

Anders Miltner

University of Texas at Austin
2317 Speedway, Austin, TX 78702
415-342-3622
amiltner@cs.utexas.edu

RESEARCH INTERESTS	My primary research interest lies in Programming Languages. Specifically, I am interested in developing novel program synthesis techniques, and finding new problems that program synthesis can solve. I am interested in applying my work to Software Engineering and Artificial Intelligence.	
EDUCATION	<i>Ph.D. Computer Science</i> Princeton University, Princeton, NJ Advisor: David Walker Thesis: Synthesizing Lenses	2020
	<i>M.A. Mathematics</i> University of Pennsylvania, Philadelphia, PA Advisors: Scott Weinstein and Val Tannen	2013
	<i>B.S.E. Computer Science and Mathematics</i> University of Pennsylvania, Philadelphia, PA Advisors: Zachary Ives and Philip Gressman	2013
RESEARCH EXPERIENCE	<i>Postdoctoral Fellow</i> UT Austin, Austin, TX Advisors: Isil Dillig and Swarat Chaudhuri	2020 - Present
	<i>Graduate Researcher</i> Princeton University, Princeton, NJ Advisor: David Walker	2015 - 2020
	<i>Research Intern</i> Microsoft, Redmond, WA Advisors: Sumit Gulwani and Gustavo Soares	2019
	<i>Undergraduate Researcher</i> University of Pennsylvania, Philadelphia, PA Advisors: Insup Lee and Krishna Venkatasubramanian	2011-2012
AWARDS	<i>Distinguished Paper Award</i> For the paper <i>Bottom-up Synthesis of Recursive Functional Programs using Angelic Execution</i>	POPL 2022
	<i>Distinguished Paper Award</i> For the paper <i>Data-Driven Inference of Representation Invariants</i>	PLDI 2020
	<i>Student Research Competition First Place</i> For the work on <i>Synthesizing Bijective Lenses</i>	ICFP 2017

TEACHING EXPERIENCE	<i>Princeton PTI Pod Instructor</i> MAT 030 – Intermediate Algebra	Spring 2018
	<i>Princeton PTI Pod Instructor</i> MAT 020 – Elementary Algebra	Spring 2017, Fall 2017
	<i>Princeton CS Teaching Assistant</i> COS 226 – Algorithms and Data Structures	Spring 2017
	<i>Princeton CS Teaching Assistant</i> COS 326 – Functional Programming	Fall 2016
	<i>Princeton PTI Pod Instructor</i> MAT 015 – Basic Mathematics	Fall 2016
	<i>Princeton PTI Pod Instructor</i> MAT 037 – Beginning Algebra	Spring 2016
	<i>Penn CS Teaching Assistant</i> CIS 160 – Mathematical Foundations of Computer Science	Spring 2012, Fall 2012
	<i>Penn CS Teaching Assistant</i> CIS 120 – Programming Languages and Techniques I	Spring 2011, Fall 2011
INDUSTRY EXPERIENCE	<i>Software Engineer</i> Microsoft, Redmond, WA	2013 - 2015
	<i>Engineering Intern</i> Ampush, San Francisco, CA	2012
CONFERENCE PUBLICATIONS	<i>POPL 2022</i> Anders Miltner , Adrian Trejo Nuñez, Ana Brendel, Swarat Chaudhuri, and Isil Dillig. Bottom-up Synthesis of Recursive Functional Programs using Angelic Execution. In Principles of Programming Languages, 2022. <i>Distinguished Paper Award</i> .	
	<i>PLDI 2020</i> Anders Miltner , Saswat Padhi, Todd Millstein, and David Walker. Data-Driven Inference of Representation Invariants. In Programming Language Design and Implementation, 2020. <i>Distinguished Paper Award</i> .	
	<i>OOPSLA 2019</i> Anders Miltner , Sumit Gulwani, Vu Le, Alan Leung, Arjun Radhakrishna, Gustavo Soares, Ashish Tiwari, Abhishek Udupa. On the Fly Synthesis of Edit Suggestions. In Object-oriented Programming, Systems, Languages, and Applications, 2019.	
	<i>ICFP 2019</i> Anders Miltner , Solomon Maina, Kathleen Fisher, Benjamin C. Pierce, David Walker, Steve Zdancewic. Synthesizing Symmetric Lenses. In The International Conference on Functional Programming, 2019.	
	<i>ICFP 2018</i> Solomon Maina, Anders Miltner , Kathleen Fisher, Benjamin C. Pierce, David Walker, Steve Zdancewic. Synthesizing Quotient Lenses. In The International Con-	

ference on Functional Programming, 2018.

POPL 2018

Anders Miltner, Kathleen Fisher, Benjamin C. Pierce, David Walker, Steve Zdancewic. Synthesizing Bijective Lenses. In Principles of Programming Languages, 2018.

WORKSHOP *IWC 2020*

PUBLICATIONS **Anders Miltner**, Kathleen Fisher, Benjamin C. Pierce, David Walker, Steve Zdancewic. Confluence in Lens Synthesis. In The International Workshop on Confluence, 2020.

PATENTS *2021*

Sumit Gulwani, Arjun Radhakrishna, Abhishek Udupa, Gustavo Soares, Vu Le, **Anders Miltner**, Mark Wilson-Thomas. Automatic Repetition of Context-Specific Code Edits.

SERVICE *PLDI 2022*

Program Committee

ICFP 2021

Student Research Competition Chair

OOPSLA 2020

Artifact Evaluation Committee

BX 2019

Program Committee

ESOP 2019

External Reviewer

TOPLAS 2017

External Reviewer

PLDI 2017

Artifact Evaluation Committee

REFERENCES

David Walker
dpw@cs.princeton.edu

Isil Dillig
isil@cs.utexas.edu

Swarat Chaudhuri
swarat@cs.utexas.edu

Kathleen Fisher
kfisher@eecs.tufts.edu

Steve Zdancewic
stevez@cis.upenn.edu

Microsoft Prose Team
sumitg@microsoft.com
gustavo.soares@microsoft.com