

Mark Moeller

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EDUCATION

Cornell University, Ithaca NY 2020-2026
PhD in Computer Science, in the Programming Languages research area, coadvised by Nate Foster and Alexandra Silva

University of Pennsylvania, Philadelphia PA 2012-2013
MSE, Computer and Information Science

United States Naval Academy, Annapolis MD 2008-2012
BS, Mathematics (Honors) and Computer Science

TEACHING EXPERIENCE

College of the Holy Cross (Asst. Prof.)

CSCI226 Computer Organization and Design Fall '26
CSCI235 Analysis of Algorithms Fall '26

Cornell University (Instructor)

CS2800 Mathematical Foundations of Computing Fall '25
Topics include mathematical induction; logical proof; propositional and predicate calculus; sets, functions, and relations; graphs; combinatorics and discrete mathematics; basic probability theory; and finite-state machines. Approx. 280 students.

Cornell University (Teaching Assistant)

CS3410 Computer Architecture Fall '20, Spring '21
Introduction to computer organization, systems programming and the hardware/software interface. Approx. 300 students in the course, 15-20 students in my discussion section.

United States Naval Academy (Instructor)

SI413 Programming Languages Fall '18
Basic concepts underlying the design of modern programming languages including types, control structures, abstraction, and inheritance. Approx. 20 students.

SI340 Theory of Computing Fall '18, '19¹
Introduction to formal language theory and automata, including finite automata, regular expressions, context-free grammars, pushdown automata, and Turing machines. Approx. 20 students in '18, 40 students in '19.

IC221 Systems Programming

Spring '19

Fundamentals of the Unix Programming Interface using the C programming language. Approx. 20 students.

SI335 Computer AlgorithmsSpring '19¹, '20¹

Fundamentals of algorithms design and analysis, including algorithm design paradigms, run-time analysis, and correctness proofs. Course includes a study of classic algorithms using greedy methods, divide and conquer, dynamic programming, and graphs as well as an introduction to complexity theory. Approx. 60 students each year.

Note 1. Course coordinator

PROFESSIONAL EXPERIENCE

Assistant Professor

2026-Present

The College of the Holy Cross, Worcester MA

Research Engineering Intern

Summers 2022, 2025

Galois Inc., Portland OR

- Pursued research in network verification and compilers on client-billable projects.

Instructor

2018-2020

United States Naval Academy, Annapolis MD

- Taught courses for Computer Science majors as instructor of record.
- Served as academic advisor for 18 students.

PUBLICATIONS

- Mark Moeller, Tiago Ferreira, Thomas Lu, Nate Foster, Alexandra Silva. Active Learning of Symbolic NetKAT Automata. In PLDI 2025.
- Mark Moeller + Jules Jacobs, Olivier Savary Belanger, David Darais, Cole Schlesinger, Steffen Smolka, Nate Foster, Alexandra Silva. KATch: A Fast Symbolic Verifier for NetKAT. In PLDI 2024.
- Mark Moeller, Thomas Wiener, Alaia Solko-Breslin, Caleb Koch, Nate Foster, Alexandra Silva. Automata Learning with an Incomplete Teacher. In ECOOP 2023.

SERVICE

Seminar Organization

- Upstate Programming Languages Seminar, August 2025. <https://www.cs.cornell.edu/upstate-pl/>.
- Programming Languages Discussion Group (PLDG), Cornell's PL Research Seminar, 2022-2024. E.g., <https://pl.cs.cornell.edu/pldg/2023sp/>

FELLOWSHIP

John J. McMullen Fellow

2012

Awarded competitively for complete funding of Master's work, 2012-2013.