MEGAN HOFMANN

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HONORED PUBLICATIONS

Living Disability Theory: Reflections on Access, Research, and Design.
Megan Hofmann, Devva Kasnitz, Jennifer Mankoff, Cynthia L. Bennett.2020. 22nd International ACM SIGACCESS Conference on Computers and Accessibility (ASSETS '20). https://doi.org/10.1145/3373625.3416996

"Occupational Therapy is Making": Clinical Rapid Prototyping and Digital Fabrication.
Megan Hofmann, Kristin Williams, Toni Kaplan, Stephanie Valencia, Gabriella Hann, Scott E. Hudson, Jennifer Mankoff, Patrick Carrington. 2019 CHI Conference on Human Factors in Computing Systems (CHI '19). https://doi.org/10.1145/3290605.3300544

Sharing is Caring: Assistive Technology Designs on Thingiverse.
Erin Buehler, Stacy Branham, Abdullah Ali, Jeremy J. Chang, **Megan Hofmann**, Amy Hurst, Shaun K. Kane. 2015. 33rd Annual ACM Conference on Human Factors in Computing Systems (CHI '15). https://doi.org/10.1145/2702123.2702525

The Right to Help and the Right Help:
Fostering and Regulating Collective Action in a Medical Making Reaction to COVID-19.
Megan Hofmann, Udaya Lakshmi, Kelly Mack, Scott E. Hudson, Rosa I Arriaga, Jennifer Mankoff. 2021. CHI Conference on Human Factors in Computing Systems (CHI '21). https://doi.org/10.1145/3411764.3445395

Medical Maker Response to COVID-19: Distributed Manufacturing Infrastructure for Stop Gap Protective Equipment.
Udaya Lakshmi, **Megan Hofmann**, Kelly Mack, Scott E. Hudson, Jennifer Mankoff, Rosa Arriaga. 2021. CHI Conference on Human Factors in Computing Systems (CHI '21). https://doi.org/10.1145/3542923

EMPLOYMENT

Assistant Prof. Computer Science and Mechanical Engineering, Northeastern University—2023+

Senior Research Fellow, Khoury College of Computer Sciences at Northeastern University—2022-2023

Medical Fabrication Consultant at University of Washington Medical School—2022

Lecturer for Graduate Special Topics on Machine Knitting at the University of Washington--2021

Ability Team Microsoft Research Intern, Redmond, WA--2019

Undergraduate Visiting Researcher at Carnegie Mellon University—2015-2017

Undergraduate Research Assistant at Colorado State University—2013-2015

Undergraduate Research Assistant at the University of Maryland, Baltimore County--2014

EDUCATION

Ph. D. in Human-Computer Interaction, Carnegie Mellon University—2022

MS in Human-Computer Interaction, Carnegie Mellon University—2021

B. S. in Computer Science, Colorado State University—2017

FUNDING

Siebel Fellow 2020

NSF Graduate Research Fellowship 2017-2021

Center for Machine Learning and Health Fellowship in Digital Health 2017-2018

HONORS

2023 SIGCHI Outstanding Dissertation Award

MIT EECS Rising Stars 2021

Runner-Up CRA Outstanding Undergraduate Female Researcher Award for PhD-Granting Institutions 2016

SERVICE

Program Committee Member: ACM CHI 2024; ACM UIST 2021, 2022; ACM Assets 2022, 2023

Accessibility Chair: ACM CHI 2023, ACM UIST 2019, 2020

XRDS 2021 Guest Editor: Winter Issue of COVID-19 and Technology

Make4COVID: Quality Control Coordinator, Documentation Team Lead: March-August 2020

TEACHING

Special Topics on Digital Fabrication—Khoury College of Computer Sciences, Northeastern University Fall 2023

AccessHack: Hackathon for Accessibility Sponsored by ACM SIGCHI---Organizer and Co-founder Summer 2023

Special Topics on E-Textiles—School of Computer Science, University of Washington Fall 2021

SPEAKING ENGAGEMENTS

SIGCHI Outstanding Dissertation Award Panel, May 2023

Invited Research Talk, TUFTs Robotics Seminar, October 2023

Invited Research Talk, Stanford HCI Seminar, May 2023

Early Career Researcher Panel, Symposium of the Future of Computing Research, September 2022

Invited Research Talk, MIT CSAIL, May 2022

Invited Research Talk, Human-Computer Interaction Institute, Carnegie Mellon University, March 2022

Invited Research Talk, Department of Computer Science, University of Colorado Boulder, February 2022

Invited Research Talk, Khoury College of Computer Sciences, Northeastern University, January 2022

Invited Research Talk, University of Michigan, November 2021

DIVHacks Columbia Panelist, October 2021

Invited Research Talk, Hasso Plattner Institute, June 2021

DUB Shorts, University of Washington, July 2021: https://vimeo.com/575195696

Hack for Impact, University of Washington SWE, April 2021

Open Hardware Response Panelist, Wilson Center, October 2020:
https://www.law.nyu.edu/sites/default/files/stitching-together-a-solution-202102.pdf

OurCS Panelist, Access Computing and University of Washington, January 2021 and April 2018

ARCHIVAL PUBLICATIONS (19)

KnitScript: A Domain-Specific Scripting Language for Advanced Machine Knitting.
Megan Hofmann, Lea Albaugh, Tongyan Wang, Jennifer Mankoff, Scott E Hudson. 2023. 36th Annual ACM Symposium on User Interface Software and Technology (UIST '23). https://doi.org/10.1145/3586183.3606789

Style2Fab: Functionality-Aware Segmentation for Fabricating Personalized 3D Models with Generative AI.
Faraz Faruqi, Ahmed Katary, Tarik Hasic, Amira Abdel-Rahman, Nayeemur Rahman, Leandra Tejedor, Mackenzie Leake, **Megan Hofmann**, Stefanie Mueller. 2023. 36th Annual ACM Symposium on User Interface Software and Technology (UIST '23). https://doi.org/10.1145/3586183.3606723

FibeRobo: Fabricating 4D Fiber Interfaces by Continuous Drawing of Temperature Tunable Liquid Crystal Elastomers.
Jack Forman, Ozgun Kilic Afsar, Sarah Nicita, Rosalie Hsin-Ju Lin, Liu Yang, **Megan Hofmann**, Akshay Kothakonda, Zachary Gordon, Cedric Honnet, Kristen Dorsey, Neil Gershenfeld, Hiroshi Ishii. 2023. 36th Annual ACM Symposium on User Interface Software and Technology (UIST '23). https://doi.org/10.1145/3586183.3606732

OPTIMISM: Enabling Collaborative Implementation of Domain Specific Metaheuristic Optimization.
Megan Hofmann, Nayha Auradkar, Jessica Birchfield, Jerry Cao, Autumn G Hughes, Gene S-H Kim, Shriya Kurpad, Kathryn J Lum, Kelly Mack, Anisha Nilakantan, Margaret Ellen Seehorn, Emily Warnock, Jennifer Mankoff, Scott E Hudson. 2023. CHI Conference on Human Factors in Computing Systems (CHI '23).
https://doi.org/10.1145/3544548.3580904

Rapid Convergence: The Outcomes of Making PPE During a Healthcare Crisis.
Kelly Mack, **Megan Hofmann**, Udaya Lakshmi, Jerry Cao, Nayha Auradkar, Rosa Arriaga, Scott Hudson, Jennifer Mankoff. 2023. ACM Trans. Comput.-Hum. Interact. (TOCHI'23). https://doi.org/10.1145/3542923

Making a Medical Maker's Playbook:
An Ethnographic Study of Safety-Critical Collective Design by Makers in Response to COVID-19.
Megan Hofmann, Udaya Lakshmi, Kelly Mack, Rosa I. Arriaga, Scott E. Hudson, Jennifer Mankoff. 2022. Proc. ACM Hum.-Comput. Interact. 3 (CSCW'22). https://doi.org/10.1145/3512948

KnitGIST: A Programming Synthesis Toolkit for Generating Functional Machine-Knitting Textures.
Megan Hofmann, Jennifer Mankoff, Scott E. Hudson. 2020. 33rd Annual ACM Symposium on User Interface Software and Technology (UIST '20). https://doi.org/10.1145/3379337.3415590

KnitPicking Textures: Programming and Modifying Complex Knitted Textures for Machine and Hand Knitting.
Megan Hofmann, Lea Albaugh, Ticha Sethapakadi, Jessica Hodgins, Scott E. Hudson, James McCann, Jennifer Mankoff. 2019. 32nd Annual ACM Symposium on User Interface Software and Technology (UIST '19). https://doi.org/10.1145/3332165.3347886

"Point-of-Care Manufacturing": Maker Perspectives on Digital Fabrication in Medical Practice.
Udaya Lakshmi, **Megan Hofmann**, Stephanie Valencia, Lauren Wilcox, Jennifer Mankoff, Rosa Arriaga. 2019. Proc. ACM Hum.-Comput. Interact. 3. (CSCW'19). https://doi.org/10.1145/3359193

Greater than the Sum of its PARTs: Expressing and Reusing Design Intent in 3D Models.
Megan Hofmann, Gabriella Hann, Scott E. Hudson, Jennifer Mankoff. 2018. CHI Conference on Human Factors in Computing Systems (CHI '18). https://doi.org/10.1145/3173574.3173875

Helping Hands: Requirements for a Prototyping Methodology for Upper-limb Prosthetics Users.
Megan Hofmann, Jeffrey Harris, Scott E. Hudson, Jennifer Mankoff. 2016. CHI Conference on Human Factors in Computing Systems (CHI '16). https://doi.org/10.1145/2858036.2858340

Investigating the Implications of 3D Printing in Special Education.
Erin Buehler, Niara Comrie, **Megan Hofmann**, Samantha McDonald, Amy Hurst. 2016. ACM Trans. Access. Comput (TACCESS) https://doi.org/10.1145/2870640

Understanding Gender Equity in Author Order Assignment.
Kirstin Early, Jessica Hammer, Megan Kelly Hofmann, Jennifer A. Rode, Anna Wong, Jennifer Mankoff. 2018. Proc. ACM Hum. -Comput. Interact. 2, CSCW. https://doi.org/10.1145/3274315

Using Audio Cues to Support Motion Gesture Interaction on Mobile Devices.
Sarah Morrison-Smith, **Megan Hofmann**, Yang Li, Jaime Ruiz. 2016. ACM Trans. Appl. Percept. https://doi.org/10.1145/2897516

EDITORIALS (6)

Getting through a global pandemic: stories of resiliency.
Megan Hofmann, Christine T. Wolf. 2022. XRDS'22 https://doi.org/10.1145/3501386

COVID-19 tracking apps: privacy and accuracy. Megan Hofmann. XRDS'22 https://doi.org/10.1145/3495247

2021 SIG on Access in SIGCHI. Megan Hofmann, Cynthia L Bennett, Jinjuan Heidi Feng, Dhruv Jain, Richard Ladner, Jennifer Mankoff. 2021. Extended Abstracts of the 2021 CHI Conference on Human Factors in Computing Systems (CHI EA '21). https://doi.org/10.1145/3411763.3450405

Consumer-grade fabrication and its potential to revolutionize accessibility. Jennifer Mankoff, **Megan Hofmann**, Xiang 'Anthony' Chen, Scott E. Hudson, Amy Hurst, Jeeeun Kim. 2019. Communications of the ACM (CACM). https://doi.org/10.1145/3339824

Access SIGCHI report. Jennifer Mankoff, Anne Spencer Ross, Cynthia Bennett, Katta Spiel, **Megan Hofmann**, Jennifer Rode. 2020. 2019 SIGACCESS Access. Comput., https://doi.org/10.1145/3386280.3386287

Clinical and Maker Perspectives on the Design of Assistive Technology with Rapid Prototyping Technologies. **Megan Hofmann**, Julie Burke, Jon Pearlman, Goeran Fiedler, Andrea Hess, Jon Schull, Scott E. Hudson, Jennifer Mankoff. 2016. 18th International ACM SIGACCESS Conference on Computers and Accessibility (ASSETS '16). https://doi.org/10.1145/2982142.2982181

DEMONSTRATIONS AND POSTERS (5)

Demonstration of Style2Fab. Faraz Faruqi, Ahmed Katary, Tarik Hasic, Amira Abdel-Rahman, Nayeemur Rahman, Leandra Tejedor, Mackenzie Leake**, Megan Hofmann**, Stefanie Mueller. 2023. Adjunct Proceedings of the 36th Annual ACM Symposium on User Interface Software and Technology (UIST '23 Adjunct. https://doi.org/10.1145/3586182.3615769

Enhancing access to high quality tangible information through machine embroidered tactile graphics. Margaret Seehorn, Gene S-H Kim, Aashaka Desai, **Megan Hofmann**, Jennifer Mankoff. 2022. 7th Annual ACM Symposium on Computational Fabrication (SCF '22). **https://doi.org/10.1145/3559400.3565586**

Fabricating Accessible Designs with Knitting Machines. Tongyan Wang, Jennifer Mankoff, **Megan Hofmann**. 2022. 7th Annual ACM Symposium on Computational Fabrication (SCF '22). https://doi.org/10.1145/3559400.3565584

Making Connections: Modular 3D Printing for Designing Assistive Attachments to Prosthetic Devices. Megan Hofmann. 2015. 17th International ACM SIGACCESS Conference on Computers &; Accessibility (ASSETS '15). https://doi.org/10.1145/2700648.2811323

Coming to grips: 3D printing for accessibility. Erin Buehler, Amy Hurst, **Megan Hofmann**. 2014. 16th international ACM SIGACCESS conference on Computers & accessibility (ASSETS '14). https://doi.org/10.1145/2661334.2661345