

Daniel Patterson

Northeastern University
Khoury College of Computer Sciences
Boston, MA

dbp@dbpmail.net

EDUCATION	<i>Ph.D.</i> , Computer Science (2022) Northeastern University, Boston MA <i>Bachelor of Science</i> , Math and Computer Science (2014) Brown University, Providence RI	
EMPLOYMENT	<i>Northeastern University, Boston MA</i>	2022-present
	Assistant Teaching Professor	
	<i>Northeastern University, Boston MA</i>	2016-2022
	Research Assistant, Teaching Assistant, Instructor of Record	
	<i>Position Development, New York, NY</i>	2014-2016
	Founder / CTO of small software consulting company.	
	<i>Brown University</i>	Summer 2013
	Research internship, codesigned Pyret programming language, CaptainTeach educational platform.	
AWARDS	<i>Northeastern University Center for Advancing Teaching and Learning Through Research</i> , Future Faculty Program	
	<i>Northeastern University, 2019 Khoury College Graduate Teaching Award</i>	
	<i>National Science Foundation, GRFP 2018</i> Honorable Mention	
TEACHING EXPERIENCE	Instructor of Record, <i>Verified Compilers</i> (CS4910), Northeastern University, Fall 2019.	
	Novel Course Design, <i>Verified Compilers</i> (CS4910), Northeastern University, Fall 2019.	
	Grad TA, <i>Fundamentals of CS, Accel.</i> (CS2500), Northeastern University, Fall 2018.	
	Head TA, <i>Probability and Computation</i> (CS155), Brown University, Spring 2013.	
	TA, <i>Introduction to Probability and Computing</i> (CS45), Brown University, Fall 2012.	
STUDENTS SUPERVISED	<ul style="list-style-type: none">Noble Mushtak (<i>BS expected 2023</i>), Northeastern University	
ACADEMIC PUBLICATIONS	<i>Semantic Soundness for Language Interoperability.</i>	
	<ul style="list-style-type: none">Daniel Patterson, Noble Mushtak, Andrew Wagner, and Amal Ahmed. (PLDI 2022).	
	<i>Foreign Function Typing: Semantic Type Soundness for FFIs.</i>	
	<ul style="list-style-type: none">Daniel Patterson and Amal Ahmed. First ACM SIGPLAN Workshop on Gradual Typing (WGT 2020).	
	<i>The Next 700 Compiler Correctness Theorems (Functional Pearl).</i>	
	<ul style="list-style-type: none">Daniel Patterson and Amal Ahmed. 24th Conference on Functional Programming (ICFP 2019).	
	<i>Rust Distilled: An Expressive Tower of Languages.</i>	
	<ul style="list-style-type: none">Aaron Weiss, Daniel Patterson, and Amal Ahmed. ML Workshop 2018 (ML 2018).	
	<i>FunTAL: Reasonably Mixing a Functional Language with Assembly.</i>	
	<ul style="list-style-type: none">Daniel Patterson, Jamie Perconti, Christos Dimoulas, and Amal Ahmed. 38th Conference on Programming Language Design and Implementation (PLDI 2017).	

**ACADEMIC
SERVICE**

Linking Types for Multi-Language Software: Have Your Cake and Eat It Too.

- Daniel Patterson and Amal Ahmed. 2nd Summit on Advances in Programming Languages (SNAPL 2017).

CaptainTeach: Multi-Stage, In-Flow Peer Review for Programming Assignments.

- Joe Gibbs Politz, Daniel Patterson, Kathi Fisler, and Shriram Krishnamurthi. 2014 Conference on Innovation & Technology in Computer Science Education (ITiCSE 2014).

Python: The Full Monty - A Tested Semantics for the Python Programming Language.

- Joe Gibbs Politz, Alejandro Martinez, Matthew Milano, Sumner Warren, Daniel Patterson, Junsong Li, Anand Chitipothu, and Shriram Krishnamurthi. 2013 International Conference on Object Oriented Programming Systems Languages & Applications (OOPSLA 2013).

2022 International Conference on Object-Oriented Programming, Systems, Languages, and Applications (OOPLSA 2022)

- *External Review Committee Member*
- *Artifact Evaluation Committee Member*

24rd International Conference on Foundations of Software Science and Computation Structures (FoSSaCS 2021)

- *External Reviewer*

23rd International Conference on Foundations of Software Science and Computation Structures (FoSSaCS 2020)

- *External Reviewer*

Principles of Secure Compilation 2020 (PriSC 2020)

- *Program Committee Member*

40th Conference on Programming Language Design and Implementation (PLDI 2019)

- *Artifact Evaluation Committee Member*

46th Symposium on Principles of Programming Languages (POPL 2019).

- *External Reviewer*
- *Artifact Evaluation Committee Member*

22nd International Conference on Functional Programming (ICFP 2017).

- *External Reviewer*