

Leesha Maliakal Shah

☎ +18474019260 | ✉ lmalishah@u.northwestern.edu | 🔗 leesha.io

APPROACH I explore how technical systems, effective processes, and social structures integrate as **socio-technical ecosystems** that surface ways to optimally use the limited resources in a community. Specifically, I investigate how such ecosystems can scale effective undergraduate research training, where students learn to self-direct complex work in a community with limited mentoring resources. I take a design-based research approach, and work at the intersection of Human-Computer Interaction (HCI), Learning Sciences (LS), and Computer-Supported Cooperative Work (CSCW).

EDUCATION

Northwestern University (Evanston, IL) Aug 2022
Ph.D. Candidate in Computer Science and Communication Studies
Thesis: *Agile Research Studios: Socio-technical Ecosystems to Scale Effective Research Training Communities*
Committee: Haoqi Zhang (Chair), Darren Gergle, Eleanor O'Rourke, Julie Hui

Northwestern University (Evanston, IL) Jun 2021
Master of Science in Technology and Social Behavior

Northwestern University (Evanston, IL) Jun 2015
Bachelor of Arts in Computer Science

COMMUNITIES Delta Lab - delta.northwestern.edu
Design, Technology, & Research (DTR) Program - dtr.northwestern.edu

AWARDS

Microsoft Ph.D. Fellowship Departmental Nomination 2019
Segal Cluster Design Research Fellowship 2017-2018
Post-Baccalaureate Research Fellowship 2016-2017
Grace Hopper ACM Student Research Competition, 2nd Place 2015
Undergraduate Research Grant (\$1000) 2015

PAPERS *PUBLISHED*

* mentored undergraduate student

- 2022 *Molly Pribble, *Neha Sharma, Haoqi Zhang, and **Leesha Maliakal Shah**. "MindYoga: Scaffolding the Reflection Process within Learning Ecosystems." *CHI Late-Breaking Work 2022*. Accepted for publication.
- 2020 Spencer E. Carlson, Daniel G. Rees Lewis, **Leesha V. Maliakal**, Elizabeth M. Gerber, and Matthew W. Easterday. "The design risks framework: Understanding metacognition for iteration." *Design Studies* 70 (2020): 100961.
- 2019 *Victoria Cabales. "Muse: Scaffolding metacognitive reflection in design-based research." *2019 CHI ACM Student Research Competition, in Extended Abstracts of the 2019 CHI Conference on Human Factors in Computing Systems*, pp. 1-6. 2019.
- 2018 Spencer E. Carlson, **Leesha V. Maliakal**, Daniel Rees Lewis, Jamie Gorson, Elizabeth Gerber, and Matthew Easterday. "Defining and assessing risk analysis: The key to strategic iteration in real-world problem solving." International Society of the Learning Sciences, Inc.[ISLS]., 2018.

- 2018 Daniel G. Rees Lewis, Jamie Gorson, **Leesha V. Maliakal**, Spencer E. Carlson, Elizabeth M. Gerber, Christopher K. Riesbeck, and Matthew W. Easterday. "Planning to Iterate: Supporting iterative practices for real-world ill-structured problem-solving." *Rethinking Learning in the Digital Age. Making the Learning Sciences Count* 2018 (2018): 9.
- 2017 Haoqi Zhang, Matthew W. Easterday, Elizabeth M. Gerber, Daniel Rees Lewis, and **Leesha V. Maliakal**. "Agile research studios: Orchestrating communities of practice to advance research training." In *Proceedings of the 2017 ACM Conference on Computer Supported Cooperative Work and Social Computing*, pp. 220-232. 2017.
- 2015 **Leesha V. Maliakal**. "CrowdCheer: Situational Crowdsourcing of Motivation for Runners." *Grace Hopper ACM Student Research Competition, 2nd Place of 117 participants*. (2015).

UNDER REVISION

* mentored student

Leesha Maliakal Shah, Daniel Rees Lewis, *Bomani McClendon, *Sameer Srivastava, Matthew Easterday, Darren Gergle, and Haoqi Zhang. "Polaris: Scaffolding the Creation and Evaluation of Design Arguments for Novice Designers." *To be submitted at Computer Supported Cooperative Work (CSCW) 2023*.

Leesha Maliakal Shah and Haoqi Zhang. "Continual Support Systems: An Approach to Engaging Ad-hoc Crowds in Community Support." *To be submitted at Computer Supported Cooperative Work (CSCW) 2023*.

*Aimee van den Berg, *Ariella Silver, Haoqi Zhang, and **Leesha Maliakal Shah**. "The STASH: Scaffolding the Helpseeking Process within Learning Ecosystems." *To be submitted at Computer Supported Cooperative Work (CSCW) 2023*.

ADVISING

I have advised 16 students in independent research across my three areas of work, culminating in 47 quarters of mentorship, \$10,000 of undergraduate research funding for their proposed projects, and 5 paper submissions.

REFLECTION SYSTEMS

Isaac Miller (1 term) Jan 2022 - present

- ★ Advise on "MindYoga: Scaffolding the Reflection Process within Learning Ecosystems"
- ★ Work led to Undergraduate Research Grant Award (\$1000)

Molly Pribble (4 terms) Jan 2021 - present

- ★ Advise on "MindYoga: Scaffolding the Reflection Process within Learning Ecosystems"
- ★ Work led to Undergraduate Research Grant Award (\$1000); CHI 2022 Late Breaking Work Paper

Neha Sharma (3 terms) Jan 2021 - Dec 2021

- ★ Advised on "MindYoga: Scaffolding the Reflection Process within Learning Ecosystems"
- ★ Work led to CHI 2022 Late Breaking Work Paper

Olivia Gallager (3 terms) *Jan 2020 - Dec 2020*

- ★ Advised on “Metacognitive Reflection System”
- ★ Work led to Undergraduate Research Grant Award (\$1000)

Zev Stravitz (2 terms) *Jan 2020 - Jun 2020*

- ★ Advised on “Metacognitive Reflection System”
- ★ Work led to Undergraduate Research Grant Award (\$1000)

Judy Lee (1 term) *Jan 2019 - Mar 2019*

- ★ Advised on “Muse: Scaffolding Metacognitive Reflection in Design-Based Research”

Victoria Cabales (3 terms) *Mar 2018 - Jun 2019*

- ★ Advised on “Muse: Scaffolding Metacognitive Reflection in Design-Based Research”
- ★ Work led to Undergraduate Research Grant Award (\$1000); CHI 2019 ACM Student Research Competition Paper

Maggie Lou (1 term) *Jan 2018 - Mar 2018*

- ★ Co-advised on “Metacognitive Reflection in Design-Based Research”

Nneoma Oradiegwu (2 terms) *Sep 2017 - Mar 2018*

- ★ Co-advised on “Metacognitive Reflection in Design-Based Research”
- ★ Work led to Undergraduate Research Grant Award (\$1000)

HELPSEEKING SYSTEMS

Aimee van den Berg (4 terms) *Sep 2021 - Dec 2021*

- ★ Advised on “The STASH: Scaffolding the Helpseeking Process within Learning Ecosystems”
- ★ Work led to Undergraduate Research Grant Award (\$1000); CHI 2022 Late Breaking Work Submission (under review)

Ariella Silver (3 terms) *Jan 2021 - Dec 2021*

- ★ Advised on “The STASH: Scaffolding the Helpseeking Process within Learning Ecosystems”
- ★ Work led to Undergraduate Research Grant Award (\$1000); CHI 2022 Late Breaking Work Submission (under review)

Natalie Ghidali (1 term) *Mar 2020 - Jun 2020*

- ★ Advised on “The Weekly: Skill Tracking and Development for Helpseeking in a Research Community”

Shankar Salwan (6 terms) *Sep 2018 - Jun 2020*

- ★ Advised on “The Weekly: Skill Tracking and Development for Helpseeking in a Research Community”
- ★ Work led to Undergraduate Research Grant Award (\$1000); CHI 2019 ACM Student Research Competition Submission

Sehmon Burnam (3 terms) *Sep 2017 - Jun 2018*

- ★ Co-advised on “Douglas: Skill Tracking and Development for Helpseeking in Research Communities”

PLANNING SYSTEMS

Sameer Srivastava (5 terms) *Jan 2016 - Jun 2017*

- ★ Co-advised on “Polaris: Scaffolding the Creation and Evaluation of Design Arguments for Undergraduate”

- ★ Work led to Undergraduate Research Grant Award (\$1000); CHI 2018 Full Paper Submission

Bomani McClendon (5 terms)

Jan 2016 - Jun 2017

- ★ Co-advised on "Polaris: Scaffolding the Creation and Evaluation of Design Arguments for Undergraduate"
- ★ Work led to Undergraduate Research Grant Award (\$1000); CHI 2018 Full Paper Submission

TEACHING

INSTRUCTIONAL AND CURRICULAR DESIGN

Northwestern CS 330: Introduction to HCI

Sep 2021 - Dec 2021

- ★ Redesigned a 30-student studio curriculum to scale for 120+ students.
- ★ Designed and directed a 10-week TA mentor training program to scale the course, for training a team of 5 TAs in effective design coaching practices.
- ★ Head TA for course, orchestrated logistics for course at scale, directly responsible for 2 sections, and 35 students.
- ★ Guest lecturer for Interface Arguments and Risk Assessment.

Agile Research University Program

2016 - present

- ★ Designed and implemented a starter kit for faculty interested in starting their own research studio, based on our Agile Research Studio (ARS) model.
- ★ Hosted 10+ faculty visits, where they actively participated in our studio practices for a week (from Berkeley, MIT, CMU, UCSD, Virginia Tech, Michigan, Northwestern, NYU, University of Washington, King's College London, Microsoft Research).

Brave Initiatives, Inc.: BraveCamp Program

2015 - 2020

- ★ Designed and implemented a 1-week coding curriculum as part of a design camp for middle and high school girls.
- ★ Taught coding curriculum to 10+ BraveCamps, reaching 100+ middle and high school girls.
- ★ Curriculum used to train a team of coding coaches, who collectively ran 25 camps, reaching over 700+ girls in 8 cities across the US.

Design for America: Iterative Planning Curriculum

Jun 2017 - Jul 2017

- ★ Designed, implemented, and taught a 10-week iterative planning curriculum for Design for America Summer Studio at Northwestern University.

INVITED LECTURES

How to De-risk Designs like an Expert System Designer

Nov 18, 2021

Purdue Fort Wayne SE 530: Systems Engineering Management

Interface Arguments

Nov 8, 2021

Northwestern CS 330: Introduction to HCI

Risk Assessment

Oct 11, 2021

Northwestern CS 330: Introduction to HCI

Design Arguments and Community Support

Mar 25, 2020

Harvard CS 179: Design of Useful and Usable Interactive Systems

INVITED
TALKS

Forward: A film about learning and growth

A documentary film following the DTR community. Furnace FPS - 2021

www.forward.movie

Not All is Lost: Finding work/life balance in grad school after my dad passed

The Story Collider Podcast: Chicago Live Show - July 17, 2020

www.storycollider.org

Continual Support Systems: Connecting Needs to Resources in Communities

Regina Dominican High School Career Day - Feb 28, 2019

Continual Support Systems to Orchestrate Research Communities

NU HCI Student Research Colloquium Series - Feb 22, 2018

SERVICE

Reviewer for ICLS 2018 (3), CHI 2019 (2), DIS 2019, CSCW 2019, CSCW 2020, CSCW 2021, and CHI 2021.

Committee Chair for Social Media, DTR Interviewing and Recruitment, and Lab Space Design committees within the Design, Technology, Research program and Delta Lab.

REFERENCES

Dr. Haoqi Zhang *Northwestern University*
Associate Professor of Computer Science and Segal Design Institute

Dr. Darren Gergle *Northwestern University*
Professor of Communication Studies, Computer Science by courtesy
Former Director of Graduate Studies for Technology and Social Behavior Ph.D.

Dr. Eleanor O'Rourke *Northwestern University*
Assistant Professor of Computer Science and Learning Sciences

Dr. Elena Glassman *Harvard University*
Assistant Professor of Computer Science

Dr. David Cochran *Purdue University - Fort Wayne*
Professor of Systems Engineering
Director of Center of Excellence in Systems Engineering