

# Justin Lubin

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Curriculum Vitae, March 2022

## 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 area:** programming languages   **Secondary area:** 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](#)

## Research 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

3<sup>rd</sup> Place Graduate at CHI, *How Statically-Typed Functional Programmers Author Code* 2021

1<sup>st</sup> 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

Invited presentation at UPenn Programming Languages Seminar 2022

Invited presentation at UCSD Programming Languages Seminar 2021

**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

Jeremy Ferguson (Undergraduate) 2022–

Kevin Ye (Undergraduate) 2022–

Jacob Yim (Undergraduate) 2022–

Fayaz Shaik (Undergraduate, **TTE REU**) 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

### UC Berkeley Programming Systems Research Group

Visit Days Area Student Coordinator 2022

Seminar Organizer 2021–2022

Graduate Admissions Student Representative Winter 2021

Visit Days Peer Advisor 2021, 2022

## Community Service

**#ShutdownPL**, Co-organizer 2020–

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