Justin Lubin

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Curriculum Vitae, October 2021

Research Vision

Computation is empowering, and programming languages are how we harness it. To that end, I am interested in studying the human aspect of programming to design programming languages, environments, and tools that are more accessible, intuitive, and powerful.

Primary research areas: programming languages, human-computer interaction

Education

University of California, Berkeley 2020–
PhD in Computer Science
Advisor: Sarah E. Chasins

University of Chicago 2016–2020
BS in Computer Science (Honors), BS in Mathematics, Minor in Music
GPA: 3.97/4.00 (*summa cum laude*)
Advisor: Ravi Chugh
Honors Thesis: **Forging Smyth: The Impl. of Program Sketching with Live Bidirectional Evaluation**

Internships

Carnegie Mellon University 2018
Advisors: Jonathan Aldrich (CMU), Alex Potanin (Victoria University of Wellington)
Project: **Approximating Polymorphic Effects with Capabilities**

Peer-Reviewed Full Publications

How Statically-Typed Functional Programmers Write Code OOPSLA 2021
Justin Lubin and Sarah E. Chasins
In *Proceedings of the ACM on Programming Languages (PACMPL), Issue OOPSLA.*

Program Sketching with Live Bidirectional Evaluation ICFP 2020
Justin Lubin, Nick Collins, Cyrus Omar, and Ravi Chugh
In *Proceedings of the ACM on Programming Languages (PACMPL), Issue ICFP.*

Sketch-n-Sketch: Output-Directed Programming for SVG UIST 2019
Brian Hempel, Justin Lubin, and Ravi Chugh
In *Proceedings of the ACM Symposium on User Interface Software and Technology.*

Deuce: A Lightweight User Interface for Structured Editing ICSE 2018
Brian Hempel, Justin Lubin, Grace Lu, and Ravi Chugh
In *Proceedings of the International Conference on Software Engineering.*

Peer-Reviewed Workshop Publications

Type-Directed Program Transformations for the Working Functional Programmer PLATEAU 2019
Justin Lubin and Ravi Chugh
In *Proceedings of the Workshop on Evaluation and Usability of Programming Languages and Tools.*

Honors

Fellowships

NSF Graduate Research Fellowship (GRFP) 2020

Student Research Competitions

3rd Place Graduate at CHI, *How Statically-Typed Functional Programmers Author Code* 2021
1st Place Undergraduate at SPLASH, *Approximating Polymorphic Effects with Capabilities* 2018

Honor Societies

Sigma Xi 2020–
Phi Beta Kappa Honor Society 2019–

Academic Honors

Enrico Fermi Scholar (University of Chicago) 2020
Harper Award (University of Chicago) 2020
Student Marshal (University of Chicago) 2019–2020
Dean's List (University of Chicago) 2016–2020

Presentations and Posters

How Statically-Typed Functional Programmers Write Code

Presentation at OOPSLA 2021
Presentation and **poster** at CHI Student Research Competition 2021

Program Sketching with Live Bidirectional Evaluation

Presentation at ICFP 2020
Presentation at Midwest Programming Languages Summit (MWPLS) 2019
Poster at UChicago Careers in STEM Undergraduate Research Symposium 2019

Type-Directed Program Transformations for the Working Functional Programmer

Presentation at PLATEAU Workshop 2019

Approximating Polymorphic Effects with Capabilities

Presentation and **poster** at SPLASH Student Research Competition 2018
Poster at Midwest Programming Languages Summit (MWPLS) 2018

Direct Manipulation Programming in Sketch-n-Sketch

Tutorial at ICFP presented with Chugh, Collins, Hempel, and Mayer 2018

Teaching

University of California, Berkeley

CS 164: Programming Languages and Compilers (Head TA) — Fall 2021

University of Chicago

CMSC 22300: Functional Programming (TA) — Spring 2020
CMSC 16100: Honors Introduction to Programming I (Grader) — Fall 2018

Mentorship

Advisees

Fayaz Shaik (Undergraduate) — 2021–
Dhanya Jayagopal (Undergraduate, MS) — 2020–

External Service

Reviewer

Symposium on User Interface Software and Technology (UIST) — 2021

Student Volunteer

Elm in the Spring Conference — 2019
International Conference on Functional Programming (ICFP) — 2018

Internal Service

Organizer, Berkeley Programming Systems Seminar — 2021–2022

Community Service

Co-organizer, #ShutdownPL — 2020–

Organization to identify, discuss, and organize around opportunities for anti-racist change in the programming languages community.