ryelin@mit.edu / ryelin@media.mit.edu rebeccayelin.github.io

Rebecca Y. E. Lin

Interests

Art tools; computational design; digital fabrication; reconfigurable structures; computational geometry; graph algorithms.

Education

2022-Now **Massachusetts Institute of Technology (MIT)**
PhD in Computer Science
Adviser: Erik Demaine

2017-2022 **University of British Columbia (UBC)**
BSc in Honors Computer Science
Adviser: William Evans

Experience

▸ Research

2022-Now **MIT CSAIL:** Graduate Research Assistant
Advisor: Erik Demaine [C2/P3-5/M1]

2024-Now **MIT Media Lab:** Visiting Researcher
Advisor: Zach Lieberman

2024 **Adobe Research:** Research Scientist Intern
Mentors: Mackenzie Leake and Mike Lukáč

2023 **University of Tokyo:** Visiting Researcher
Host: Tomohiro Tachi

2021-2022 **University of Waterloo:** Undergraduate Researcher
Advisor: Craig Kaplan [P1]

2020-2022 **University of British Columbia:** Undergraduate Researcher
Advisors: Nick Harvey, Alla Sheffer [J1], and William Evans [C1]

▸ Industry

2020 **Microsoft:** Software Engineering Intern

2019 **Microsoft:** Software Engineering Intern

2019 **Cisco Systems:** Cloud Infrastructure Engineering Intern

▸ Teaching

Spring 2025 **MIT — 6.1220 Design & Analysis of Algorithms:** Graduate Teaching Assistant (TA) 20 hrs/week
Instructors: Jonathan Kelner, Piotr Indyk, and Srini Raghuraman

Fall 2024	**MIT — 6.1220 Design & Analysis of Algorithms:** Graduate TA Instructors: Konstantinos Daskalakis, Kuikui Liu, and Srini Raghuraman	20 hrs/week
Spring 2024	**MIT — 6.1220 Design & Analysis of Algorithms:** Graduate TA Instructors: Kuikui Liu, Srini Raghuraman, and Virginia Vassilevska Williams	20 hrs/week
Fall 2023	**MIT — 6.1001 Fundamentals of Programming:** Graduate TA Instructors: Max Goldman, Adam Hartz, and Robert C. Miller	20 hrs/week
Summer 2021	**UBC — CPSC 320 Intermediate Algorithm Design & Analysis:** Undergraduate TA Instructor: Anne Condon	12 hrs/week
Fall 2020	**UBC — CPSC 221 Basic Algorithms & Data Structures:** Undergraduate TA Instructors: William Evans and Cinda Heeren	12 hrs/week

Honors

2024-2027	**Postgraduate Scholarship - Doctoral (PGS-D)** Natural Sciences and Engineering Research Council of Canada — 120,000 CAD	
2024-2027	**Canada Graduate Scholarship - Doctoral (CGS-D)** Natural Sciences and Engineering Research Council of Canada — 120,000 CAD	DECLINED
2022	**Stata Family Presidential Fellowship** Massachusetts Institute of Technology — Tuition + Stipend	
2022	**Canada Graduate Scholarship - Masters (CGS-M)** Natural Sciences and Engineering Research Council of Canada — 17,500 CAD	DECLINED
2020/2021	**Undergraduate Student Research Award** Natural Sciences and Engineering Research Council of Canada — 4,500/6,000 CAD	
2020/2021/2022	**Rick Sample Memorial Award in Computer Science** University of British Columbia — 2,500/2,800/2,500 CAD	
2021	**Undergraduate Research Fellowship** University of Waterloo — 15,000 CAD	
2021	**Laura Huber Memorial Award for Women in Video Gaming** Electronic Arts via the University of British Columbia — 10,000 CAD	
2021	**Irving K. Barber Women in Technology Scholarship** BC Scholarship Society — 10,000 CAD	
2018, 2020	**Trek Excellence Scholarship** University of British Columbia — 1,500 CAD	
2018	**Summer Studentship** BC Children's Hospital Research Institute — 4,750 CAD	
2018	**Summer Student Research Program** University of British Columbia — 2,800 CAD	

Grants

Grants marked with ‡ indicate sole or leading contributions

2024 ‡**MIT MAD:** Design Funding for *Modular and Reconfigurable Garments* — 1,490 USD

2024 ‡**MIT Make:** Design-to-Making Mini-Grant for *Modular and Reconfigurable Garments* — 500 USD

2024 ‡**CAMIT:** Graduate Student Seed Grant for *Reconfigurable Sculptures* — 500 USD

2023 **CAMIT:** Grants Committee Funding for *Metallic Kusudamas* with RnKOLEKTIVE — 4,940 USD

Publications

(a-b) denotes alphabetical ordering and * denotes equal contribution

▸ Preprints

2024 **Folding One Polyhedral Metric Graph into Another** P5
(a-b) Lily Chung, Erik D. Demaine, Martin L. Demaine, Markus Hecher, **Rebecca Lin**, Jayson Lynch, and Chie Nara
https://arxiv.org/abs/2412.15121

2024 **Continuous Flattening of Convex Polyhedral Linkages** P4
(a-b) Erik D. Demaine, Martin L. Demaine, Markus Hecher, **Rebecca Lin**, Victor H. Luo, and Chie Nara
https://arxiv.org/abs/2412.15130

2024 **Graph Threading with Turn Costs** P3
(a-b) Erik D. Demaine, Yael Kirkpatrick, and **Rebecca Lin**
https://arxiv.org/abs/2405.17953

2023 **Learning Lens Blur Fields** P2
Esther Y. H. Lin, Zhecheng Wang, **Rebecca Lin**, Daniel Miau, Florian Kainz, Jiawen Chen, Cecilia Zhang, David B. Lindell, and Kiriakos N. Kutulakos
https://arxiv.org/abs/2310.11535

2022 **Freeform Islamic Geometric Patterns** P1
Rebecca Lin and Craig Kaplan
https://arxiv.org/abs/2301.01471

▸ Journals

2022 **Detecting Viewer-Perceived Intended Vector Sketch Connectivity** J1
Jerry Yin*, Chenxi Liu*, Rebecca Lin, Nicholas Vining, Hedge Rhodin, and Alla Sheffer
ACM Transaction on Graphics (SIGGRAPH 2022)

▸ Conferences

2024 **Graph Threading** C2
(a-b) Erik D. Demaine, Yael Kirkpatrick, **Rebecca Lin**
ITCS 2024

2022 **The Polygon Burning Problem** C1
(a-b) William Evans and **Rebecca Lin**
WALCOM 2022

▸ Miscellaneous

2024 **Routing Reconfigurations** M1
Rebecca Lin, Wenzhong Yan, Ankur Mehta, and Erik D. Demaine
SCF 2024 — Demo

Exhibitions

2025 Joint Mathematics Meetings — *Disintegrating (State of Mind)*

Community

2024-2025 **MIT EECS Committee on Diversity, Equity, and Inclusion:** Member

2022-2023 **MIT EECS Graduate Application Assistant Program:** Organizer & Mentor

2022 **SIGGRAPH Undergraduate Mentorship Program:** Mentor

2020-2022 **City Center Community Center:** Youth Instructor

2017 **Science World British Columbia:** Barbara Brink Intern

Mentoring

2025 Gwyneth Margaux Tangog (Undergraduate), MIT

2023 Cindy Zhang (Undergraduate), MIT

Reviewing

MIT EECS 2025 Graduate Admissions

Subareas:
- Computer Graphics
- Theoretical Computer Science

Conferences

Theoretical Computer Science:
- FUN 2024
- WALCOM 2023
- CCCG 2022