# Ethan Cecchetti

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## Education

**PhD**, *Computer Science*, **Cornell University**, Ithaca, NY — 2015 – 2021
Dissertation: *Mechanisms for Provable Integrity Protection in Decentralized Systems*
Advisors: Andrew C. Myers and Ari Juels

**MS**, *Computer Science*, **Cornell University**, Ithaca, NY — 2019

**ScB**, *Mathematics – Computer Science*, **Brown University**, Providence, RI — 2008 – 2012

## Academic Appointments

**University of Wisconsin–Madison**, Madison, WI — 2023 – Present
*Assistant Professor, Department of Computer Sciences*

**University of Maryland**, College Park, MD — 2021 – 2023
*Maryland Cybersecurity Center (MC2) Postdoctoral Fellow*

## Industry Employment

**VMware**, Palo Alto, CA – *Research Intern* — 2019

**TripAdvisor**, Needham, MA – *Software Engineer* — 2012 – 2015

**Google**, Cambridge, MA – *Software Engineering Intern* — 2011

## Awards and Honors

**Distinguished Paper Award**, European Conference on Object-Oriented Programming (ECOOP) — 2023

**Best Paper Award**, IEEE Symposium on Security and Privacy (S&P) — 2021

**Best Paper Award Finalist**, ACM Conference on Computer and Communication Security (CCS) — 2017

**National Defense Science and Engineering Graduate (NDSEG) Fellowship** — 2017

**Outstanding Teaching Assistant**, Cornell University, Department of Computer Science — Fall 2015

**Senior Prize**, Brown University, Department of Computer Science — 2012

## Conference Publications

*Computationally Bounded Robust Compilation and Universally Composable Security* — CSF 2024
Robert Künnemann, Marco Patrignani, **Ethan Cecchetti** — *(To Appear)*
[arxiv.org/abs/2401.15041]

*Semantics for Noninterference with Interaction Trees* — ECOOP 2023
Lucas Silver, Paul He, **Ethan Cecchetti**, Andrew K. Hirsch, and Steve Zdancewic
***Distinguished Paper Award***
[doi.org/10.4230/LIPIcs.ECOOP.2023.29]

*Compositional Security for Reentrant Applications* S&P 2021
**Ethan Cecchetti**, Siqiu Yao, Haobin Ni, and Andrew C. Myers
***Best Paper Award***
[arxiv.org/abs/2103.08577]

*Giving Semantics to Program-Counter Labels via Secure Effects* POPL 2021
Andrew K. Hirsch and **Ethan Cecchetti**
[doi.org/10.1145/3434316]

*First-Order Logic for Flow-Limited Authorization* CSF 2020
Andrew K. Hirsch, Pedro H. Azevedo de Amorim, **Ethan Cecchetti**, Ross Tate, and Owen Arden
[doi.org/10.1109/CSF49147.2020.00017]

*PIEs: Public Incompressible Encodings for Decentralized Storage* CCS 2019
**Ethan Cecchetti**, Ben Fisch, Ian Miers, and Ari Juels
[doi.org/10.1145/3319535.3354231]

*Obladi: Oblivious Serializable Transactions in the Cloud* OSDI 2018
Natacha Crooks, Matthew Burke, **Ethan Cecchetti**, Sitar Harel, Rachit Agarwal, and Lorenzo Alvisi
[arxiv.org/abs/1809.10559]

*Nonmalleable Information Flow Control* CCS 2017
**Ethan Cecchetti**, Andrew C. Myers, and Owen Arden
***Best Paper Award Finalist***
[doi.org/10.1145/3133956.3134054]

*Solidus: Confidential Ledger Transactions via PVORM* CCS 2017
**Ethan Cecchetti**, Fan Zhang, Yan Ji, Ahmed Kosba, Ari Juels, and Elaine Shi
[doi.org/10.1145/3133956.3134010]

*Town Crier: An Authenticated Data Feed for Smart Contracts* CCS 2016
Fan Zhang, **Ethan Cecchetti**, Kyle Croman, Ari Juels, and Elaine Shi
[doi.org/10.1145/2976749.2978326]

## Workshop Publications

*Securing Smart Contracts with Information Flow* FAB 2020
**Ethan Cecchetti**, Siqiu Yao, Haobin Ni, and Andrew C. Myers [scfab.github.io/2020/]
[cecchetti.sites.cs.wisc.edu/papers/ifc-contracts-fab20.pdf]

## Patents

*Authenticated Data Feed for Blockchains* Issued: 2023-11-28
Patent No.: US-11829998-B2
Owner: Cornell University
Inventors: Fan Zhang; **Ethan Cecchetti**; Kyle Croman; Ari Juels; Runting Shi

## Professional Service

**Conference Program Committees**

IEEE S&P (Oakland) 2024 [www.ieee-security.org/TC/SP2024/]
OOPSLA 2023 (External Review Committee) [2023.splashcon.org/track/splash-2023-oopsla]
OOPSLA 2022 (External Review Committee) [2022.splashcon.org/track/splash-2022-oopsla]

**Workshop Program Committees**

FCS 2024 *(PC co-chair)* [fcs-workshop.github.io/fcs2024/]
Choreographic Programming (CP) 2024 [pldi24.sigplan.org/home/cp-2024]
PLAS 2023 [plas23.github.io]
FCS 2023 *(PC co-chair)* [squera.github.io/fcs23/]
PriSC 2023 [popl23.sigplan.org/home/prisc-2023]
FMBC 2022 [fmbc.gitlab.io/2022/]
PLAS 2020 [pages.cispa.de/plas2020/]
FAB 2020 [scfab.github.io/2020/]

**Journal Refereeing**

Transactions on Programming Languages and Systems (TOPLAS) [dl.acm.org/journal/toplas]
Transactions on Privacy and Security (TOPS) [dl.acm.org/journal/tops]

## Invited Talks

*SCIF: Securing Smart Contracts with Explicit Trust*
CMU Secure Blockchain Summit — Apr. 2024

*Compositional Security for Reentrant Applications*
University of Pennsylvania PL Club — Dec. 2021
Boston University Principles of Programming and Verification Seminar — Oct. 2021
Brown University Systems Seminar — Oct. 2021
UC Berkeley Security Seminar — June 2021
UC San Diego Security Lunch — Apr. 2021

*Controlling Reentrancy with Information Flow*
UC Santa Cruz Languages, Systems, and Data Lab Seminar — Aug. 2019

*One File for the Price of Three: Catching Cheating Servers in Decentralized Storage Networks*
MIT CSAIL Security Seminar — Sept. 2018
UC Berkeley Security Seminar — Aug. 2018
Initiative for CryptoCurrencies & Contracts (IC3) Meetup — Aug. 2018

*Nonmalleable Information Flow Control*
Harvard Programming Languages Seminar — Apr. 2017

## Outreach

Volunteer teacher for Conrell's annual Expanding Your Horizons Conference — 2016 – 2019

Volunteer teacher for Bootstrap, teaching 6th – 8th graders math and programming 2013

## Teaching

**Primary Instructor** *(University of Wisconsin–Madison)*

COMP SCI 642: *Introduction to Information Security* Spring 2024
COMP SCI 839: *Language-Based Security* Fall 2023

**Graduate TA** *(Cornell University)*

CS 5430/5431: *Systems Security (and Practicum)* Spring 2018
CS 2110: *Object-Oriented Programming and Data Structures* Fall 2015

**Bootstrap Volunteer Teacher**

*Bootstrap Algebra (Orchard Gardens Middle School, Roxbury, MA)* Spring 2013
*Bootstrap Algebra (Newton Community Education, Newton, MA)* Fall 2013

**Head TA** *(Brown University)*

CSCI 1510: *Introduction to Cryptography and Computer Security* Fall 2011
CSCI 0510: *Models of Computation* Fall 2010

**Head TA and Course Development** *(Brown University)*

CSCI 0190: *Programming with Data Structures and Algorithms* Summer – Fall 2009