

Zoe Paraskevopoulou

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EDUCATION

Princeton University

USA

PhD in Computer Science

2015-2020

- Thesis: Verified Optimizations for Functional Languages, Adviser: Andrew W. Appel
- Teaching: *Algorithms and Data Structures* (Spring 2017), *Programming Languages* (Spring 2018, Spring 2019)

École Normale Supérieure Paris-Saclay

France

Master's Degree in Computer Science (Master Parisien de Recherche en Informatique)

2014-2015

- *Summa Cum Laude*
- Specialization: Logics and Semantics of Programs
- Thesis: *Self-Adjusting Computation for CostIt*, Adviser: Deepak Garg.

National Technical University of Athens

Greece

Combined BS/MS in Electrical and Computer Engineering

2008-2014

- Majors: Computer Software, Computer Systems
- Minors: Mathematics, Computer Networks
- Thesis: *A Coq Framework For Verified Property Based Testing*, Adviser: Cătălin Hrițcu

WORK EXPERIENCE

Research Engineer

August 2022 - present

Ethereum Foundation

Athens, Greece (remote)

- Designing and developing tools to formally specify and verify programs that run on the Ethereum blockchain.

Postdoctoral Researcher

October 2020 - December 2022

Khoury College of Computer Sciences, Northeastern University

Boston, USA

- *Computing Innovation Fellow 2020* (acceptance rate 11%)
- Mentor: Professor Amal Ahmed

PhD Intern

June 2019 - August 2019

Facebook

Seattle, USA

- Topic: Extracting Certified Elliptic Curve Arithmetic from Coq to Rust
- Team: Libra

Research Internship

June 2018 - August 2018

Microsoft Research

Redmond, USA

- Topic: *Layered DSLs for Verified Cryptography*
- Team: RiSE

Research Internship

June 2017 - August 2017

Microsoft Research

Redmond, USA

- Topic: *Optimizing an Interpreter by Selective Native Compilation*
- Team: RiSE

Research Internship

March 2015 - August 2015

Max Planck Institute of Software Systems

Saarbrücken, Germany

- Topic: *Self-Adjusting Computation for CostIt*
- Adviser: Deepak Garg

Research Internship

April 2014 - September 2014

INRIA Paris-Rocquencourt

Paris, France

- Topic: *QuickChick: A Coq Framework for Verified Property Based Testing*
- Adviser: Cătălin Hrițcu

AREAS OF EXPERTISE

formal verification, interactive theorem proving, compilers, static analysis, software testing, functional programming, type systems

PUBLICATIONS

- Computing Correctly with Inductive Relations.** PLDI 2022
Zoe Paraskevopoulou, Aaron Eline, and Leonidas Lampropoulos. To Appear.
- Compiling with Continuations, Correctly.** OOPSLA 2021
Zoe Paraskevopoulou and Anvay Grover.
- Compositional Optimizations for Certioq.** ICFP 2021
Zoe Paraskevopoulou, John M. Li, and Andrew Appel.
- Closure Conversion is Safe for Space.** ICFP 2019
Zoe Paraskevopoulou and Andrew Appel.
- Meta-F*: Proof Automation with SMT, Tactics, and Metaprograms.** ESOP 2019
Guido Martínez, Danel Ahman, Victor Dumitrescu, Nick Giannarakis, Chris Hawblitzel, Cătălin Hrițcu, Monal Narasimhamurthy, Zoe Paraskevopoulou, Clément Pit-Claudel, Jonathan Protzenko, Tahina Ramananandro, Aseem Rastogi, and Nikhil Swamy.
- Generating Good Generators for Inductive Relations.** POPL 2018
Leonidas Lampropoulos, Zoe Paraskevopoulou, and Benjamin Pierce.
- A Type Theory for Incremental Computational Complexity with Control Flow Changes.** ICFP 2016
Ezgi Çiçek, Zoe Paraskevopoulou, and Deepak Garg.
- Foundational Property-Based Testing.** ITP 2015
Zoe Paraskevopoulou, Cătălin Hrițcu, Maxime Dénès, Leonidas Lampropoulos, and Benjamin C. Pierce.

SCHOLARSHIPS AND AWARDS

- Computing Innovation Fellow** 2020
2-year postdoctoral fellowship from Computing Research Association (acceptance rate 11%).
- Siebel Scholars Fellow** 2019
Distinction based on academic merit, distinguished research, and outstanding leadership.
- Stanley J. Seeger Hellenic Studies Prize** 2015
Scholarship for distinguished academic performance for my first year of study at Princeton University.
- INRIA-MPRI Scholarship** 2015
INRIA 1-year scholarship to attend the MPRI master's program.
- Thomaidio Award** 2014
Award for ranking first among the students of my class at the Electrical and Computer Engineering School of NTUA during the academic year 2012-2013.
- KARY Award** 2014
Award from the National Technical University of Athens for excellent academic performance during the academic year 2012-2013.

ACADEMIC SERVICE

- Program Committee**, PLDI 2023
Program Committee, Types 2022
Workshops Co-chair, ICFP 2022
Program Committee, PEPM 2022
Program Committee, CPP 2022
Workshops Co-chair, ICFP 2021
Program Committee, PriSC 2021
Program Committee, TFP 2020
Program Committee, ML 2019
External Review Committee, ICFP 2019
Program Committee, TyDe 2018
Program Committee, OCaml 2017
Artifact Evaluation Committee, POPL 2017