

# David Moon Curriculum Vitae

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## Education

- 2019-

PhD Candidate, Computer Science • University of Michigan  
Advisor: [Cyrus Omar](#)
- 2018-19

PhD Student, Computer Science • University of Colorado Boulder  
Transferred to Michigan
- 2011-16

BA, Mathematics & Computer Science • Williams College  
Thesis: [Specifying & Enforcing Synchronization Disciplines in Multithreaded Programs](#)  
Advisor: [Stephen Freund](#)

## Publications

- 2023

[Gradual Structure Editing with Obligations](#) • [VL/HCC](#)  
[David Moon](#), Andrew Blinn, Cyrus Omar
- 2023

[Live Pattern Matching with Typed Holes](#) • [OOPSLA](#)  
Yongwei Yuan, Scott Guest, Eric Griffis, Hannah Potter, [David Moon](#), Cyrus Omar  
🏆 Distinguished Paper Award
- 2022

[tylr: A Tiny Tile-Based Structure Editor](#) • [TyDe](#)  
[David Moon](#), Andrew Blinn, Cyrus Omar
- 2022

[An Integrative Human-Centered Architecture for Interactive Programming Assistants](#) • [VL/HCC](#)  
Andrew Blinn, [David Moon](#), Eric Griffis, Cyrus Omar
- 2021

[Filling Typed Holes with Live GUIs](#) • [PLDI](#)  
Cyrus Omar, [David Moon](#), Andrew Blinn, Ian Voysey, Nick Collins, Ravi Chugh
- 2015

[Sets Characterized by Missing Sums and Differences in Dilating Polytopes](#) • [JNT](#)  
Thao Do, Archit Kulkarni\*, Steven J Miller, [David Moon](#)\*, Jake Wellens, James Wilcox  
\* joint lead authors (authors listed alphabetically by last name)
- 2015

[Sums and Differences of Random Correlated Sets](#) • [JNT](#)  
Thao Do, Archit Kulkarni, Steven J Miller, [David Moon](#), Jake Wellens
- 2014

[Generalizing Zeckendorf's Theorem to f-decompositions](#) • [JNT](#)  
Philippe Demontigny, Thao Do, Archit Kulkarni, Steven J Miller, [David Moon](#), Umang Varma

## Honors

- 2020

NSF GRFP Honorable Mention
- 2018

Outstanding PhD Teaching Award • University of Colorado Boulder
- 2007-11

Caroline D Bradley Scholar

## Talks

- 2023

[Gradual Structure Editing with Obligations](#) • [VL/HCC](#)
- 2022

[tylr: A Tiny Tile-Based Structure Editor](#) • UPenn  
Guest lecture for [Andrew Head](#)'s graduate seminar [Live and Literate Programming](#).
- 2022

[tylr: A Tiny Tile-Based Structure Editor](#) • [TyDe](#)
- 2021

[Restructuring Structure Editing](#) • [LIVE](#)
- 2019

[Naturally Editing Typed Expressions with Holes](#) • [Midwest PL Summit](#)  
Joint presentation with Cyrus Omar
- 2019

[Flexible Structure Editing of Well-Typed Expressions](#) • [TyDe](#)
- 2013

[Sets Characterized by Missing Sums and Differences in Z^D](#) • [YMC](#)

## Teaching

- University of Michigan

2024

EECS 490: Programming Languages (TA)

2023

EECS 490: Programming Languages (TA)

2022

EECS 490: Programming Languages (TA)

2020

EECS 490: Programming Languages (TA)
- University of Colorado Boulder

2018

CSCI 3155: Principles of Programming Languages (TA)
- City College of New York

2018

CSC 59940: Front-End Web Application Development (co-instructor)
- Williams College

2015

MATH 394: Galois Theory (grader)

2015

CSCI 136: Data Structures (grader)

2012

MATH 200: Discrete Mathematics (grader)

## Service

- 2024

Program Committee • [HATRA](#)
- 2024

Program Committee • [LIVE](#)
- 2020-22

Program Committee • [LIVE](#)
- 2021

Artifact Evaluation Committee • [PLDI](#)

## Industry

- 2016-18

[Software Engineer](#) • [Addepar](#)  
Web application development using Ember.js and Java.  
Developed interfaces for benchmarking investment portfolios.