

# Aymeric Fromherz

## Curriculum Vitae

6351 Walnut Street, Apt 9  
Pittsburgh, 15206, PA  
USA

☎ +1-510-361-6400

✉ fromherz@cmu.edu

Born on January 3rd 1996 in Lyon, France

## Education

- 2017–now **PhD**, *Electrical and Computer Engineering*, Carnegie Mellon University.  
coadvised by Bryan Parno and Corina Pasareanu
- 2014–2015, **Master (M.Sc.)**, *Computer Science*, Paris, Summa cum laude.
- 2016–2017 MPRI (Master Parisien de Recherche en Informatique)
- 2014–2015 **Licence (B.Sc.)**, *Mathematics*, École Normale Supérieure, Paris.
- 2013–2014 **Licence (B.Sc.)**, *Computer Science*, École Normale Supérieure, Paris, Summa cum laude.
- 2011–2013 **Preparatory classes**, *MPSI/MP\* (Maths-Physics)*, Lycée du Parc, Lyon.
- 2011 **Baccalauréat (French high school diploma)**, *Scientific*, Cité Scolaire Internationale, Lyon, Summa cum laude.

## Professional appointments

- Summer 2020 **Research Intern**, *Supervised by Nikhil Swamy*, Microsoft Research, Redmond, WA, USA.
- Summer 2019 **Research Intern**, *Supervised by Nikhil Swamy*, Microsoft Research, Redmond, WA, USA.
- Sept 2015–  
June 2016 **Development and Formal Proof of a MicroKernel**, ProvenRun, Paris, France, Engineer position.

## Honors and Awards

- 2019 **Cylab Presidential Fellow**.
- 2017 **Fondation Monohan Fellow**.
- 2017 **Google Summer of Code**, Java Pathfinder, Mentor.
- 2016 **Google Summer of Code**, Java Pathfinder, Student.
- 2013 **Admission at the École Normale Supérieure, Paris**, National exam for computer science majors, ranked 13th.
- 2011 **Abitur**, (German high school diploma).

## Publications

**HACLxN: Verified Generic SIMD Crypto (for All Your Favourite Platforms)**, Marina Polubelova, Karthikeyan Bhargavan, Jonathan Protzenko, Benjamin Beurdouche, Aymeric Fromherz, Natalia Kulatova, Santiago Zanella-Béguelin, *ACM Conference on Computer and Communications Security (CCS)*, 2020

**SteelCore: An Extensible Concurrent Separation Logic for Effectful Dependently Typed Programs**, Nikhil Swamy, Aseem Rastogi, Aymeric Fromherz, Denis Merigoux, Danel Ahman, Guido Martinez, *International Conference on Functional Programming (ICFP)*, 2020

**Steel: Scaling up Memory Reasoning for F\***, Aymeric Fromherz, Denis Merigoux, *Automated Deduction for Separation Logics (ADSL)*, 2020

**EverCrypt: A Fast, Verified, Cross-Platform Cryptographic Provider**, Jonathan Protzenko, Bryan Parno, Aymeric Fromherz, Chris Hawblitzel, Marina Polubelova, Karthikeyan Bhargavan, Benjamin Beurdouche, Joonwon Choi, Antoine Delignat-Lavaud, Cédric Fournet, Tahina Ramanananandro, Aseem Rastogi, Nikhil Swamy, Christoph Wintersteiger, and Santiago Zanella-Béguelin, *IEEE Symposium on Security and Privacy (Oakland)*, 2020

**Symbolic Pathfinder for SV-COMP - (Competition Contribution)**, Yannic Noller, Corina S. Pasareanu, Aymeric Fromherz, Xuan-Bach D. Le, Willem Visser, *International Conference on Tools and Algorithms for the Construction and Analysis of Systems (TACAS)*, 2019

**A Verified, Efficient Embedding of a Verifiable Assembly Language**, Aymeric Fromherz, Nick Giannarakis, Chris Hawblitzel, Bryan Parno, Aseem Rastogi, and Nikhil Swamy, *Symposium on Principles of Programming Languages (POPL)*, 2019

**Static Value Analysis of Python Programs by Abstract Interpretation**, Aymeric Fromherz, Abdelraouf Ouadjaout, Antoine Miné, *NASA Formal Methods Symposium (NFM)*, 2018

**Symbolic Arrays in Symbolic Pathfinder**, Aymeric Fromherz, Kasper S. Luckow, Corina S. Pasareanu, *Java PathFinder Workshop*, 2016

## Publications under review

**Fast Geometric Projections for Local Robustness Certification**, Aymeric Fromherz, Klas Leino, Matt Fredrikson, Bryan Parno, Corina Pasareanu

**Layered Indexed Effects. Foundations and Applications of Effectful Dependently Typed Programming**, Aseem Rastogi, Guido Martínez, Aymeric Fromherz, Tahina Ramananandro, Nikhil Swamy

## Teaching Experience

Spring 2019 **Secure Software Systems**, 18-732, *Carnegie Mellon University*, Head Teaching Assistant

Spring 2018 **Secure Software Systems**, 18-732, *Carnegie Mellon University*, Head Teaching Assistant

## Professional Service

**Artifact Evaluation Committee member.** POPL'21, ICFP'20, ISSTA'20

**External Reviewer.** ESOP'21, POPL'20, CPP'20, ESOP'20, FSE'19