Emmanuel Suárez Acevedo

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Education

Cornell University Ann S. Bowers College of Computing and Information Science — **New York, NY**
PhD in Computer Science — *August 2024 – Present*

University of Pennsylvania School of Engineering and Applied Science — **Philadelphia, PA**
MSE in Computer and Information Science — *August 2022 – May 2024*

University of Pennsylvania School of Engineering and Applied Science — **Philadelphia, PA**
BSE with Honors in Computer and Information Science — *August 2015 – May 2019*

Publications

Effects and Coeffects in Call-By-Push-Value — **OOPSLA 2024**
Cassia Torczon, Emmanuel Suárez Acevedo, Shubh Agrawal, Joey Velez-Ginorio, and Stephanie Weirich

Work Experience

Graduate Researcher — **New York, NY**
Cornell University — *August 2024 – Present*

* Working on program logics for reasoning about concurrent, randomized programs
* Developed a programming language for verifying quantitative network properties (e.g. latency, bandwidth)

Research Intern — **Minneapolis, MN**
University of Minnesota, Twin Cities — *May 2024 – August 2024*

* Developed an extension to Martin-Löf type theory with strictly associative dependent sums and presented work at HoTT MURI 2024 Meeting

Graduate Researcher — **Philadelphia, PA**
University of Pennsylvania — *August 2022 – April 2024*

* Developed type system for tracking effects and coeffects in call-by-push-value (with properties formalized in Rocq) and presented paper at OOPSLA 2024
* Wrote paper in literate Agda (available on the arXiv) showcasing a proof that can be used for teaching the technique of logical relations with a proof assistant

Senior Software Engineer — **San Francisco, CA**
Strava — *August 2019 – July 2022*

* Led the design and implementation of core system for modeling types of activities
* Mentored junior engineers in microservice architecture and Scala programming
* Used Apache Spark and Apache Kafka to build a geospatial data export tool for city planners
* Built tools to verify and ensure correctness of internal route data
* Developed a Scala microservice serving all static maps in product

Teaching Experience

Mentor — **University of Pennsylvania**
CIS 5520: Advanced Programming — *Nov 2023 – Dec 2023*

Teaching Assistant — **University of Pennsylvania**
CIS 5520: Advanced Programming — *August 2022 – December 2022*

Head Teaching Assistant — **University of Pennsylvania**
CIS 120: Programming Languages & Techniques I — *August 2016 – May 2019*

Service

POPL 2026 Artifact Evaluation Committee Member

Cornell Student-Applicant Support Program (Fall 2024)

Heights Philadelphia Summer School Teaching Assistant (2023)

Talks

Effects and Coeffects in Call-By-Push-Value **OOPSLA 2024**

Strictly Associative Sigmas **HoTT MURI 2024 meeting**

Awards

Dean's Excellence and Hopper-Dean Fellowship, Cornell University Ann S. Bowers College of Computing and Information Science (2024)

Outstanding Research Award, University of Pennsylvania School of Engineering and Applied Sciences (2024)

Graduate Research Fellowship, National Science Foundation (2024)

Dean's Master's Scholarship, University of Pennsylvania School of Engineering and Applied Sciences (2022)

Skills

Languages: Agda, OCaml, Rocq, Haskell, Scala, Lean, Java, Ruby, C/C++, Javascript

General: Git, LaTeX, Rails, Apache Spark, MySQL, React, Fluent in Spanish