment Technology (ACE '11), 1-6.
- [51] Li Bian, Lining Yao, and Matthew Hirsch. 2011. Queen's New Clothes. In Proceedings of the 8th International Conference on Advances in Computer Entertainment Technology (ACE '11), 1-6.

Minor Conference Papers

- [52] Fang Qin, Huai-Yu Cheng, Rachel Sneeringer, Maria Vlachostergiou, Sampada Acharya, Haolin Liu, Carmel Majidi, Mohammad Islam, and Lining Yao. 2021. Exoform: shape memory and self-fusing semi-rigid wearables. In Extended Abstracts of the 2021 CHI Conference on Human Factors in Computing Systems (CHI EA '21), 1–8.
- [53] Lingyun Sun, Jiaqi Li, Danli Luo, Ziqi Fang, Yitao Fan, Zhi Yu, Yu Chen, Deying Pan, Yue Yang, Yijun Zhao, Jianzhe Gu, Lining Yao, Ye Tao, Guanyun Wang. 2021. Fashion Design with FlexTruss Approach. In Extended Abstracts of the 2021 CHI Conference on Human Factors in Computing Systems (CHI EA '21), 1–8.
- [54] Danli Luo, Humphrey Yang, Malika Khurana, Kuanren Qian, and Lining Yao. 2021. Demonstrating Freeform Fabrication of Fluidic Edible Materials. In Extended Abstracts of the 2021 CHI Conference on Human Factors in Computing Systems (CHI EA '21), 1–4.
- [55] Lingyun Sun, Ziqian Shao, Danli Luo, Jianzhe Gu, Ye Tao, Lining Yao, and Guanyun Wang. 2020. FabricFit: Transforming Form-Fitting Fabrics. In Adjunct Publication of the 33rd Annual ACM Symposium on User Interface Software and Technology (UIST '20 Adjunct). Association for Computing Machinery, New York, NY, USA, 99–101.
- [56] Lingyun Sun, Jiaji Li, Yu Chen, Yue Yang, Jianzhe Gu, Ye Tao, Lining Yao, and Guanyun Wang. 2020. WireTruss: A Fast-Modifiable Prototyping Method Through 3D Printing. In Adjunct Publication of the 33rd Annual ACM Symposium on User Interface Software and Technology (UIST '20 Adjunct). Association for Computing Machinery, New York, NY, USA, 93–95.
- [57] Michael L. Rivera, Jack Forman, Scott E. Hudson, and Lining Yao. 2020. Hydrogel-Textile Composites: Actuators for Shape-Changing Interfaces. In Extended Abstracts of the 2020 CHI Conference on Human Factors in Computing Systems (CHI EA '20). Association for Computing Machinery, New York, NY, USA, 1–9.
- [58] Lingyun Sun, Yue Yang, Yu Chen, Jiaji Li, Guanyun Wang, Ye Tao, and Lining Yao. 2020. ShrinkyKit: 3D Printing Shrinkable Adaptations for Everyday Objects. In Extended Abstracts of the 2020 CHI Conference on Human Factors in Computing Systems (CHI EA '20). Association for Computing Machinery, New York, NY, USA, 1–7.
- [59] Lingyun Sun, Jiaji Li, Yu Chen, Yue Yang, Ye Tao, Guanyun Wang, and Lining Yao. 2020. 4DTexture: A Shape-Changing Fabrication Method for 3D Surfaces with Texture. In Extended Abstracts of the 2020 CHI Conference on Human Factors in Computing Systems (CHI EA '20). Association for Computing Machinery, New York, NY, USA, 1–7.
- [60] Eric Markvicka, Guanyun Wang, Yi-Chin Lee, Gierad Laput, Carmel Majidi, and Lining Yao. 2019. Showcasing ElectroDermis. In Extended Abstracts of the 2019 CHI Conference on Human Factors in Computing Systems (CHI EA '19). Association for Computing Machinery, New York, NY, USA, Paper VS17, 1.
- [61] Lea Albaugh, Scott Hudson, and Lining Yao. 2019. Digital Fabrication of Soft Actuated Objects by Machine Knitting. In Extended Abstracts of the 2019 CHI Conference on Human Factors in Computing Systems (CHI EA '19). Association for Computing Machinery, New York, NY, USA, Paper INT017, 1–4.
- [62] Guanyun Wang, Youngwook Do, Tingyu Cheng, Humphrey Yang, Ye Tao, Jianzhe Gu, Byoungkwon An, and Lining Yao. 2018. Demonstrating Printed Paper Actuator: A Low-cost Reversible Actuation and Sensing Method for Shape Changing Interfaces. In Extended Abstracts of the 2018 CHI Conference on Human Factors in Computing Systems (CHI EA '18). Association for Computing Machinery, New York, NY, USA, Paper D105, 1–4.
- [63] Guanyun Wang, Ye Tao, Ozguc Bertug Capunaman, Humphrey Yang, and Lining Yao. 2019. 4D Printing A-line. In Extended Abstracts of the 2019 CHI Conference on Human Factors in Computing Systems (CHI EA '19). ACM, New York, NY, USA, Paper VS16, 1-2.

- [64] Guanyun Wang, Youngwook Do, Tingyu Cheng, Humphrey Yang, Ye Tao, Jianzhe Gu, Byoungkwon An, and Lining Yao. 2018. Demonstrating Printed Paper Actuator: A Low-cost Reversible Actuation and Sensing Method for Shape Changing Interfaces. In *Extended Abstracts of the 2018 CHI Conference on Human Factors in Computing Systems (CHI EA '18)*. ACM, New York, NY, USA, Paper D105, 1-4.
- [65] Ye Tao, Jianzhe Gu, Byoungkwon An, Tingyu Cheng, Xiang 'Anthony' Chen, Xiaoxiao Zhang, Wei Zhao, Youngwook Do, Teng Zhang, and Lining Yao. 2018. Demonstrating Thermorph: Democratizing 4D Printing of Self-Folding Materials and Interfaces. In *Extended Abstracts of the 2018 CHI Conference on Human Factors in Computing Systems (CHI EA '18)*. ACM, New York, NY, USA, Paper D405, 1-4.
- [66] Guanyun Wang, Lining Yao, Wen Wang, Jifei Ou, Chin-Yi Cheng, and Hiroshi Ishii. 2015. xPrint: from design to fabrication for shape changing interfaces by printing solution materials. In *SIGGRAPH Asia 2015 Posters (SA '15)*. ACM, New York, NY, USA, Article 7, 1-2.
- [67] Hiroshi Ishii, Daniel Leithinger, Lining Yao, Sean Follmer, and Jifei Ou. 2015. Vision-Driven: Beyond Tangible Bits, Towards Radical Atoms. In *Proceedings of the 33rd Annual ACM Conference Extended Abstracts on Human Factors in Computing Systems (CHI EA '15)*. ACM, New York, NY, USA, 2495-2496.
- [68] Lining Yao, Jifei Ou, Daniel Tauber, and Hiroshi Ishii. 2014. Integrating optical waveguides for display and sensing on pneumatic soft shape changing interfaces. In *Proceedings of the adjunct publication of the 27th annual ACM symposium on User interface software and technology (UIST'14 Adjunct)*. ACM, New York, NY, USA, 117-118.
- [69] Lining Yao. 2014. Matter matters: offloading machine computation to material computation for shape changing interfaces. In *Proceedings of the adjunct publication of the 27th annual ACM symposium on User interface software and technology (UIST'14 Adjunct)*. ACM, New York, NY, USA, 29-32.
- [70] Jifei Ou, Lining Yao, Clark Della Silva, Wen Wang, and Hiroshi Ishii. 2014. bioPrint: an automatic deposition system for bacteria spore actuators. In *Proceedings of the adjunct publication of the 27th annual ACM symposium on User interface software and technology (UIST'14 Adjunct)*. ACM, New York, NY, USA, 121-122.
- [71] Lining Yao, Sayamindu Dasgupta, Nadia Cheng, Jason Spingarn-Koff, Ostap Rudakevych, and Hiroshi Ishii. 2011. Multi-jump: jump roping over distances. In *CHI '11 Extended Abstracts on Human Factors in Computing Systems (CHI EA '11)*. ACM, New York, NY, USA, 1729-1734.
- [72] Lining Yao, Sayamindu Dasgupta, Nadia Cheng, Jason Spingarn-Koff, Ostap Rudakevych, and Hiroshi Ishii. 2011. RopePlus: bridging distances with social and kinesthetic rope games. In *CHI '11 Extended Abstracts on Human Factors in Computing Systems (CHI EA '11)*. ACM, New York, NY, USA, 223-232.
- [73] Lining Yao, Sayamindu Dasgupta, Nadia Cheng, Jason Spingarn-Koff, Ostap Rudakevych, and Hiroshi Ishii. 2011. RopePlus: bridging distances with social and kinesthetic rope games. In *CHI '11 Extended Abstracts on Human Factors in Computing Systems (CHI EA '11)*. ACM, New York, NY, USA, 223-232.
- [74] Anthony DeVincenzi, Lining Yao, Hiroshi Ishii, and Ramesh Raskar. 2011. Kinected conference: augmenting video imaging with calibrated depth and audio. In *Proceedings of the ACM 2011 conference on Computer supported cooperative work (CSCW '11)*. Association for Computing Machinery, New York, NY, USA, 621-624.
- [75] Lining Yao, Yan Shi, Hengfeng Chi, Xiaoyu Ji, and Fangtian Ying. 2010. Music-touch shoes: vibrotactile interface for hearing impaired dancers. In *Proceedings of the fourth international conference on Tangible, embedded, and embodied interaction (TEI '10)*. ACM, New York, NY, USA, 275-276.

Chapters in Books

- [76] Lining Yao and Hiroshi Ishii. 2019. 3 - Hygromorphic living materials for shape changing. In S. Shawn M. Walsh, Michael S. Strano (Eds.), *Robotic Systems and Autonomous Platforms* (pp. 41-57). Woodhead Publishing.

Technical Report

- [77] Correll, Nikolaus, Ray H Baughman, Richard M. Voyles, Lining Yao and Dan Inman. "Robotic Materials." *ArXiv abs/1903.10480* (2019).

Ph.D. Thesis

- [78] Lining Yao. Shape changing composite material design for interactions. Ph.D. Thesis, Massachusetts Institute of Technology (2017).

Patents and Industrial Partnerships

Patents

- [1] Humphrey Yang, Mohammad F Islam, Carmel Majidi, Lining Yao, Dinesh K Patel, Tate Johnson, Ke Zhong, Gina Olson. Methods and Systems for Designing Reconfigurable Kinematic Devices. US Patent Application No. 18/845,842
- [2] Eric J. Markvicka, Michael D. Bartlett, Carmel Majidi, Lining Yao, Guanyun Wang, Yi-Chin Cheng, Laput, Gierad. Method of producing untethered, stretchable, and wearable electronic devices. US Patent No. 11729904B2.
- [3] Lining Yao, Danli Luo, Jianzhe Gu, Fang Qin, Guanyun Wang. Methods and devices for biomimetic hygromorphic composite. US Application No. 20220322599A1.
- [4] Lining Yao, Ye Tao, Catherine Mondoa, Jianxun Cui, Youngwook Do, Humphrey Yang, Wen Wang, Yi-Chin Lee, Claudia Berti, Elena Berti, Elena Bergamini. Four-based shape-changing food and related methods. US Application No. 20220354134.
- [5] Lining Yao, Ye Tao, Catherine Mondoa, Yi-Chin Lee, Jianxun Cui, Haolin Liu, Jasio Santillan, Wen Wang, Teng Zhang. Self-folding materials and methods, systems and devices for making the same. US Application No. 20220338514A1.
- [6] Lining Yao, Ye Tao, Guanyun Wang, Humphrey Yang, Youngwook Do, Jianxun Cui, Catherine Mondoa, Yi-Chin Lee, Wen Wang. Flour-based shape changing foods, methods, systems and devices. US Application No. 20220338526A1.
- [7] Lining Yao, Wen Wang, Jifei Ou, Chin-Yi Cheng, Guanyun Wang, Hiroshi Ishii, Daniel Wang, Helene Steiner, and Clark Della Silva. Methods and apparatus for hygromorphic shape control. US Patent No. 9931829B2.
- [8] Wen Wang, Lining Yao, Chin-Yi Cheng, Teng ZHANG, Hiroshi Ishii, Daniel Wang, and Daniel Levine. Methods and Apparatus for Shape-Changing Food. United States US Application No. 20190320705A1.
- [9] Ryuma Niyama, Lining Yao, Jifei Ou, Sean Follmer, and Hiroshi Ishii. Methods and apparatus for shape control. United States US Patent No. 10337536B2.
- [10] Jifei Ou, Lining Yao, Daniel Tauber, and Hiroshi Ishii. Methods and apparatus for layer jamming. United States US Patent No. 9664210B2.
- [11] Pranav Mistry, Sajid Sadi, Lining Yao, and John Snaveley. User gesture input to wearable electronic device involving outward-facing sensor of device. US Application No. 20160328023A1.
- [12] Pranav Mistry, Sajid Sadi, Lining Yao, John Snaveley, Eva-Maria Offenberg, Link Chun Huang, and Cathy Kim. GUI Transitions on Wearable Electronic Device. US Application No. 20140143678A1.
- [13] Pranav Mistry, Sajid Sadi, Lining Yao, John Snaveley, Eva-Maria Offenberg, Link Chun Huang, and Cathy Kim. Display screen or portion thereof with graphical user interface. US Patent No. D763288S1.
- [14] Pranav Mistry, Lining Yao, John Snaveley, Eva-Maria Offenberg, Link Chun Huang, and Cathy Kim. Transition and interaction model for wearable electronic device. European Union Patent No. EP2733597A2.

Industrial Partnership

Nike, Portland	Workshop, gift	2023
Patpat, Guangdong	Gift	2022
Accenture, California	Technology Licensing, Co-authors	2022
Accenture, California	Gift	2021
Accenture, California	Gift	2019
Barilla, Milan	Co-inventor in patent	2019
Honda, Tokyo	Sponsored Research	2018
Estee Lauder, New York	Sponsored Research	2018
Barilla, Milan	Sponsored Research	2017
Target Future coLab, Cambridge	Sponsored Research	2016
New Balance, Boston	Sponsored Research	2015

Memberships

Association for Computing Machinery
Materials Research Society
Society of Engineering Science
4D Printing Society (Director)

Professional Service

General Chair

2024, **General Co-Chair** | The ACM Symposium on User Interface Software and Technology (UIST) (**A top technical venue** in the field of human-computer interaction, by SIGCHI and SIGGRAPH)

2019, **General Co-Chair** | ACM Symposium on Computational Fabrication (SCF) (by SIGCHI and SIGGRAPH)

Program Committee Member

2025 - now, Core Editorial Board, Design and Artificial Intelligence, ScienceDirect, ISSN: 3050-7413

<https://www.keaipublishing.com/en/journals/design-and-artificial-intelligence/>

2024 - now, Academic Committee of the World Eco-Design Conference, United Nation Consultative NGO and Design+ Journal Editorial Board

2021 & 2020 & 2019 & 2018, program committee | ACM CHI

2020 & 2018 & 2016, program committee | ACM UIST

2020 | ACM Special Interest Group on Computer Graphic and Interactive Techniques

Session Chair and Host

2022, Faculty Host | “Ask-Me-Anything (AMA)” on antidisiplinary research | ACM UIST

2022, Session Chair | Society of Engineering Science (SES), 3D and 4D Printing of Multifunctional Materials

2022, Session Chair | Gordon Research Conference, Additive Manufacturing of Soft Materials

2021, Session Chair | ACM CHI

2021, Session Chair | ACM UIST

2019, Faculty Panelist | Gordon Research Conference, Complex Active and Adaptive Material Systems, Doctoral Communication Advisory panel

2016, Student Innovation Contest Chair | ACM UIST

Steering Committee

ACM UIST Steering Committee

Conference Keynote

2026, Planetary keynote speaker at RoboSoft 2026

2022, Workshop keynote at THE IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)

2021, Keynote at Symposium on Geometry Processing (SGP)

2021, Keynote at Shape Modeling International Conference (SMI)

2020, Keynote in American Physics Society (APS) march meeting

2020, Keynote at FabLearn

Workshop or Program Organizer

2025, IEEE/RSJ IROS 2025 workshop on S'MORE: Shape-Morphing Robotics via Embodied Sensing and Mechanisms

Reviewer

ACM UIST (2014 – 2022), ACM CHI (2013 - 2021), ACM SIGGRAPH (2016), ACM SIGGRAPH Asia (2017), ACM TEI (2014 - 2017), ACM DIS (2019), ACM/IEEE HRI (2021), IEEE IROS (2020), IEEE-RAS RoboSoft (2021); Nature Electronics (2021); Soft Matter (2022); Frontier (2022); Journal of Computational Design and Engineering (2022); TOCHI (2022, 2020), Science (2024), Nature Computational Science (2024), Science Advances (2024), Nature Materials (2023)

Invited Talks and Interviews

2024

- [1] **Gordon Research Conference (GRC)**, invited keynote, Robotics, Invited by Prof. Metin Sitti and Prof. Cecilia Laschi
- [2] **Gordon Research Conference (GRC)**, invited keynote, Multifunctional Materials and Structures, Invited by Prof. Chiara Daraio
- [3] **MIT Summer Geometry Initiative (SGI)**, guest lecture, Invited by Prof. Justin Solomon
- [4] Berkeley Institute of Design (BiD), invited seminar

2023

- [5] **Johns Hopkins**, Mechanical Engineering, “Sustainable Morphing Matter”, invited by Prof. Sung Hoon Kang
- [6] **London Design Biennale**, Workshop on “Self-morphing through Physics, Design and Architecture”, Invited by Prof. Benoit Roman and Prof. Eran Sharon
- [7] **4D Printing Society Conference 2023**, keynote, invited by Prof. Ali Zolfagharian
- [8] **Stanford**, Department of Mechanical Engineering
- [9] **UC Berkely**, Department of Mechanical Engineering
- [10] **Nike**, “Nike Time” festival

2022

- [11] **Princeton** Physics Department “Physics of Morphing Matter”, Invited by Prof. Pierre-Thomas Brun
- [12] **Northwestern** University Center for Robotics and Biosystems (CRB), “Robotic Morphing Materials and Structures”, invited by Prof. Sam Kriegman and Prof. Michael Rubenstein
- [13] **Johns Hopkins** Department of Civil and Systems Engineering, invited by Prof. Jochen Mueller
- [14] **Meta Reality Labs** (Redmond) Haptics, invited by Dr. Yatian Qu
- [15] **MIT Summer Geometry Initiative (SGI)**, “Computational Morphing Matter”, invited by Prof. Justin Solomon
- [16] **University of Waterloo** Mechanical Engineering, “Computational Design Sustainable Morphing Matter”, invited by Prof. Yue Hu
- [17] **Meta Reality Labs** (Seattle) Design Lunch and Learn Seminar Series, “Matter-verse”, invited by Austin Lee
- [18] **University of Pennsylvania** Pennovation Center, invited by Prof. Shu Yang
- [19] **RISD and Brown** Better World x Design, “Sustainable Design” [link](#)

2021

- [20] **National Academy of Science** Distinctive Voices, “Sustainable Bites”
- [21] **Air Force Research Laboratory**, Invited by Richard A. Vaia
- [22] **Symposium on Geometrical Processing (SGP)** Keynote, “Morphing Matter, the Confluence of Geometry and Force”, invited by Prof. Keenan Crane
- [23] **Shape Modeling International Conference (SMI)** Keynote
- [24] **International Polysaccharides Conference (EPNOE)** Keynote
- [25] **Amazon**, “Sustainable Morphing Matter”
- [26] **University of Colorado, Boulder** Atlas Institute, “Sustainable Morphing Matter”, invited by Prof. Ellen Do
- [27] **Parsons**, “Making Friends with Morphing Matter”, Invited by Prof. Richard The
- [28] **MIT Media Lab**, Invited by Prof. Hiroshi Ishii
- [29] **Science Friday**, interview and documentary

2020

- [30] **FabLearn** at Columbia University Teachers College, keynote
- [31] **IEEE** Soft Robotics podcast, interview
- [32] **American’s Test Kitchen** Kids podcast, interview
- [33] **MIT Media Lab**

2019

- [34] **South by South West (SXSW)**, Intelligent Future Track – “Morphing in the Future”
- [35] **Stanford**, Human Computer Interaction Seminar on “Morphing Matter, a Materialized Interface”, Invited by Prof. Michael Bernstein
- [36] **Georgia Institute of Technology**, College of Computing, Invited by Prof. Gregory Abowd
- [37] **Google**, “Design is Curious”
- [38] **3D Printing Symposium**, invited talk
- [39] **Voice of America**, interview
- [40] **University of Washington** and **Microsoft Research** Summer Institute, “The Future of Fabrication”

2018

- [41] **Techfestival** and **IKEA Space 8**, Copenhagen, Denmark
- [42] **Ars Electronica**, Linz, Austria
- [43] **Fluxible**, Waterloo, Canada
- [44] **UX Week**, San Francisco, CA, USA
- [45] **HP** Research, Palo Alto, CA, USA
- [46] **Science Friday** and **NPR**, Pittsburgh, PA, USA

[47] **United Nation** Industrial Development Organization, World Eco Conference

2017

[48] **Cornell University**, School of Human Ecology, invited by Prof. Jintu Fan and Dr. Lihong Lao

[49] **Temple University**, Tyler School of Art, invited by Prof. Andrew John Wit

[50] **Syracuse University**, Department of Aerospace and Mechanical Engineering Department, invited by Prof. Teng Zhang

[51] **Meet the Media Guru**, Milan, Italy

[52] **Wired festival**, London, UK

[53] **PopTech**, Maine, USA

2013-2016

[54] **Harvard**, Origins of Life Initiative

[55] **Stanford**, Bioengineering

[56] **University of Tokyo**, EE, invited by Prof. Yoshihiro Kawahara

[57] **Keio University**, invited by Prof. Yasuaki Kakehi

[58] **Waseda University**

[59] **reThink Food** cohosted by Culinary Institute of America and the MIT Media Lab, Napa County, CA, USA.

[60] **Wired UK** fellow and invited speaker in Wired festival in London, UK.

[61] **Tokyo Designers' Week**, Tokyo, Japan.

[62] **MIT Museum**. Cambridge, MA, USA.

[63] **Aspen Ideas Festival**. Aspen, CO, USA.

Research Appearing in Selected Books

Interactive Futures (2023). Philip Yuan, Neil Leach and Behnaz Farahi. Birkhäuser Verlag GmbH, Basel, Switzerland.

The Ultimate Guide to Informed Wearable Technology (2022). Christine Farion. Packt Publishing Ltd. Birmingham, UK.

Weaving Fire into Form: Aspirations for Tangible and Embodied Interaction (2022). Brygg Ullmer, Orit Shaer, Ali Mazalek and Caroline Hummels. Morgan & Claypool. Associate for Computing Machinery. New York, USA.

Robotic Systems and Autonomous Platforms (2018). Shawn M. Walsh, Michael S. Strano. Elsevier-Woodhead Publishing. Cambridge, MA.

Active Matter (2017). Skylar Tibbits. MIT Press. Cambridge, USA.

Practical Fashion Tech: Wearable Technologies for Costuming, Cosplay, and Everyday (2016). Joan Horvath, Lyn Hoge and Rich Cameron. Apress. California, UK.

Outreach & Service

2025, Contributing article to a science magazine for children named Araştırmacı Çocuk (Young Researchers), published by Araştırmacı Çocuk Merkezi (Children's Research Center, <http://www.acmtr.org/>) based in Ankara, Türkiye.

2025, Participating in the Berkeley Engineering Design Scholar program as a faculty host. The program aims to increase diversity in the field of design and provide underrepresented students with research experience.

2025, Morphing Matter Lab volunteered to help host the annual 3D printing workshop for PREP (Pre-Engineering Program)/TREP (Transfer Pre-Engineering Program)/ME (Mechanical Engineering) Scholars students.

2025, Lab tour host for the Berkeley Lawrence Hall of Science teen research program on [Bioinspired Design](#)

2025, Invited faculty speaker at the ME Cal Day Infosession, welcoming the newly admitted undergraduates to UC Berkeley Mechanical Engineering.

2025, Invited panelist at the High School Shadowing Coffee Chat, a biannual event for around 70 Bay Area high school students, organized by the Service Committee of the Engineering Honor Society, Tau Beta Pi.

2025, Invited panelist as an NSF CAREER awardee at the Annual NSF CAREER Award Panel, organized by Berkeley Research Development Office, Office of the Vice Chancellor for Research at UC Berkeley.

2025, Invited speaker to share career path and research at the [High School Engineering Program \(HSEP\)](#) hosted by UC Berkeley Society of Women Engineers (SWE)

2024-2025, Initiating and hosting Berkeley Tangibles Tea Party, with participation from ME, EECE, MSE, Architecture, MDES

2024-2025, Jacobs Institute of Design, Co-Curriculum Working Committee, monthly meeting
 2024, Faculty presentation and lab tour host for UCB ME Alum event
 2024-2025, Design Track proctor for ME PhD's Preliminary Examination Spring 2025
 2024, Overnight Host Program, "Snack Time with Professors". Hosted by UC Berkeley Society of Women Engineers. The program is a one-day, one-night event that gives new Cal admits (women and non-binary-identifying) intending to study in the STEM field the opportunity to explore Berkeley and the opportunities Cal has to offer.
 2022, "Ask-me-anything" session host at ACM UIST
 2022, New faculty recruiting committee
 2022, Judge for TartanHacks, a student organized hackathon at CMU
 2021, Community Pandemic Safety Ambassador
 2021, CMU ASA x Asian Leadership Council Faculty Panelist 2020 & 2019 & 2018, Ph.D. admission committee member for Human-Computer Interaction Institute.
 2020, Course committee member for new minor degree in "Soft Technologies" under CMU Integrative, Design, Arts, and Technology (IDeATe) program.
 2019, Faculty hiring committee member for Human-Computer Interaction Institute.
 2019, Panel speaker for "Human-Computer Interaction Today" at HCII 25 celebration.
 2019, Social co-host for the party of HCII 25 celebration.
 2018, CS Women Roundtable at CMU.
 2018, Invited speaker at CMU CS Academy for high school students.
 2018, Faculty advisor for CMU campus fashion show "Lunar Gala".

Funding

Since Sep 2017, I have been involved in funded projects of **\$15.8 million**, among which, **\$4.2 million** is to directly support my group's research.

Reviewing: NSF Panel Reviewer 2021, 2022

2023-2024	NSF	PI	Connected Community	\$ 150,000
2023-2028	Army Research Office MURI	Co-PI (with Wood, Feinberg, Karni, Hester, Rivnay)	MURI: SSyMBioTIC - Self-sustaining sensorized muscle-based biohybrid technologies with integrated control	\$ 6,250,000
2021-2026	NSF IIS	PI	CAREER: Interactive Morphing Materials	\$566,000
2020-2024	NSF IIS	PI (with Collins)	Fostering Aptitudes, Attitudes and Aspirations of Girls in STEM Through 4D Printing of Robotic Materials	\$711,640
2021-2024	NSF IIS	Co-PI (with Martelaro, Holstein)	RETTL: Learning to Collaborate: Supporting Designers in Learning to Co-create with AI for Complex Computational Design Tasks	\$850,000
2021-2023	NSF ERC	Co-PI (with Majidi, Islam, Fedder, Yuan)	ERC Planning: Planning Grant: Engineering Research Center for Symbiotic Systems	\$100,000
2019-2022	NSF ERC	Co-PI (with Yang, Dion, Pearson, Kamien)	Planning Grant: Engineering Research Center for Convergence of Scalable and Sustainable Digital Fabrication of Smart Textiles	\$100,000
2019-2024	Airforce Research Lab	Co-PI (with Holms, Rohrer, DeGraef, Jayan, Bockstaller, Rollett, Chi, Kara, Singh, Poczos)	Data-Driven Discovery of Optimized Multifunctional Material Systems Center of Excellence (D3OM2S CoE)	\$5,000,422

2021-2022	Portugal Foundation for Science and Technology	PI (with Majidi; Tavakoli)	Human-AI Codesign of Robotic & Personalized Compliant Exoskins for Physical Exercises, Prosthesis & Rehabilitation	\$100,000
2020-2021	The US Army GVSC	Co-PI (with Martelaro)	Designing multimodal explanatory interfaces for effective and trustworthy human-robot teaming	\$197,653
2020-	Accenture	PI	Environmental Responsive Smart Material Systems	\$100,000
2019-	Accenture	PI	Natural hygromorphic actuators	\$130,281
2022-	Patpat	PI	Responsive fabrics	\$250,000
2020-2022	CMU Moonshot	PI (with Islam)	Morphing Body Supports that Self-heal and Reconfigure	\$150,000
2021-2023	CRA and NSF CCC	PI	Computing Innovation Fellow	\$255,214
2019-2020	Pennsylvania Manufacturing Futures Initiative	PI (with Islam)	Computationally Guided Additive Manufacturing of Carbon Nanotube Composite Based Actuators	\$50,597
2019-2020	CMU Manufacturing Future Initiative (MFI)	Co-PI (with Zhang)	SimuLearn: Combining Machine Learning, Mechanical and Geometrical Simulation for the Inverse Design and Manufacture of Self-Assembling Fiber-Reinforced Composites	\$111,645
2019-2020	CMU MFI	Co-PI (with Islam)	Healer: Computationally Guided Additive Manufacturing of Electrically-actuated Self-healing Robotic Materials	\$111,645
2019-2021	CMU MFI	PI	Postdoc fellowship award	\$200,000
2018-2019	Estee Lauder	PI	PrInterFacial: 4D Hyper-Personalized Sheet Masks with Targeted Actives Delivery	\$154,000
2019-2021	Carnegie Bosch Institute Research Award	Co-PI (with Islam)	Computationally Guided Additive Manufacturing of Self-Healing Actuators and Sensors	\$242,506
2018-2019	Honda	PI (with Zhang)	4D Printing of Self-folding Thermoplastic Structures for Honda Applications	\$44,000
2017-2018	Barilla	PI	4D Printed Shape Changing Pasta	\$150,000

Teaching

For my contributions to inclusive teaching practices at CMU, I was chosen as the CMU **Provost's Inclusive Teaching Fellow** 2021-2022.

05-499/899	Sustainable Design: Materials, Artifacts and Computational Tools	Fall 2023
	<i>electives, main instructor & course developer ca. 20 students (undergrad and grad)</i>	
	This course is an interdisciplinary exploration of sustainable design principles, materials science and engineering, consumer factors, and computational tools used in creating sustainable artifacts. Students will engage in critical analysis of existing designs and explore alternative designs for a more sustainable future.	
05-499/899	Inclusive Tangible and Material Interfaces	Spring 2022
	<i>electives, main instructor & course developer ca. 30 students (undergrad and grad)</i>	

This course is a hybrid of lecture and hands-on lab course in which students learn the science and design principles of tangible and morphing materials and interfaces. In parallel, inclusive design guidelines will be introduced and practiced for the final project.

05-499/899 Morphing Materials: from Programmable to Learning Matter Fall 2020
electives, main instructor & course developer ca. 30 students (undergrad and grad)

This course teaches the designing, printing and engineering of morphing matter- the creation of new materials that can change their shapes. The course consists of both design and technical lectures, light weight hands-on lab sessions, and two interdisciplinary team projects.

**05-392/692 Interaction Design Overview Fall 2021, 2020
Spring 2021**
Primary, co-instructor with Karen Kornblum, ca. 40 students (undergrad, master)

This studio course offers a broad overview of communication and interaction design. Students will learn design methodologies such as brainstorming, sketching, storyboarding, wire framing, and prototyping. Students learn to take a human-centered design approach to their work.

**05-651 Interaction Design Studio A & B Fall 2022, 2018
Spring 2023, 2019, 2018**
Primary, co-instructor with Skip Shelly, Paul Pangaro, Karen Kornblum, Laura Vinchesi, ca. 120 students (undergrad, master, Ph.D.)

This two-semester advanced studio course introduces students to design thinking and the basic practices of interaction design. We follow a human-centered design process that includes research, concept generation, prototyping, and refinement.

Advising

Ph.D. Student Supervised

- [1] 2020 – Present, Michael Vinciguerra (Mechanical Engineering, College of Engineering)
- [2] 2020 – Present, Ke Zhong (Material Science and Engineering, College of Engineering)
- [3] 2019 – Present, Humphrey Yang (Human-Computer Interaction Institute, School of Computer Science)
- [4] 2018 – Present, Jianzhe Gu (Human-Computer Interaction Institute, School of Computer Science)
- [5] 2017 – Present, Lea Albaugh (Human-Computer Interaction Institute, School of Computer Science)

Postdoctoral Scholars Supervised

- [6] 2024 – Present, David, Jourdan (Computer Graphics)
- [7] 2021 – Present, Qiuyu, Lu (Human Computer Interaction)
- [8] 2021 – 2022, Adriane F. Minori (Robotics / Soft Materials)
- [9] 2020 – 2023, Dinesh Patel (Material Science / Chemistry)
- [10] 2017 – 2020, Guanyun Wang (Human Computer Interaction / Design)
- [11] 2017 – 2019, Ye Tao (Human Computer Interaction / Design)

Ph.D. Thesis and Qualifying Exam Committees

- [12] 2025, Danli Luo, Human Centered Design & Engineering, UW, USA (PhD Quals)
- [13] 2025, Taylor Waddell, Mechanical Engineering, UC Berkeley, USA (PhD Quals)
- [14] 2025, X Sun, Mechanical Engineering, UC Berkeley, USA (PhD Quals)
- [15] 2025, Nicole Michelle Goridkov, Mechanical Engineering, UC Berkeley, USA (PhD Quals)
- [16] 2025, Saul Schaffer, Mechanical Engineering, Carnegie Mellon University, USA
- [17] 2025, Kuanren Qian, Mechanical Engineering, Carnegie Mellon University, USA
- [18] 2024, Ke Zhong, Material Science and Engineering, Carnegie Mellon University, USA
- [19] 2024, Jianzhe Gu, Human-Computer Interaction Institute, Carnegie Mellon University, USA
- [20] 2024, Humphrey Yang, Human-Computer Interaction Institute, Carnegie Mellon University, USA
- [21] 2024, Lea Albaugh, Human-Computer Interaction Institute, Carnegie Mellon University, USA
- [22] 2024, Danli Luo, Human Centered Design and Engineering, Washington University, USA
- [23] 2024, Kuanren Qian, Mechanical Engineering, Carnegie Mellon University, USA
- [24] 2024, Mason Zadan, Mechanical Engineering, Carnegie Mellon University, USA
- [25] 2024, Saul Schaffer, Mechanical Engineering, Carnegie Mellon University, USA

- [26] 2022, Wenhuan Sun, Mechanical Engineering, Carnegie Mellon University, USA
- [27] 2022, Mason Zadan, Mechanical Engineering, Carnegie Mellon University, USA
- [28] 2022, Tian Gao, Physics, CNRS/ESPCI/Sorbonne U./U. Paris, France
- [29] 2022, Sai Swaminathan, Human-Computer Interaction Institute, Carnegie Mellon University, USA
- [30] 2021, Yuxuan Yu, Mechanical Engineering, Carnegie Mellon University, USA
- [31] 2021, Michael Rivera, Human-Computer Interaction Institute, Carnegie Mellon University, USA
- [32] 2020, Clement Zheng, ATLAS Institute, University of Colorado Boulder, USA
- [33] 2020, Yang Zhang, Human-Computer Interaction Institute, Carnegie Mellon University, USA
- [34] 2019, Çağlar Genç, KOC ÜNİVERSİTESİ, Institute of Social Sciences, Turkey

Undergraduate and Master Students Supervised

- [64] 2022 – 2023, Sunniva Liu (Undergraduate student in Psychology and HCI at CMU)
- [65] 2022 – 2024, Mengtian Gan (Master student in Material Science and Engineering at CMU)
- [66] 2022 – 2023, Yibo Fu (Master student in Design, Parsons)
- [67] 2022 – 2023, Di Wu (Master student in Architecture at CMU)
- [68] 2022 – 2024, Reece Whatmore (Undergraduate student in Material Science and Engineering at CMU)
- [69] 2022 – 2023, Joey Wang (Undergraduate student in Computational Biology and Computer Science at CMU)
- [70] 2021 – 2023, Tate Johnson (Undergraduate student in Product Design at CMU; NSF REU)
- [71] 2021 – 2023, Melinda Chen (Undergraduate student in Material Science and Engineering at CMU)
- [72] 2020 – 2023, Ziwen Ye (Undergraduate student in Material Science and Engineering; currently master at CS at CMU)
- [73] 2022 – 2022, Lydia Yang (Undergraduate student in Computational Biology and Computer Science at CMU)
- [74] 2022 – 2022, Zoe Lee (Undergraduate student in Product Design, RISD; NSF REU)
- [75] 2021 – 2021, Ashley Burbano (Undergraduate student in Design at CMU)
- [76] 2020 – 2021, David Perry (Undergraduate student in self-defined major, kinetic textile direction at CMU)
- [77] 2020 – 2021, Maria Vlachostergiou (Master student in Computational Design at CMU)
- [78] 2020 – 2021, Stella Shen (Master student in Computational Design; currently Ph.D. at MIT)
- [79] 2020 – 2021, Kexin Lu (Master student in Computational Design at CMU)
- [80] 2021 – 2022, Sophie Paul (Undergraduate student in Material Science and Engineering; currently at UCSB)
- [81] 2019 – 2021, Cathy Fang (Undergraduate student in Mechanical Engineering; currently graduate student at MIT Media Lab)
- [82] 2019 – 2020, Matthew McGehee (Undergraduate student in Design at CMU)
- [83] 2019 – 2020, Jasio Santillan (Master student in Material Science and Engineering; currently at Tufts University)
- [84] 2019 – 2020, Harshika Jain (Master student in Product Design; currently working at McKinsey)
- [85] 2019 – 2020, Olaitan Adisa (Master student in Information Technology)
- [86] 2019 – 2020, Rachel Sneeringer (Master student in Mechanical Engineering; currently at Microsoft)
- [87] 2018 – 2020, Fang Qin (Master student in Electrical Computer Engineering; current master student at Stanford)
- [88] 2018 – 2020, Yi-Chin Lee (Master student in Computational Design; current PhD candidate at University of Michigan)
- [89] 2018 – 2020, Haolin Liu (Master student in Mechanical Engineering at CMU)
- [90] 2018 – 2019, Rahul Sharma (Master student in Mechanical Engineering at CMU)
- [91] 2017 – 2019, Jack Forman (Undergraduate student in Material Science and Engineering; current graduate student at MIT Media Lab)
- [92] 2017 – 2019, Jenny Hu (Undergraduate student in Design; current graduate student at Royal College of Art)
- [93] 2017 – 2019, Catherine Mondoa (Undergraduate student in Material Science and Engineering; current graduate student at Royal College of Art)
- [94] 2017 – 2019, Marissa Lu (Undergraduate student in Design; currently at Apple)
- [95] 2017 – 2019, Ty Van de Zande (Undergraduate student in Design; current PhD candidate at University of North Carolina)
- [96] 2017 – 2019, Mohan Yeh (Master student in costume design)
- [97] 2017 – 2019, Ozguc Bertug Capunaman (Master student in computational design; current PhD candidate at Penn State University)
- [98] 2017 – 2019, Adrian Galvin (Master student in design; currently at NASA)
- [99] 2017 – 2019, Taylor Tabb (Master student in Mechanical Engineering)

- [100] 2017 – 2019, Zeyu Yan (Master student in Mechanical Engineering)
 [101] 2017 – 2018, Melodie Yashar (Master student in HCII; currently at NASA)

Supplemental: Press & Media

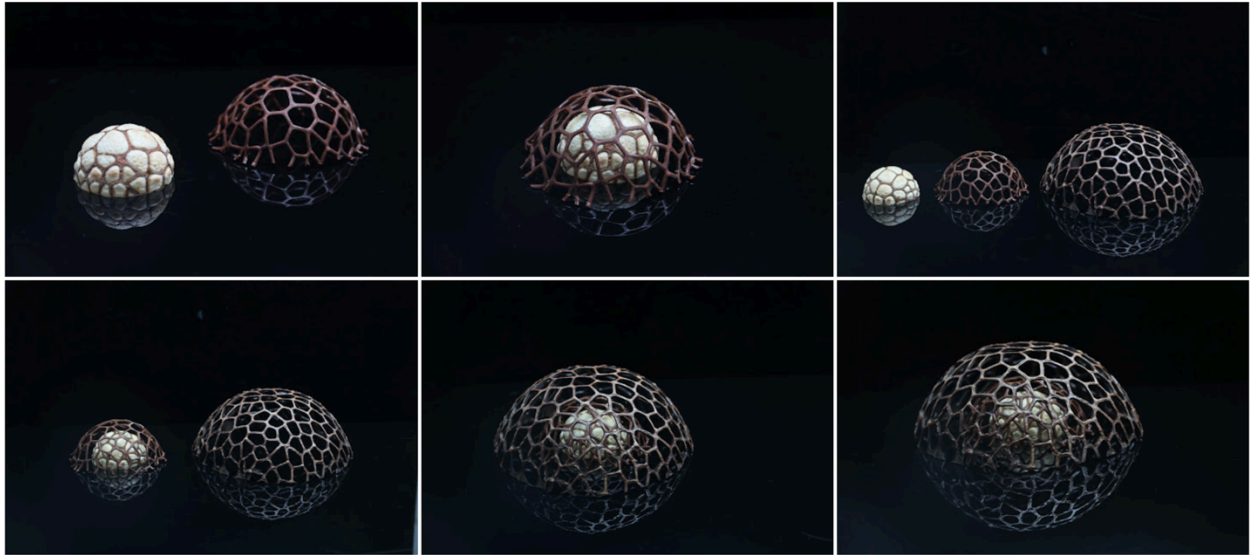
2023, CNN, “Powered by rain, this seed carrier could help reforest the most remote areas”
 2023, World Economy Forum. “These robots can seamlessly shift from walking to swimming”.
 2023, BBC, The Naked Scientist. “Self-planting, drill shaped seeds”.
 2023, Science Friday. “A New Twist On Sowing Seeds”.
 2023, Nature News. “Self-burying robot morphs wood to sow seeds”
 2023, NewScientist. “Artificial seed casing made from wood buries itself when wet”.
 2023, Plantae, American Society of Plant Biologist. “Inspired by nature: Self-burying seeds”.
 2023, CMU News. “Engineered Magic: Wooden Seed Carriers Mimic the Behavior of Self-Burying Seeds”.
 2023, Penn Today. “Engineered magic: Wooden seed carriers mimic the behavior of self-burying seed”.
 2023, Nature Biotechnology, Research Highlight. “Plant-inspired design of self-burying seed carrier”.
 2023, Tulsa World. “These self-burying seed carriers can plant themselves after being dropped from the sky”
 2022, Vogue Business. “Living, breathing, wearable plants? Inside the rise of biocouture.”
 2022, Fast Company's 2022 Innovation by Design Awards.
 2022, Hackaday. “ElectriPop Turns Cut Mylar Into Custom 3D Structures.”
 2021, New York Times. “The engineers are in the kitchen, again.”
 2021, Science.org. “A new twist on pasta dough could reshape food manufacturing.”
 2021, Fast Company. “Watch this flat-pack pasta transform into shapes as it boils.”
 2021, NPR 90.5 WESA. “CMU Researchers Play with Pasta Shapes to Save Packaging”
 2021, National Geographic. “2D food to reduce the use of plastic.”
 2021, ABC News. “Groovy flat-packed pasta could help revolutionize food production.”
 2021, Science Friday. “A Bowl Full Of Pasta Engineering.”
 2021, Smithsonian Magazine. “Mighty Morphing ‘Flat-Pack’ Pasta Changes Shape in Boiling Water.”
 2021, BBC.
 2021, NEXTpittsburgh. “The pasta that changes shape and helps save the planet.”
 2021, PBS.
 2021, UK Daily Mail. “Will ‘flat-pack’ pasta send Italians into boiling rage?”
 2021, ScienceNews. “Morphing noodles start flat but bend into curly pasta shapes as they’re cooked.”
 2021, Designboom. “this flatpack pasta will morph into all sorts of 3D shapes when cooked.”
 2021, Inverse. “IKEA-LIKE PASTA IS THE EARTH-FRIENDLY FOOD OF THE FUTURE.”
 2021, Physics World. “‘Flat-pack pasta’ morphs into 3D shapes when cooked.”
 2021, NewScientist. “Flat pasta that morphs into 3D shapes when cooked saves on packaging.”
 2021, CNET. “This strange, flat pasta transforms into 3D shapes as you cook.”
 2021, Anthropocene Magazine. “Researchers experiment with “morphing” food to enable more sustainable packaging. Behold, flat-packed 3D pasta.”
 2021, Hackaday. “Flat-Pack Pasta: Like Ikea Furniture Without The Weird Wrench.”
 2020, History Channel. “This insane robot goop heals itself like the Terminator.”
 2020, CMU News. “Students studies movement in fashion’s future.”
 2020, CMU News. “Self-Healing Devices Gain or Regain Function After Being Cut.”
 2020, CMU News. “The future of AI is female.”
 2020, Hackaday. “Soon... Inkjet Your Circuit Boards”
 2019, TechCrunch. “CMU uses knitting machines to make soft robots that hug.”
 2019, CMU News. “Knit 1, Purl 2: Assembly Instructions for a Robot?”
 2019, TechXplore. “Researchers make soft, actuated objects using commercial knitting machines.”
 2019, Fast Company. “The Band-Aid of the future knows when you’re healed.”
 2019, Dezeen. “ElectroDermis researchers make stretchy wearable tech that sticks to the skin.”
 2019, Designboom. “electrodermis is a fully-untethered, stretchable and customizable electronic bandage”
 2019, AI MED. “The wearable of tomorrow.”
 2019, Printed Electronic World.
 2019, New Scientist. “4D knitting makes rabbits that cuddle and lampshades that move.”
 2019, ZDNET. “Mesmerizing plush toy robots made on a knitting machine.”
 2019, CMU News. “One-Dimensional Objects Morph Into New Dimensions.”

2019, AXIS Japan. "Carnegie Mellon University lab reveals its manufacturing method."
 2019, Ars Electronica. "Printed Paper Actuator Morphing Matter Lab at Carnegie Mellon University."
 2018, Wired. "Prepare to Be Hypnotized By These Delicate Paper Robots"
 2018, Interesting Engineering. "This Budget 3D Printer Can Build Unique Shapes that Fold."
 2018, Discover Magazine. "These Robot Claws Are Made From Paper"
 2018, NPR News. "CMU Researchers Make Paper Move On Its Own Thanks To A Super Thin Conductive Layer."
 2018, Futurity. "WATCH: HEAT MAKES PAPER 'ROBOTS' BEND AND CRAWL."
 2018, Science Daily. "Specially prepared paper can bend, fold or flatten on command."
 2018, CMU News. "Actuation Gives New Dimensions to an Old Material."
 2018, Futurity. "3D-printed plastic folds itself into amazing shapes."
 2018, Science Friday. "No Assembly (Or Hardware) Required."
 2018, Engineering. "Create Self-Folding Materials Thanks to Common 3D Printing Defect."
 2017, MIT News. "Researchers engineer shape-shifting noodles".
 2017, The Washington Post. "MIT researchers use bacteria to create workout clothes that cool the sweaty body."
 2017, CNN.
 2017, Popular Science. "MIT researchers want to make a dumpling that can fold itself."
 2017, Dezeen. "MIT researchers create flat-pack food that takes shape in water."
 2017, Designboom. "MIT designs moisture-responsive gym gear to cool you down."
 2017, Boston Globe. "MIT researchers develop a shape-shifting pasta."
 2016, MIT News. "A living, breathing textile aims to enhance athletic performance."
 2016, Bloomberg. "BioLogic, a Shape-Changing Fabric That Vents."
 2015, Wired. "This Living Clothing Morphs When You Sweat."
 2015, Wired UK. "How Lining Yao adapted bacteria into living clothing and biomaterials."
 2015, Wired UK. "This sportswear peels away when you're hot and sweaty."
 2015, Discovery News.
 2015, Dezeen. "MIT Media Lab's BioLogic material opens and closes in response to humidity."
 2015, Yahoo News. "Bacteria-Powered Shirt Morphs When the Wearer Sweats."
 2015, CNBC. "What's with these critters in workout clothes?"
 2015, Fast Company. "This Shape-Shifting Clothing Is Alive—And Powered By Bacteria."
 2015, Creative Application. "Living nanoactuators yield interfaces that are grown, not manufactured."
 2015, Gizmodo. "MIT Is Growing Living Bacteria Into a Second Skin That Reacts To Your Sweat."
 2015, Smithsonian Innovation. "When You Sweat, Vents in These Clothes Automatically Open."
 2015, Interesting Engineer.

Supplemental: Other Art & Design Activities

Culinary Art

I was a stagiaire in a culinary lab dedicated to making food in new ways. I invented techniques to make inflatable chocolate bread.



Cinemaphotography and Directing

I love directing and producing films. I was commissioned to direct a documentary by Ars Electronica in Linz, to reflect my team's working and living during the pandemic. I also worked with dancers from Boston Ballet Company for a dance video that was labeled as Vimeo "staff pick".



Art Curation

I like art curation. This was an exhibition I curated for MIT Media Lab 30's anniversary.



