HIMANI DESHPANDE

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RESEARCH INTERESTS

HCI, Digital Fabrication, Hybrid Craft, Design Research, Sustainability, Tangible Interactions

I explore the intersection of digital fabrication, sustainable design, and human-computer interaction, focusing on hybrid craft-computation workflows, circular material practices, and fine-grained control of material properties to enable accessible and sustainable fabrication tools.

EDUCATION

2020 - 2025	**Ph.D. in Computer Science (Focus on Human Computer Interaction)** Texas A&M University Computer Science and Engineering Advisor: Dr. Jeeeun Kim
2017 - 2020	**Master's in Industrial Design (MID)** Georgia Institute of Technology Industrial Design Advisor: Dr. Hyunjoo Oh
2012 - 2016	**B.E. Computer Engineering** Pune Institute of Computer Technology Computer Engineering

EMPLOYMENT

2025-present	**Aarhus University** Postdoctoral Researcher, Interactive Matter Lab
2020-2024	**Texas A&M University, TX** Graduate Research Assistant, HCIED Lab
2024 Summer	**Accenture Labs** Associate Principal, Future Technologies
2019-2020	**Georgia Institute of Technology, GA** Graduate Research Assistant, CoDeCraft Group
2018 Summer	**Lokus Design, Pune** Design Intern

PUBLICATIONS

Peer-reviewed Papers

[8] **Deshpande, Himani**, Tolga Yildiz, Madelein Villegas, Ergun Akleman, and Jeeeun Kim. "Fabricating Interactions through Optical Pathways." In Proceedings of the ACM Symposium on Computational Fabrication, Article 9, 1–12. 2025.

[7] **Deshpande, Himani**, Haruki Takahashi, and Jeeeun Kim. "Unmake to Remake: Materiality-driven Rapid Prototyping." ACM Transactions on Computer-Human Interaction.

[6] **Deshpande, Himani**, Bo Han, Kongpyung Moon, Andrea Bianchi, Clement Zheng, and Jeeeun Kim. "Reconfigurable Interfaces by Shape Change and Embedded Magnets." In Proceedings of the CHI Conference on Human Factors in Computing Systems, pp. 1-12. 2024.

[5] Darnal, Aryabhat, Zaryab Shahid, **Himani Deshpande**, Jeeeun Kim, and Anastasia Muliana. "Tuning mechanical properties of 3D printed composites with PLA: TPU programmable filaments." Composite Structures 318 (2023): 117075.

[4] **Deshpande, Himani**, Clement Zheng, Courtney Starrett, Jinsil Hwaryoung Seo, and Jeeeun Kim. "Fab4D: an accessible hybrid approach for programmable shaping and shape changing artifacts." In Proceedings of the Sixteenth International Conference on Tangible, Embedded, and Embodied Interaction, pp. 1-7. 2022.

[3] **Deshpande, Himani**, Jin Yu, Akash Talyan, Noah Posner, Clement Zheng, and HyunJoo Oh. "Upcycling discarded HDPE plastic bags for creative exploration in product design." (2022).

[2] Kwon, Nahyun*, **Himani Deshpande***, Md Kamrul Hasan, Aryabhat Darnal, and Jeeeun Kim. "Multittach: Techniques to Enhance Multi-material Attachments in Low-cost FDM 3D Printing." In Proceedings of the 6th Annual ACM Symposium on Computational Fabrication, pp. 1-16. 2021.

[1] **Deshpande, Himani**, Haruki Takahashi, and Jeeeun Kim. "Escapeloom: Fabricating new affordances for hand weaving." In Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems, pp. 1-13. 2021.

Workshops and Demos

[2] Song, Katherine W., Fiona Bell, **Himani Deshpande**, Ilan Mandel, Tiffany Wun, Mirela Alistar, Leah Buechley et al. "Sustainable Unmaking: Designing for Biodegradation, Decay, and Disassembly." In Extended Abstracts of the CHI Conference on Human Factors in Computing Systems, pp. 1-7. 2024.

[1] **Deshpande, Himani**, Courtney Starrett, Jinsil Hwaryoung Seo, Clement Zheng, and Jeeeun Kim. "Hands-on Exploration of Hybrid 4D Printing Design Space." In ACM SIGGRAPH 2022 Labs, pp. 1-2. 2022.

TEACHING

2025 Spring	**Teaching Assistant, CSCE Department, Texas A&M University** Accessible Computing - CSCE 432
2024 Fall	**Teaching Assistant, CSCE Department, Texas A&M University** Human Computer Interaction - CSCE 436
2023 Fall **2022 Spring** **2022 Summer**	**Teaching Assistant, CSCE Department, Texas A&M University** Introduction to Program Design and Concepts - CSCE 120/121
2024 Spring **2023 Spring**	**Guest Lecturer, , CSCE Department, Texas A&M University** "Rapid Prototyping": Human Computer Interaction - CSCE 436 "Emerging Materials in 3D Printing": Human Computer Interaction - CSCE 436 "3D/4D Printing for HCI Application Design": Human Computer Interaction - CSCE 436
2021 Fall	**Senior Grader, CSCE Department, Texas A&M University** Cybersecurity Law and Policy - CSCE 402/702
2019 Spring	**Teaching Assistant, ID Department, Georgia Institute of Technology** Introduction to Smart Product Design - ID 2510

MENTORING

2022	**Research Mentor, HCIED Lab, Texas A&M University** Prajwal Iyer : Project on light transfer with phosphorescent filaments
2021	**Research Mentor, HCIED Lab, Texas A&M University** Emory Lu : Project on programmable PLA:TPU filaments Zhengnan Huang : Project on light transfer with phosphorescent materials
2018-2020	**Mentor, ID Department, Georgia Institute of Technology** Interactive Product Design Lab

SERVICE

Associate Chair
TEI 2025, 2026

Conference Peer Reviewer
CHI(2021-2026), UIST(2023-2025), DIS(2021-2023), TEI(2021-2026), C&C(2021-2022)

Director of Mentoring
Indian Graduate Student Association (2021-2023)

OUTREACH

2021	**4D Printing Workshops** TEES Spark! PK-12 Engineering Education Outreach Science Summer Camp E3 Program UTSW STARS TAMU Engineering Research Symposium
2022	**Breakout Session, Design Ideation for 4D Printing** STEM4Innovation Virtual Conference for K-12 Education
2019	**Assistant, Paper Mechatronics Workshops** GoSTEAM CEISMC