Liang He

Assistant Professor, Department of Computer Science
Director, Design and Engineering for Making (DE4M) Lab
Erik Jonsson School of Engineering and Computer Science
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Research Interests

The primary focus of my research in Human–Computer Interaction (HCI) is digital fabrication, aiming to enable customizable and personalized experiences through new pipelines, techniques, and devices that integrate computational and physical intelligence. In my research, I emphasize prototyping and tinkering as processes to explore how people might interact with the physical world across diverse domains, including making, haptics, accessibility, and education. The current research directions include:

- Computational design and AI-assisted tools for creative tasks
- Streamlined making pipelines for personal fabrication
- Intelligent physical agents for human body-centered and environmental-scale interfacing and interaction

Employment

8/2025 **Assistant Professor (tenure-track)**
University of Texas at Dallas, Department of Computer Science
Director of Design & Engineering for Making (DE4M) Lab

6/2025–8/2025 **Visiting Associate Professor**
Keio University, Department of Information and Computer Science
Hosted by Prof. Koya Narumi

8/2022–5/2025 **Assistant Professor (tenure-track)**
Purdue University, Department of Computer Graphics Technology

10/2020–12/2020 **Research Intern** *with Kris J. Erickson and Rafael 'Tico' Ballagas*
3D Print Lab, HP Labs, Palo Alto, CA

6/2019–9/2019 **Research Intern** *with Rafael 'Tico' Ballagas*
Artificial Intelligence & Emerge Computing Lab, HP Labs, Palo Alto, CA

6/2016–8/2016 **Research Intern** *with Rob DeLine and Saleema Amershi*
Microsoft Research, Redmond, WA

5/2014–8/2014 **Research Intern** *with Ellen Yi-Luen Do and Beryl Plimmer*
Keio-NUS CUTE Center, Singapore

Education

8/2022 **Ph.D., Computer Science & Engineering,** *University of Washington, Seattle*
Dissertation: Fabricating Kinetic Objects with 3D Printable Spring-Based Mechanisms for Interactivity
Advisor: Jon E. Froehlich
Committee members: Jennifer Mankoff, Adriana Schulz, and Nadya Peek
(Transferred from the University of Maryland, College Park to UW in 2017)

5/2015 **M.S., Computational Design,** *Carnegie Mellon University, Pittsburgh*
Thesis: SqueezaPulse - Adding Interactive Input Using Passive Pulses of Air

5/2013 **M.S., Computer Science and Technology,** *University of Chinese Academy of Sciences*
Thesis: A Tangible Approach for Storytelling

5/2010 **B.Eng, Software Engineering,** *Beihang University (BUAA)*

Publications

My students and myself are underlined.

Conference Papers

2026 [C.19] **InvisIto: Weaving Unobtrusive Infrared Markers for Ubiquitous Textile Interaction.** Hsuanling Lee, Hal Sugiyama, Tian Min, Hanako Fujino, Mayuka Kuwana, Yuta Sugiura, Mustafa Doga Dogan, Liang He, and Koya Narumi. In *Proceedings of the 39th Annual ACM Symposium on User Interface Software and Technology (UIST '26)*.

2026 [C.18] **Not Seeing the Whole Picture: Challenges and Opportunities in Using AI for Co-Making Physical, DIY-AT for People with Visual Impairments.** Ben Kosa, Hsuanling Lee, Jasmin Li, Sanbrita Mondal, Yuhang Zhao, and Liang He. In *Proceedings of the 2026 CHI Conference on Human Factors in Computing Systems (CHI '26).*

2026 [C.17] **AgentCoach: LLM-Based Adaptive Coaching Feedback for Motor Skill Learning.** Dizhi Ma, Jiakun Yu, Xinyi Wang, Xiyun Hu, Liang He, Sooyeon Jeong, and Karthik Ramani. In *Proceedings of the 2026 CHI Conference on Human Factors in Computing Systems (CHI '26).*

2026 [C.16] **FluxLab: Creating 3D Printable Shape-Changing Devices with Integrated Deformation Sensing.** Hsuanling Lee, Jiakun Yu, Shurui Zheng, Te-Yen Wu, and Liang He. In *Proceedings of the Twentieth International Conference on Tangible, Embedded, and Embodied Interaction (TEI '26).*

2025 [C.15] **4D Leaf Circuits: Integrating Self-folding Origami and Conductive Leaf Transfer for Freeform Circuits.** Yutaro Nakaya*, Ko Fujino*, Liang He, and Koya Narumi. In *Proceedings of the ACM Symposium on Computational Fabrication (SCF '25).*

2025 [C.14] **3Duino: A Low-Barrier Platform for Prototyping Interactive 3D-Printed Devices.** Yonghao Shi, Zejia Cai, Liuyi Chen, Yuning Su, Liang He, Xing-Dong Yang, and Te-Yen Wu. In *Proceedings of the ACM Symposium on Computational Fabrication (SCF '25).*

2025 [C.13] **A11yShape: AI-Assisted 3-D Modeling for Blind and Low-Vision Programmers.** Zhuohao (Jerry) Zhang, Haichang Li, Chun Meng Yu, Faraz Faruqi, Junan Xie, Gene S-H Kim, Mingming Fan, Angus Forbes, Jacob O. Wobbrock, Anhong Guo, and Liang He. In *Proceedings of the 27th International ACM SIGACCESS Conference on Computers and Accessibility (ASSETS '25).*

2025 [C.12] **"I Want to Use Technology to Help Farmers in the Future": Enhancing Children's Understanding of Farming through Tangible User Interfaces and Embodied Interaction.** Yili Wen, Jiaxin Wang, Hongni Ye, Liang He, Min Fan, Xin Tong. In *Proceedings of the 24th Annual ACM Interaction Design and Children Conference (IDC '25).*

2024 [C.11] **MobiPrint: A Mobile 3D Printer for Environment-Scale Design and Fabrication.** Daniel Campos Zamora, Liang He, and Jon E. Froehlich. In P*roceedings of the 37th Annual ACM Symposium on User Interface Software and Technology (UIST '24).*

2023 [C.10] **3D Printing Magnetophoretic Display.** Zeyu Yan, Hsuanling Lee, Liang He, and Huaishu Peng. In P*roceedings of the 36th Annual ACM Symposium on User Interface Software and Technology (UIST '23).*

2022 [C.9] **Kinergy: Creating 3D Printable Motion using Embedded Kinetic Energy.** Liang He, Xia Su, Huaishu Peng, Jeffrey I. Lipton, and Jon E. Froehlich. In *Proceedings of the 35th Annual ACM Symposium on User Interface Software and Technology (UIST '22).*

[C.8] **FlexHaptics: A Design Method for Haptic Inputs Using Flat Compliant Structures.** Hongnan Lin, Liang He, Fangli Song, Yifan Li, Tingyu Chen, Clement Zheng, Wei Wang, and HyunJoo Oh. In *Proceedings of the 40th Annual ACM Conference on Human Factor in Computing Systems (CHI '22).*

2021 [C.7] **HulaMove: Using Commodity IMU for Waist Interaction.** Xuhai Xu, Jiahao Li, Tianyi Yuan, Liang He, Xin Liu, Yukang Yan, Yuntao Wang, Yuanchun Shi, Jennifer Mankoff, and Anind K. Dey. In *Proceedings of the 39th Annual ACM Conference on Human Factors in Computing Systems (CHI '21).*

2019 [C.6] **Ondulé: Designing and Controlling 3D Printable Springs.** Liang He, Huaishu Peng, Michelle Lin, Ravikanth Konjeti, François Guimbretière, and Jon E. Froehlich. In *Proceedings of the 32nd Annual ACM Symposium on User Interface Software and Technology (UIST '19).*

2017 [C.5] **MakerWear: A Tangible Approach to Interactive Wearable Creation for Children.** Majeed Kazemitabaar, Jason McPeak, Alexander Jiao, Liang He, Thomas Outing, and Jon E. Froehlich. In *Proceedings of the 35th annual ACM conference on Human factors in computing systems (CHI '17).*
Best Paper Award [Top 1%]

[C.4] **SqueezaPulse: Adding Interactive Input to Fabricated Objects Using Corrugated Tubes and Air Pulses.** Liang He, Gierad Laput, Eric Brockmeyer, and Jon E. Froehlich. In *Proceedings of the ACM symposium on tangible and embodied interaction (TEI '17).*

2015 [C.3] **PneuHaptic: Delivering Haptic Cues with a Pneumatic Armband.** Liang He, Cheng Xu, Ding Xu, and Ryan Brill. In *Proceedings of the 19th International Symposium on Wearable Computers (ISWC '15).*

[C.2] **CozyMaps: Real-time Collaboration on a Shared Map with Multiple Displays.** Kelvin Cheng, Liang He, Xiaojun Meng, David A. Shamma, Dung Nguyen, and Anbarasan Thangapalam. In *Proceedings of the 17th International Conference on Human-Computer Interaction with Mobile Devices and Services (MobileHCI'15).*

[C.1] **New Interaction Tools for Preserving an Old Language.** Beryl Plimmer, Liang He, Tariq Zaman, Kasun Karunanayaka, Alvin W. Yeo, Garen Jengan, Rachel Blagojevic, and Ellen Yi-Luen Do. In *Proceedings of the 33rd annual ACM conference on Human factors in computing systems (CHI '15).*
Honorable Mentions Award [Top 3%]

Journal Papers

2026 [J.3] **SafetyBuilder: A Framework of In-situ AI-assisted Creation of Child Safety Protection.** Jiawei Li, Zisu Li, Siyu Chen, Ziyan Wang, Yukai Zhang, Mingming Fan, and Liang He. In *Proceedings of the ACM Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT)* 10, 1, Article 8 (March 2026).

2021 [J.2] **ModElec: A Design Tool for Prototyping Physical Computing Devices Using Conductive 3D Printing.** Liang He, Jarrid A. Wittkopf, Ji Won Jun, Kris Erickson,

and Rafael 'Tico' Ballagas. In *Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT)* 5, no. 4 (2021): 1-20.

2014 [J.1] **StoryCube: Supporting Children's Storytelling with a Tangible Tool.** Danli Wang, Liang He, and Keqin Dou. *The Journal of Supercomputing,* Volume 70 Issue 1, Pages 269-283. Springer. 2014.

Dissertation & Doctoral Position Paper

2022 [Diss.] **Fabricating Kinetic Objects with 3D Printable Spring-Based Mechanisms for Interactivity.** Liang He. University of Washington, 2022.

2020 [DC.1] **Designing, Controlling, and Fabricating In-Place Augmented Structures.** Liang He. In *Adjunct Proceedings of the 33rd Annual ACM Symposium on User Interface Software and Technology (UIST '20 Doctoral Symposium).*
Committee: Michel Beaudouin-Lafon, Ranjitha Kumar, Pedro Lopes, Camille Moussette, Ken Hinckley

Extended Abstracts/Poster& Workshop Papers

2026 [W.2] **Everyday Wearable for Personalized Health and Well-Being.** Chankyu (Charlie) Han, Hongyu Mao, Qiuyue (Shirley) Xue, Ishan Chatterjee, Liang He, Xuhai Xu, Junyi Zhu, and Yiyue Luo. In *Proceedings of the Extended Abstracts of the 2026 CHI Conference on Human Factors in Computing Systems (CHI EA '26).*

2026 [P.12] **PufFab: Making Shape Transformable Rice Paper for Playful Food Fabrication.** Yili Wen, Yafei Ge, Xin Tong, and Liang He. In *Proceedings of the Twentieth International Conference on Tangible, Embedded, and Embodied Interaction (TEI '26).*

2025 [W.1] **Computational Tailor-Making for Personalized, Shape-changing, and Sustainable Fabrics.** Koya Narumi, Yuichi Hirose, Hsuanling Lee, Maria Larsson, Liang He, Mackenzie Leake, Jack Forman, Behnaz Farahi, Lining Yao, and Takeo Igarashi. In *Adjunct Proceedings of the 38th Annual ACM Symposium on User Interface Software and Technology (UIST Adjunct '25).*

2024 [P.11] **Towards Rapid Fabrication of Custom Tactile Surface Indicators for Indoor Navigation.** Daniel Campos Zamora, Liang He, and Jon E. Froehlich. In *Proceedings of the 26th International ACM SIGACCESS Conference on Computers and Accessibility (ASSETS '24).*

2024 [P.10] **Fluxable: A Tool for Making 3D Printable Sensors and Actuators.** Hsuanling Lee, Yujie Shan, Huachao Mao, and Liang He. In *Adjunct Proceedings of the 37th Annual ACM Symposium on User Interface Software and Technology (UIST Adjunct '24).*
Best Poster Award [Top 1%]

[P.9] **3D Printing Shape-Changing Devices with Inductive Sensing.** Hsuanling Lee and Liang He. In *ACM SIGGRAPH 2024 Posters (SIGGRAPH '24)*.

2023 [P.8] **A Multi-modal Toolkit to Support DIY Assistive Technology Creation for Blind and Low Vision People.** Liwen He, Yifan Li, Mingming Fan, Liang He, and Yuhang Zhao. In *Adjunct Proceedings of the 36th Annual ACM Symposium on User Interface Software and Technology (UIST '23 Adjunct).*

[P.7] **Understanding the Experiences, Challenges, and Needs of Dementia Caregivers in the Indian Subcontinent.** Srishti Shekhar Agrawal, Shrey Panchal, and Liang He. In *the 25th International ACM SIGACCESS Conference on Computers and Accessibility (ASSETS '23).*

2022 [D.1] **sPrintr: Towards In-Situ Personal Fabrication using a Mobile 3D Printer.** Daniel Campos Zamora, Liang He, Yueqian Zhang, Xuhai Xu, Jennifer Mankoff, and Jon E. Froehlich. In *Symposium on Computational Fabrication (SCF '22).*

[SIG.1] **SIG: Towards More Personal Health Sensing.** Junyi Zhu, Liang He, Jun Nishida, Hamid Ghaednia, Cindy Hsin-Liu Kao, Jon E. Froehlich, Edward Jay Wang, and Stefanie Mueller. In *Extended Abstracts of the 2022 CHI Conference on Human Factors in Computing Systems (CHI EA '22).*

2020 [EA.3] **PneuFetch: Supporting Blind and Visually Impaired People to Fetch Nearby Objects via Light Haptic Cues.** Liang He, Ruolin Wang, Xuhai Xu. In *Proceedings of CHI '20 Extended Abstracts on Human Factors in Computing Systems (CHI EA '20).*

2019 [P.6] **A Multi-Modal Approach for Blind and Visually Impaired Developers to Edit Webpage Designs.** Venkatesh Potluri, Liang He, Christine Chen, Jon E. Froehlich, and Jennifer Mankoff. In *the 21st International ACM SIGACCESS Conference on Computers and Accessibility (ASSETS '19).*

2017 [P.5] **TacTILE: A Preliminary Toolchain for Creating Accessible Graphics with 3D-Printed Overlays and Auditory Annotations.** Liang He, Zijian Wan, Leah Findlater, and Jon E. Froehlich. In *Poster Proceedings of the 19th International ACM SIGACCESS Conference on Computers & Accessibility (ASSETS '17).*

[P.4] **Designing 3D-Printed Deformation Behaviors Using Spring-Based Structures: An Initial Investigation.** Liang He, Huaishu Peng, Joshua Land, Mark D. Fuge, and Jon E. Froehlich. In *Adjunct Proceedings of the 30th Annual ACM Symposium on User Interface Software and Technology (UIST '17).*

[P.3] **Early Exploration of Deformable Interactive Designs with 3D-Printed Springs.** Liang He, Joshua Land, Huaishu Peng, Mark D. Fuge, and Jon E. Froehlich. In *Proceedings of the 1st Annual ACM Symposium on Computational Fabrication (SCF '17).*

2016 [EA.2] **ReWear: Early Explorations of a Modular Wearable Construction Kit for Young Children.** Majeed Kazemitabaar, Liang He, Katie Wang, Chloe Aloimonos,

Tony Cheng, and Jon E. Froehlich. In *Proceedings of CHI '16 Extended Abstracts on Human Factors in Computing Systems (CHI EA '16).*
Best Poster Award [Top 1%]

[EA.1] **VRSurus: Enhancing Interactivity and Tangibility of Puppets in Virtual Reality.** Ruofei Du and Liang He. In *Proceedings of CHI '16 Extended Abstracts on Human Factors in Computing Systems (CHI EA '16).*

2012 [P.2] **E-Block: A Tangible Programming Tool for Children.** Danli Wang, Yang Zhang, Tianyuan Gu, Liang He, and Hongan Wang. In *Adjunct Proceedings of the 25th Annual ACM Symposium on User Interface Software and Technology (UIST '12).*

[P.1] **TempoString: A Tangible Tool for Children's Music Creation**. Liang He, Guang Li, Yang Zhang, Danli Wang, and Hongan Wang. In *Proceedings of the 14th International Conference on Ubiquitous Computing (UbiComp '12).*

Funding

2024 **Equitable and Personalized Treatment of Edema Through Wearable Textiles and Machine Learning-Based Pain Assessment.** Liang He (PI) and Sooyeon Jeong, $192,000. *Institute for Physical Artificial Intelligence (IPAI), Purdue University.*

2023 **Exploratory SAIL Fund. Hacking, Designing, and Making.** Liang He (PI), $2,667. *Purdue University.*

2023 **Assistive Haptic and Actuated Interface for People with Disability using Modular, Personalized On-body Robots.** Liang He (PI) and Huachao Mao, $9,538. *Holistic Safety and Security (HSS) Research Impact Area, Purdue University.*

Honors and Awards

2026 **Special Recognition for Paper Reviews,** *DIS '26*

2026 **Special Recognition for Paper Reviews,** *CHI '26*

2025 **Special Recognition for Paper Reviews,** *IMWUT*

2025 **Special Recognition for Paper Reviews,** *UIST '25*

2025 **Best Reviewer Award 2025,** *CCF Transactions on Pervasive Computing and Interaction*

2025 **Finalist for the 3D Pioneer Challenge Award**

2024 **UIST 2024 Jury Best Poster Award,** *UIST '24*

2024 **IPAI Postdoctoral Research Award,** *Purdue University*

2024 **Purdue Polytechnic Institute Faculty Research Award,** *Purdue University*

2024 **Special Recognitions for Paper Reviews,** *UIST '24, CHI '24, DIS '24*

2023 **Special Recognitions for Paper Reviews,** *UIST '23, DIS '23, IMWUT, CHI '23*

2022 **Special Recognition for Paper Reviews,** *UIST '22, CHI '22*

2021 **Bob Bandes Memorial Honorable Mention Student Teaching Award (top 1%),** *UW*

2021 **Special Recognition for Paper Reviews,** *UIST '21*

2020 **Special Recognition for Paper Reviews,** *UIST '20, CHI '20*

2019 **Winner,** *CHI '19 SV t-shirt design contest*

2018 **Finalist,** *Amazon Catalyst Award*

2017 **Best Paper Award (top 1%),** *CHI '17*

2016 **Conference Travel Funding,** *Department of Computer Science, University of Maryland*

2016 **Best Late-Breaking Work Paper Award,** *CHI '16*

2016 **Dean's fellowship,** *Department of Computer Science, University of Maryland*

2015 **Dean's fellowship,** *Department of Computer Science, University of Maryland*

2015 **Paper Honorable Mentions Award (top 3%),** *CHI '15*

2014 **Conference Travel Funding,** *School of Architecture, Carnegie Mellon University*

2014 **Department Scholarship,** *School of Architecture, Carnegie Mellon University*

2014 **Most Creative Award,** *UIST '14 Student Innovation Contest*

2014 **Winner,** *CHI '14 SV t-shirt design contest*

2013 **Department Scholarship,** *School of Architecture, Carnegie Mellon University*

2012 **Winner,** *G-Startup Seed Stage, Global Mobile Internet Conference '12*

2011 **Winner,** *Baidu User Experience contest*

2011 **Follow-up,** *Software Design, Microsoft Imagine Cup Local Final*

2009 **China National Scholarship (Top 1% nationwide),** *China*

Patent/Software Copyright

2013 [PA.1] **A Method and System for Children's Tangible Storytelling.**
Patent number: 2013100129910

2010 [SC.1] **InkSound: A Pen-based System for Chinese Traditional Painting.**

Invited Talks

2026 **Intelligent Making and Making Intelligence.** *Keio KMD, Tokyo.*

2026 **Intelligent Making and Making Intelligence.** *University of Tokyo, Tokyo.*

2025 **Creative Making through Physical Intelligence.** *HKUST (Guangzhou).*

2025 **Creative Making through Physical Intelligence.** *UT Dallas.*

2025 **Creative Making through Physical Intelligence.** *UW-Madison.*

2023 **Beyond Shape: Creating Interactive 3D Printable Objects.** *UW-Madison.*

Beyond Shape: Creating Interactive 3D Printable Objects. *Purdue University.*

Beyond Shape: Creating Interactive 3D Printable Objects. *Tsinghua University, virtual.*

Beyond Shape: Fabricating Kinetic Objects for Interactivity. *Zhejiang Univ., China.*

Beyond Shape: Fabricating Kinetic Objects for Interactivity. *Duke Kunshan, China.*

Beyond Shape: Fabricating Kinetic Objects for Interactivity. *HCI Seminar, CSAIL, MIT.*

2022 **Beyond Shape.** *Georgia Tech.*

Beyond Shape. *Hasso Plattner Institute, Germany.*

2021 **Beyond Shape.** *HCIL Brown-Bag Lunch. University of Maryland, College Park.*

ModElec. *CSE Colloquium. University of Washington.*

Beyond Shape. *HCI seminar invited by Ryo Suzuki. University of Calgary. Virtual.*

Kinetic Fab Research Overview. *Lightning Talk. IWHEC 2021 affiliated forum. Virtual.*

2020 **3D Printing Electronics.** *HP 3D Print Lab.*

Designing, Controlling, and Fabricating In-Place Augmented Structures. *UIST 2020 Doctoral Symposium. Virtual.*

Designing and Controlling On-Demand 3D Printable Structures to Support the Fabrication for Interactivity. *DUB Doctoral Colloquium, UW, Seattle.*

2019 **Ondulé.** *Institute of Software, Chinese Academy of Sciences (ISCAS), China.*

Ondulé. *HCI Lunch Talk. Stanford, CA.*

Making 3D-Printed Objects for Interactivity. *Lightning Talk. UW CSE/MSR Summer Institute – Future of Fabrication, Blaine, WA.*

2018 **Modeling and Fabricating Interactivity and Creativity with Object Properties.** *UW CSE Colloquia – Computational Fabrication. Seattle.*

Fabricating High-Level Design Specifications with Low-Level Object Properties. *Industry Affiliates Research Day. UW. Seattle.*

2016 **SqueezaPulse.** *Tech+Design: Interaction Design for a Purpose. UMD, College Park, MD.*

SqueezaPulse. *HCIL's 33rd Annual Symposium. UMD, College Park, MD.*

Guest Lectures/Workshops

2025 [L.9] **Creative Making through Physical Intelligence.** *Computer Aided Design (MECH6303), Department of Mechanical Engineering, Univ. of Texas at Dallas.*

2025 [L.8] **Creative Making through Physical Intelligence.** *Introduction to HCI (CISCX82), Department of Computer Science, Univ. of Delaware.*

2024 [L.7] **Intro to Digital Fabrication.** *EECS 493. Department of Computer Science & Engineering. University of Michigan.*

[L.6] **Democratizing Interactivity Prototyping with Digital Fabrication.** *Introduction to HCI, Department of Computer Science, University of Rochester.*

[L.5] **Prototyping Interactivity from Physical to Virtual to Physical.** *Introduction to HCI (CISCX82), Department of Computer Science, Univ. of Delaware.*

2022 [L.4] **Prototyping, Prototyping, Prototyping.** *Introduction to HCI (CISCX87), Department of Computer Science, Univ. of Delaware.*

[L.3] **Build for Access.** *Introduction to Assistive Technology and Robotics (CNIT 581 AST). Department of Computer Information Technology, Purdue University.*

[W.4] **CSNext Workshop.** *Mentoring four students from underrepresented groups. Computer Science & Engineering, UW.*

2020 [W.3] **3D Printed Electronics with ModElec.** *HP Labs.*

2019 [L.2] **Heuristic Evaluation.** *CSE 440A: Introduction to HCI. CSE, UW.*

2018 [W.2] **Video Making.** *CSE SkillShare Workshop, UW.*

[W.1] **3D Modeling with Fusion 360.** *CSE 590A: Ubiquitous Computing, CSE, UW.*

[L.1] **Laser Cutting.** *HCID 521, Human-Computer Interaction & Design, UW.*

Teaching

2026 [TE.21] **CS6326: Human-Computer Interactions.** *CS, UT Dallas. Instructor, 48 enrolled graduate students*

2025 [TE.20] **CS4352: Introduction to Human-Computer Interaction.** *CS, UT Dallas. Instructor, 78 enrolled undergraduate students*

2025 [TE.19] **CGT581: Interactive Prototyping & Digital Fabrication.** *CGT, Purdue. Instructor, 7 enrolled graduate students*

2025 [TE.18] **CGT532: UX Design Graduate Studio (Cross-Channel).** *CGT, Purdue. Instructor, 13 enrolled graduate students, studio-based course*

2024 [TE.17] **CGT27108: UX Design Learning Studio - Screen.** *CGT, Purdue. Instructor, taught 49 undergraduate students, studio-based course*

2024 [TE.16] **CGT512: Foundational Readings of UX Design.** *CGT, Purdue. Instructor, taught 14 graduate students*

2024 [TE.15] **CGT27208: UX Design Learning Studio (Cross-Channel).** *CGT, Purdue. Instructor, taught 46 undergraduate students, studio-based course*

2024 [TE.14] **CGT532: UX Design Graduate Studio (Cross-Channel).** *CGT, Purdue. Instructor, taught 30 graduate students, studio-based course*

2023 [TE.13] **CGT512: Foundational Readings of UX Design.** *CGT, Purdue. Instructor, taught 41 graduate students*

2023 [TE.12] **CGT532: UX Design Graduate Studio (Cross-Channel).** *CGT, Purdue. Instructor, taught 28 graduate students, studio-based course*

2022 [TE.11] **CGT116: Geometric Modeling for Visualization and Communication.** *CGT, Purdue. Instructor, taught 98 undergraduate students, statewide and hybrid*

2021 [TE.10] **CSE 490: Physical Computing.** *CSE, UW. Remote teaching and hardware prototyping. Instructor: Jon E. Froehlich*

Bob Bandes Memorial Honorable Mention Student Teaching Award [Top 1%]

2020 [TE.9] **CSE 590A: Ubiquitous Computing.** *CSE, UW. Course development and remote teaching. Instructor: Jon E. Froehlich*

2019 [TE.8] **CSE 599U: Prototyping Interactive Systems.** *CSE, UW. Instructor: Jon E. Froehlich*

[TE.7] **CSE 440A: Introduction to HCI.** *CSE, UW. Instructor: Nigini Oliveira*

2018 [TE.6] **CSE 440A: Introduction to HCI.** *CSE, UW. Instructor: Nigini Oliveira*

[TE.5] **CSE 590A: Ubiquitous Computing.** *CSE, UW. Couse development Instructor: Jon E. Froehlich*

[TE.4] **HCID 521: Prototyping Studio.** *HCID, UW. Course development Instructors: Jon E. Froehlich and Jennifer Mankoff*

2016 [TE.3] **CMSC 250: Discrete Structures.** *CS. UMD, College Park.*

[TE.2] **CMSC 132: Object-Oriented Programming II.** *CS. UMD, College Park.*

2015 [TE.1] **CMSC 131: Object-Oriented Programming I.** *CS. UMD, College Park.*

Services

Program Committee

2026 **The US National Science Foundation Panel**

2026 **ASSETS 2026 Program Committee, Associate Chairs,** *papers*

2026 **UIST 2026 Program Committee, Associate Chair,** *papers*

2026 **DIS 2026 Program Committee, Associate Chair,** *Artifacts & Systems subcommittee*

2025 **CHI 2026 Program Committee, Associate Chair,** *Developing Novel Devices subcommittee*

2025 **UIST 2025 Program Committee, Associate Chair,** *papers*

2025 **TEI 2026 Paper Co-chair,** *work-in-progress*

2025 **CHI 2025 Program Committee, Associate Chair,** *Blending Interaction: Engineering Interactive Systems & Tools subcommittee*

2024 **TEI 2024 Program Committee, Associate Chair,** *papers*

2024 **UIST 2024 Program Committee, Associate Chair,** *papers*

2024 **DIS 2024 Program Committee, Associate Chair,** *papers and pictorials*

2024 **ASSETS 2024 Program Committee, Associate Chair,** *papers, posters, and demos*

2024 **SIGGRAPH 2024 Posters Jury Committee**

2024 **SIGGRAPH 2024 Emerging Technologies Jury Committee**

2024 **CHI 2024 Program Committee, Associate Chair,** *Blending Interaction: Engineering Interactive Systems & Tools subcommittee*

2024 **CHI 2024 Student Design Competition Review Committee**

2023 **ASSETS 2023 Program Committee, Associate Chair,** *papers, posters, and demos*

2023 **DIS 2023 Program Committee, Associate Chair,** *papers and pictorials*

2023 **Invited Guest Editor for** *Journal - CCF Transactions on Pervasive Computing & Interaction*

2023 **IDC 2023 Program Committee, Associate Chair,** *papers*

2022 **ASSETS 2022 Program Committee, Associate Chair,** *papers, posters, and demos*

2021 **ACHI 2021 Program Committee, Associate Chair,** *papers*

2021 **IDC 2021 Program Committee, Associate Chair,** *work-in-progress*

2021 **CHI 2021 Program Committee, Associate Chair,** *late-breaking work*

2020 **CHI 2020 Program Committee, Associate Chair,** *late-breaking work*

2019 **CHI 2019 Program Committee, Associate Chair,** *late-breaking work*

Organizing Committee

2025 **TEI 2026 Paper Co-chair,** *work-in-progress*

2024 **Student Innovation Contest co-chair,** *UIST 2024*

2023 **Posters & Demos co-chair,** *ASSETS 2023*

2023 **Experience Reports co-chair,** *ASSETS 2023*

2023 **Proceedings co-chair,** *UIST 2023*

2022 **Proceedings co-chair,** *UIST 2022*

2022 **Web and Graphic Design co-chair,** *ASSETS 2022*

2019 **Design and Web co-chair,** *UIST 2019*

Reviewing

300+ papers, ***22 special recognitions for excellent review***

2026 ***SIGGRAPH '26, DIS '26, ASSETS '26, IDC '26, UIST '26***

2025 ***SIGGRAPH '25, IMWUT (Feb), UIST '25, CHI '26***

2024 ***UIST '24, CHI '25, DIS '24, TEI '25, SIGGRAPH '24, ASSETS '24, ISMAR '24***

2023 ***CHI '24, SCF '23, IDC '23, ASSETS '23, DIS '23, UIST '23, IEEE VR '24***

2022 ***CHI '23, UIST '22, ASSETS '22, IEEE VR '23, IMWUT (November)***

2021 ***CHI '22, UIST '21, DIS '21, SCF '21, CSCW (April), AHCI '21***

2020 ***CHI '21, UIST '20, DIS '20, SCF '20***

2019 ***CHI '20, UIST '19, WAC '19***

2018 ***CHI '19***

2017 ***CHI '18, TEI '18***

2016 ***CHI '17, TEI '17, MobileHCI '16***

2015 ***CHI '16***

Other Services

2026 **Session Chiar**, *CHI 2026*

2025 **Session Chair,** *UIST 2025*

2024 **Session Chair,** *UIST 2024*

2023 **Session Chair,** *CHI 2023*

2022 **Session Chair,** *UIST 2022*

2021 **Session Chair,** *UIST 2021*

2017 **Student Volunteer,** *TEI 2017*

2015 **Student Volunteer,** *CHI 2015*

2014 **Student Volunteer,** *UIST 2014*

2014 **Student Volunteer,** *CHI 2014*

2012 **Student Assistant,** *the first China Symposium on HCI*

Outreach

2026 – CS K-12 Outreach Summer Camp, University of Texas at Dallas

2026 – STEM Bridge Summer Camp, Texas Association of Science & Technology

2024 - Collaborating with Seeed Studio to organize UIST 2024 Student Innovation Contest
Selected and created a custom hardware kit – Gen-M Kit – that contains over 80 programmable modules for physical computing and distributed the kits to eight student teams around the world.

Since 2018 - Leading the creation and maintenance of FabGalaxy
FabGalaxy is an online interactive visualization repository that provides a quick entry to fabrication research in human-computer interaction and computer graphics. This platform is hosted on the MIT's online repository for personal fabrication research which was created and maintained by HCI Engineering group, MIT CSAIL.

Press Coverages

2026 **Low-Vision Programmers Can Now Design 3D Models Independently > A11yShape lets blind coders design and verify models on their own.** *IEEE Spectrum.* Link

2025 **Researchers Create AI Tool To Help Sight-Impaired Programmers.** *UTD News - Science & Technology.* Link

2025 **New AI Tool opens 3D modeling to blind and low-vision programmers.** *Michigan News. University of Michigan.* Link

2024 **Meet MobiPrint: A Mobile 3D Printer that Can Automatically Measure a Room and Print to the Specs.** *Tech Briefs.* Link

2024 **This Mobile 3D Printer Can Print Directly on Your Floor.** *IEEE Spectrum.* Link

2024 **Meet MobiPrint: The smart 3D printer that can upgrade your home instantly.** *TechXplore.* Link

2024 **From accessibility upgrades to a custom cat-food bowl, this mobile 3D printer can autonomously add features to a room.** *UW News.* Link

2024 **3D printing on the move: UW device can map a room and print custom items in desired space.** *GeekWire.* Link

Students

PhD Committees

2026–Present **Xiaoman Yang.** *Ph.D. in Computer Science at UT Dallas*

2026–Present **Junke Zhao.** *Ph.D. in Computer Science at UT Dallas*

2026–Present **Haokun Wang.** *Ph.D. in Computer Science at UT Dallas*

2026–Present **Daniel Henri Honrales.** *Ph.D. in Computer Science at UT Dallas*

2026–Present **Yuxiao Wang.** *Ph.D. in Computer Science at UT Dallas*

2025–Present **Yili (Angel) Wen.** *Ph.D. in Computer Science at UT Dallas*

2025–Present **Difan (Bobby) Jia.** *Ph.D. in Computer Science at UT Dallas*

2023–2026 **Ali Baigelenov.** *Ph.D. in Technology at Purdue*

2023–2025 **Min Soo Choi.** *Ph.D. in Technology at Purdue*

2022–2023 **Dixuan Cui.** *Now Assistant Professor at Sam Houston State University*

Advisees

2026–Present **Xiaoman Yang.** *PhD in CS at UT Dallas.*

2026–Present **Junke Zhao.** *PhD in CS at UT Dallas.*

2025–Present **Yili (Angel) Wen.** *PhD in CS at UT Dallas.*

2025–Present **Difan (Bobby) Jia.** *PhD in CS at UT Dallas.*

2024–Present **Aezaz Ali.** *M.S. in Gaming at Purdue. Now: incoming Ph.D. at Purdue.*

2022–2026 **Hsuanling Lee.** *Research Associate. Now: incoming Ph.D. at U Chicago.*

2023–2025 **Amy Yu.** *M.S. in Information Visualization at Purdue.*

2024–2025 **Thomas Carlock.** *M.S. in UX Design at Purdue. Now: Resarcher at Warmart.*

2024–2025 **Jasmine Li.** *Senior in UX Design at Purdue. Now: M.S. at UT Austin.*

2024 **Liuyi Chen.** *Visiting undergrad student. Now: M.S. at Columbia University.*

2023 **Jacqueline Dong.** *Research Intern. Now: Ph.D. at Indiana University.*

2023 **Srishti Shekhar Agrawal.** *M.S. in UX Design at Purdue. Now: Ph.D. at Purdue.*

2022 **Liwen He.** *M.S. in Industrial Design at Beihang. Now: Ph.D. at Tsinghua University.*

2022 **Yifan Li.** *Senior in Architecture at Southeast University. Now: M.S. at UW.*

2021–2022 **Daniel Campos Zamora.** *Ph.D. in CSE at UW.*

2021 **Hongnan Lin.** *Ph.D. in Design at Georgia Tech. Now: Postdoc at ISCAS.*

2020–2021 **Yueqian Zhang.** *Undergrad in CSE at UW. Now: Engineer at Roblox.*

2020–2021 **Xia Su.** *M.S. in Architecture at Tsinghua. Now: Ph.D. in CSE at UW.*

2020–2021 **Xiyuan Shen.** *Undergrad in Media Art at Tsinghua. Now: Ph.D. in CSE at UW.*

2019–2021 **Jessica Chin.** *Undergrad in Psychology at UW. Now at Meta.*

2020 **Yawen Zheng.** *Undergrad in Media Art at Tsinghua. Now: M.S. at Tsinghua.*

2020 **Yuebing Liang.** *M.S at Tsinghua. Now: Assistant Professor at Tsinghua.*

2019 **Venkatesh Potluri.** *Ph.D. in CSE at UW. Now: Assistant Professor at UMich.*

2019 **Shuxu Huffman.** *Undergrad in CSE at UW. Now: Software engineer at Microsoft.*

2018–2019 **Michelle Lin.** *Undergrad in CSE at UW. Now: Grad in CSE at UW.*

2017 **Joshua Land.** *Undergrad in Mech Engineering at UMD. Now: Engineer at Appian.*

2012 **Muyan Li.** *Undergrad at Beihang. Now: Software Engineer at UiPath.*

2012 **Yang Zhang.** *Undergrad at Beihang. Now: Assistant Professor at UCLA.*

2012 **Keqin Dou.** *Undergrad at Univ. of Science and Technology Beijing. Now: Regional Director at Fintopia.*