YUXUAN MEI

+1 (646) 830-3939 ymei@wesleyan.edu Website

ACADEMIC POSITIONS

Assistant Professor of Computer Science, Wesleyan University, Department of Mathematics & Computer Science, July 2025 - Present.

Assistant Professor, Design and Engineering Studies (affiliate member), Wesleyan University, November 2025 - Present.

EDUCATION

Ph.D. Computer Science, University of Washington, School of Computer Science & Engineering, June 2025.

Dissertation: Design for Sustainable Fabrication.

Committee: Adriana Schulz (Chair), Jennifer Mankoff, Vikram Iyer, Afroditi Psarra (GSR).

M.S. Computer Science, University of Washington, School of Computer Science & Engineering, June 2022.

B.S. Computer Science, Columbia University, School of Engineering and Applied Sciences, *summa cum laude*, May 2019.

HONORS & AWARDS

Bob Bandes Memorial Teaching Award Honorable Mention, University of Washington, 2024.

CSE First-year Research Fellowship, University of Washington, 2019.

Russell C. Mills Award, Columbia University, 2019.

Dean's List, Columbia University, 2015 - 2018.

PEER-REVIEWED PUBLICATIONS

* indicates equal contributions.

[1] Zhihan Zhang, Alexander Metzger, Yuxuan Mei, Felix Hähnlein, Zachary Englhardt, Tingyu Cheng, Gregory D. Abowd, Shwetak Patel, Adriana Schulz, and Vikram Iyer. "Sustainability assessment using multimodal artificial intelligence agents". In: *Nature Electronics* (June 2026). ISSN: 2520-1131. DOI: 10.1038/s41928-026-01653-w. URL: https://doi.org/10.1038/s41928-026-01653-w.

[3] Yuxuan Mei, Lirong Que, Mackenzie Leake, and Adriana Schulz. "PatchUp: Interactive Patchwork Design for Scrap Fabric Upcycling". In: *Proceedings of the 10th ACM Symposium on Computational Fabrication*. SCF '25. New York, NY, USA: Association for Computing Machinery, Nov. 2025, pp. 1–17. ISBN: 9798400720345. DOI: 10.1145/3745778.3766667.

[5] Zhihan Zhang, Puvarin Thavikulwat, Alexander Le Metzger, Yuxuan Mei, Felix Hähnlein, Zachary Englhardt, Gregory D. Abowd, Shwetak Patel, Adriana Schulz, Tingyu Cheng, and Vikram Iyer. "Living Sustainability: In-Context Interactive Environmental Impact Communication". In: *Proc. ACM Interact. Mob. Wearable Ubiquitous Technol.* 9.3 (Sept. 2025). DOI: 10.1145/3749488. URL: https://doi.org/10.1145/3749488.

[6] Zachary Englhardt, Felix Hähnlein, Yuxuan Mei, Tong Lin, Connor Masahiro Sun, Zhihan Zhang, Shwetak Patel, Adriana Schulz, and Vikram Iyer. "Incorporating Sustainability in Electronics Design: Obstacles and Opportunities". In: *Proceedings of the 2025 CHI Conference on Human Factors in Computing Systems*. CHI '25. (Honorable Mention, top 5%). Association for Computing Machinery, 2025. ISBN: 9798400713941. DOI: 10.1145/3706598.3713299. URL: https://doi.org/10.1145/3706598.3713299.

[8] Amy Zhu, Yuxuan Mei, Benjamin Jones, Zachary Tatlock, and Adriana Schulz. "Computational Illusion Knitting". In: *ACM Trans. Graph.* 43.4 (July 2024), 152:1–152:13. ISSN: 0730-0301. DOI: 10.1145/3658231.

[9] Yuxuan Mei, Benjamin Jones, Dan Cascaval, Jennifer Mankoff, Etienne Vouga, and Adriana Schulz. "FabHacks: Transform Everyday Objects into Home Hacks Leveraging a Solver-aided DSL". In: *Proceedings of the 9th ACM Symposium on Computational Fabrication*. SCF '24. New York, NY, USA: Association for Computing Machinery, July 2024, pp. 1–16. ISBN: 9798400704963. DOI: 10.1145/3639473.3665788.

[10] Zhihan Zhang*, Felix Hähnlein, Yuxuan Mei*, Zachary Englhardt, Shwetak Patel, Adriana Schulz, and Vikram Iyer. "DeltaLCA: Comparative Life-Cycle Assessment for Electronics Design". In: *Proc. ACM Interact. Mob. Wearable Ubiquitous Technol.* 8.1 (Mar. 2024), 29:1–29:29. DOI: 10.1145/3643561.

[11] Benjamin Jones, Yuxuan Mei, Haisen Zhao, Taylor Gotfrid, Jennifer Mankoff, and Adriana Schulz. "Computational Design of Knit Templates". In: *ACM Trans. Graph.* 41.2 (Dec. 2021), 16:1–16:16. ISSN: 0730-0301. DOI: 10.1145/3488006.

ABSTRACTS, PATENTS, THESIS

[2] Yuxuan Mei, Lauren Bricker, and Jeff Solin. “Incorporating Fabrication into Computer Science Courses for Broadening Participation”. In: *Proceedings of the 57th ACM Technical Symposium on Computer Science Education V.2*. New York, NY, USA: Association for Computing Machinery, 2026, p. 1703. ISBN: 9798400722554. URL: https://doi.org/10.1145/3770761.3777096.

[4] Yuxuan Mei. “Design for Sustainable Fabrication”. PhD thesis. University of Washington, Aug. 2025. URL: https://hdl.handle.net/1773/53515.

[7] Vidya Narayanan, Yuxuan Mei, Seungbae Bang, and Sunil Sharadchandra Hadap. “Garment pattern generation from image data”. US12198290. Jan. 14, 2025.

[12] Yuxuan Mei, Dan Cascaval, Benjamin Jones, Etienne Vouga, and Adriana Schulz. “FabHacks: A Domain-specific Language for Functional Fixtures Using Everyday Objects”. In: *Proceedings of the 7th Annual ACM Symposium on Computational Fabrication*. SCF ’22. New York, NY, USA: Association for Computing Machinery, Oct. 2022, pp. 1–2. ISBN: 9781450398725. DOI: 10.1145/3559400.3565591.

TEACHING EXPERIENCE

Wesleyan University

COMP 116 Introduction to Programming and Machine Knitting: Spring 2026, Spring 2027, instructor.

COMP 355 Computational Design and Fabrication: Fall 2025, Fall 2026, instructor.

University of Washington - Seattle Campus

CSE 163 Intermediate Data Programming: Summer 2024, instructor; Winter 2024, teaching assistant for Prof. Kevin Lin.

CSE 493H Special Topics in Computer Science - Computational Fabrication: Autumn 2023, teaching assistant for Prof. Adriana Schulz.

CSE 556 Computational Fabrication: Winter 2022, teaching assistant for Prof. Adriana Schulz.

Columbia University in the City of New York

COMS W1004 Introduction to Computer Science in Java: Fall 2016, Spring 2017, Fall 2017, Spring 2018, course assistant; Fall 2018, head teaching assistant for Prof. Adam Cannon; Spring 2019, head teaching assistant for Prof. Paul Blaer.

COMS W4160 Computer Graphics: Spring 2018, Spring 2019, teaching assistant for Prof. Changxi Zheng.

COMS W4167 Computer Animation: Fall 2018, teaching assistant for Prof. Eitan Grinspun.

MENTORING EXPERIENCE

Wesleyan University

Dylan Ross: Summer 2026 (QAC Summer Apprenticeship)

Hannah Wang: Summer 2026

Solomon Grossman: Summer 2026

Leo Ferry: Spring 2026 (ARTS 402)

Anan Afrida: Fall 2025 (COMP 423); thesis reader

Marouan El-Asery: Fall 2025

University of Washington - Seattle Campus

Lirong (Audrey) Que: Autumn 2024 (CSE 499), Winter 2025, Winter 2026

Darel Hansel Gunawan: Autumn 2024

Mingsheng Xu: Winter - Spring 2024 (CSE 499 / CSE 492R)

Stanley Yang: Winter - Spring 2024 (CSE 499 / CSE 492R)

Annabelle Martin: Winter 2024

Masa Nakura: Winter 2024 (with Daniel Revier)

Vivek Sarkar: Winter 2024 (with Daniel Revier)

Tosh Brown-Moore: Autumn 2020 (ME 499)

Yu (Tom) Lou: Summer - Autumn 2020 (CSE 499)

Milin Kodnongbua: Spring - Autumn 2020 (CSE 499)

Other Institutions

Grace Magny-Fokam: Spring 2026 (UMD, exploreCSR program by Brown CS and Google Research)

Grace Luo: Summer 2026 (Avon High School)

WORK AND RESEARCH EXPERIENCE

Graduate research assistant at University of Washington, *advised by Prof. Adriana Schulz*, Jun 2019 - Jun 2025.

Applied Scientist Intern at Amazon, Sunnyvale, CA, June 2023 - Sept 2023.

Applied Scientist Intern at Amazon, remote, June 2022 - Sept 2022.

Undergraduate research assistant at Columbia University, *advised by Prof. Changxi Zheng*, Sep 2018 - May 2019.

Software Engineering Intern at Google, New York, NY, May 2018 - Aug 2018.

Undergraduate research assistant at Columbia University, *advised by Prof. Steven Feiner*, Sep 2017 - Dec 2017.

Engineering Practicum Intern at Google, Los Angeles, CA, May 2017 - Aug 2017.

Undergraduate research assistant at Columbia University, *advised by Prof. Douglas Almond and Prof. Shuang Zhang*, Sep 2016 - Jan 2017.

SERVICE

Program Committees

SCF 2027 Area Chair for the area of Graphics and Computational Design.

External Reviewer

Conferences: SCF 2025, SIGCSE 2025/2026, CAD/Graphics 2025, SIGGRAPH Asia 2025/2026, SIGGRAPH 2026.

Journals: Automation in Construction, TVCG.

Community Outreach and Invited Talks

Co-organizer, Website Workshop at Wesleyan University, March 2026.

Co-organizer, BOF on Fabrication in CS Education at SIGCSE 2026, February 2026.

CS Education Week at University of Washington. Combinatorics and Algorithms in Scrap Fabric Packing, December 2025.

GAMES Seminar. Design for Sustainable Fabrication, November 2025.

Javascript tutorial for Girls Who Code at Garfield High School, Dec 2019.

Departmental Service

Wesleyan University

Co-organizer, CS Department Seminar, July 2025 - Present.

NSM Lunch Talk. Design for Sustainable Fabrication, December, 2025.

CS Seminar Talk. Design for Sustainable Fabrication, September, 2025.

University of Washington

UW CSE Friday Breakfast Coordinator, 2024 - 2025.

UW CSE PARS/PAMS (Pre-Application Reading/Mentoring Service) Reader, 2020 - 2024.

UW CSE PSC Scheduler, 2020 - 2022; Non-standard Visitor Coordinator, 2022; Activity Coordinator, 2024.

UW CSE Faculty Recruiting Student Host, 2021.

UW CSE Historian, 2020 - 2022.

Other Service

Exec member, WiGRAPH (women in graphics research), May 2020 - Jun 2025.

Event organizer, Computational Fabrication Seminar, Mar 2021 - Mar 2022.

SIGGRAPH RCDC Mentor, 2021 and 2022.

SIGGRAPH Student Volunteer, 2019.

Board member, Columbia Womxn in Computer Science, 2016 - 2019.

GRANTS & FUNDING

Wesleyan University

Sustainability and Environmental Justice Pedagogical Initiative for *COMP 355 Computational Design and Fabrication*, $500, Fall 2026.

Allbritton Center for the Study of Public Life, Faculty Lectures and Programs for *Critically Conscious Computing*, $1,000, Fall 2026.

Faculty-Student Internship and QAC Summer Apprenticeship for *Text Mining Knitting Pattern Corpora*, $5,000, Summer 2026.

Faculty-Student Internship for *Experimenting with Machine Knitting and Novel Materials*, $5,000, Summer 2026.