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

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.