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 - present	**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

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, WORKSHOPS, AND DEMOS

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

[9] **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.

[8] 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.

[7] 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.

[6] Darnal, Aryabhat, Kamal Poluri, **Himani Deshpande**, Jeeeun Kim, Negar Kalantar, and Anastasia Muliana. "An exploration of 3D printed freeform kerf structures." In Behavior and Mechanics of Multifunctional Materials XVII, vol. 12484, pp. 67-75. SPIE, 2023

[5] **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.

[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.

TEACHING AND MENTORING

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
2022	**Breakout Session, Design Ideation for 4D Printing** STEM 4 Innovation Virtual Conference for K-12 Education
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
2021	**Workshop Lead, 4D Printing** TEES Spark! PK-12 Engineering Education Outreach Science Summer Camp E3 Program UTSW STARS TAMU Engineering Research Symposium
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

2019	**Assistant, Paper Mechatronics Workshops** GoSTEAM CEISMC
2018-2020	**Mentor, ID Department, Georgia Institute of Technology** Interactive Product Design Lab Guest talk on "Programming basics for prototyping with Arduino"

HONORS AND GRANTS

2024	**Two CSCE Department Travel Grants, Texas A&M University** for UIST'2024, CHI'2024
2024	**CRA-WP Grad Cohort IDEALS** Minneapolis, MN
2023	**Special Recognition for Outstanding Review** DIS 2023 Papers and Pictorials
2023	**CRA-WP Grad Cohort for Women** San Francisco, CA
2022	**CSCE Department Travel Grant, Texas A&M University** for TEI'2022
2021	**CSCE Department Travel Grant, Texas A&M University** for CHI'2021
2012	**State Government Scholarship for academic performance** Maharashtra
2010	**State Government Scholarship for academic performance** Maharashtra
2010	**City Government Scholarship for academic performance** Pune

SERVICE

Program Committee
TEI 2025

Conference Peer Reviewer
CHI(2021-2024), UIST(2023-2024), DIS(2021-2023), TEI(2021-2024), C&C(2021-2022)

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

REFERENCES

Jeeeun Kim (Ph.D advisor)
Assistant Professor
Computer Science and Engineering Department
Texas A&M University
jeeeun.kim@tamu.edu

Clement Zheng
Assistant Professor
Division of Industrial Design
National University of Singapore
clement.zheng@nus.edu.sg

Aditi Maheshwari
R&D Principal
Accenture Labs
aditi.maheshwari@accenture.com