

# Christopher W. Fletcher

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CONTACT	<i>E-mail:</i> <a href="mailto:cwfletch@illinois.edu">cwfletch@illinois.edu</a> <i>Website:</i> <a href="http://cwfletcher.net">http://cwfletcher.net</a> <i>Last updated:</i> November, 2023
CURRENT POSITION	Associate Professor University of Illinois at Urbana-Champaign Computer Science Department
ADDRESS	Siebel Center for Computer Science 201 N. Goodwin Ave, Urbana, IL 61801
EDUCATION	<b>Massachusetts Institute of Technology</b> <span style="float: right;"><b>June 2016</b></span> Ph.D., Electrical Engineering and Computer Science Thesis: “Oblivious RAM: From Theory to Practice” ( <b>Winner of the George M. Sprowls Award for outstanding Ph.D. thesis in CS at MIT</b> ) Advisor: Sriniv Devadas  <b>Massachusetts Institute of Technology</b> <span style="float: right;"><b>May 2013</b></span> S.M., Electrical Engineering and Computer Science Thesis: “Ascend: An Architecture for Performing Secure Computation on Encrypted Data” Advisor: Sriniv Devadas  <b>The University of California, Berkeley</b> <span style="float: right;"><b>May 2010</b></span> B.S., Electrical Engineering and Computer Science Advisor: John Wawrzynek  <b>Viewpoint School, Calabasas</b> <span style="float: right;"><b>June 2006</b></span> {Elementary, High} School Diplomas
PAPERS/ETC.	Please see <a href="https://cwfletcher.github.io/research">https://cwfletcher.github.io/research</a> for a complete list of published papers, etc.
AWARDS AND DISTINCTIONS	CCS’23 Test of Time Award <span style="float: right;"><b>2023</b></span> University of Illinois Distinguished Promotion Award <span style="float: right;"><b>2023</b></span> College of Engineering Dean’s Award for Excellence in Research <span style="float: right;"><b>2023</b></span> C.W. Gear Outstanding Junior Faculty Award <span style="float: right;"><b>2023</b></span> IEEE Micro Top Picks Paper <span style="float: right;"><b>2023</b></span> Faculty Ranked Excellent by Their Students <span style="float: right;"><b>Fall 2022</b></span> Conference halls of fame: ISCA, ASPLOS, MICRO <span style="float: right;"><b>2022</b></span> 2nd Place, CSAW’22 Applied Research Competition <span style="float: right;"><b>2022</b></span> Honorable Mention Paper, Intel Hardware Security Academic Award <span style="float: right;"><b>2022</b></span> Paper selected for Pwnie Award – Best Cryptographic Attack <span style="float: right;"><b>2022</b></span> Faculty Ranked Excellent by Their Students <span style="float: right;"><b>Fall 2021</b></span> Intel Rising Star Award <span style="float: right;"><b>2021</b></span> Paper selected as a Nominee for Pwnie Award – Most Innovative Research <span style="float: right;"><b>2021</b></span> First Place Paper, Inaugural Intel Hardware Security Academic Award <span style="float: right;"><b>2021</b></span> IEEE Micro Top Picks Paper <span style="float: right;"><b>2021</b></span> Faculty Ranked Excellent by Their Students <span style="float: right;"><b>Spring 2020</b></span> Paper selected to appear in CACM Research Highlights <span style="float: right;"><b>2020</b></span> NSF CAREER Award <span style="float: right;"><b>2020</b></span> Google Faculty Award <span style="float: right;"><b>2020</b></span> Intel Corporate Research Council Outstanding Researcher Award <span style="float: right;"><b>2020</b></span> 3x IEEE Micro Top Picks Papers <span style="float: right;"><b>2020</b></span>

2x IEEE Micro Top Picks Honorable Mention Papers 2020  
 Faculty Ranked Excellent by Their Students Fall 2019  
 Finalist Paper, CSAW Applied Research Competition 2019  
 MICRO'19 Best Paper Award 2019  
 Elected Member, DARPA Information Science and Technology (ISAT) Study Group 2019-2022  
 ISCA'19 paper is highest ranked paper in double-blind review process 2019  
 NDSS'19 Distinguished Paper Finalist 2019  
 IEEE Micro Top Picks Honorable Mention Paper 2019  
 Top Picks in Hardware & Embedded Security Paper 2018  
 Faculty Ranked Excellent by Their Students Fall 2017  
 George M. Sprowls Award for Outstanding Ph.D. thesis in CS at MIT 2016  
 ACSC'13 Best Poster Presentation Award, Second Place 2013  
 CCS'13 Best Student Paper Award 2013  
 Ascend processor named one of ten "world changing ideas" by Scientific American 2013  
 National Defense Science and Engineering Graduate Fellowship Funding years: 2012-2015  
 National Science Foundation Graduate Research Fellowship Funding years: 2011  
 ICS'10 Best Student Paper Award 2010  
**Pre-graduate school:** UC Berkeley, graduated with *High Honors* (GPA: 3.91/4) (2010), Golden Key (member) (Inducted 2008), Rose Hills Science and Engineering Scholarship (2007-2008), Tau Beta Pi - UC Berkeley CA Alpha Chapter (Inducted 2007), Eta Kappa Nu (invited), National Society of Collegiate Scholars (2006), UC Berkeley Edward Frank Kraft Scholarship (2006), VSSA Award (Community Service Distinction) (2006), Cum Laude Society (Inducted 2006), CORE - Community Service Honor Society (Inducted 2005)

#### POSITIONS

1. Associate Professor **Fall 2023 - Present**  
 Affiliation: *University of Illinois at Urbana-Champaign; Computer Science Department*
2. Assistant Professor **Fall 2017 - Fall 2023**  
 Affiliation: *University of Illinois at Urbana-Champaign; Computer Science Department*
3. Research Post-Doc **Fall 2016 - Fall 2017**  
 Affiliation: *Nvidia Corporation; Nvidia Research; Architecture Research Group*  
 Advisor(s): Joel Emer, Steve Keckler
4. Research Assistant **Fall 2010 - Spring 2016**  
 Affiliation: *MIT; CSAIL; Computation Structures Group*  
 Advisor(s): Srinu Devadas
5. Undergraduate Researcher **Spring 2008 - Spring 2010**  
 Affiliation: *U.C. Berkeley; BWRC, ParLab; RAMP, Berkeley Reconfigurable Group*  
 Advisor(s): John Wawrzyniek, Garry Nolan, Greg Gibeling, Narges Asadi
6. Software Engineering Intern **Summer 2008**  
*Oracle Corporation; Project: JDeveloper-JIRA Connector*

#### STUDENTS

Please see <https://cwfletcher.github.io/students> for information on my awesome students.

**Student Award Highlights:** Kartik Hegde (Facebook Ph.D. Fellow), Jiyong Yu (Microsoft Ph.D. Fellow, W. J. Poppelbaum Memorial Award), Riccardo Paccagnella (Siebel Scholar, Chirag Foundation Graduate Fellow, Distinguished Reviewer – Oakland/SP Shadow PC, Kuck PhD Thesis Award), Sushant Dinesh (UIUC CS Excellence Award), Nandeeka Nayak (SURGE Fellow, NSF GRFP Honorable Mention)

#### SERVICE

**Conference Panels:** ISCA 2020, DAC 2020 Early Career Workshop, Intel SCAP Center Review 2020, ICCD 2021  
**Keynote Debates:** Intel SCAP Center Review 2020  
**Conference Tutorials (Organized):** ISCA 2019 (43 attendees), ASPLOS 2020<sup>1</sup>, ISCA 2022,

<sup>1</sup>This tutorial was accepted and planned to appear, but was cancelled due to its parent event ASPLOS'20 being cancelled.

ISCA 2023

**Dagstuhl Seminars (Organized):** “Microarchitectural Attacks and Defenses,” week-long seminar (2023)

**Journal/Special Issue Committees:** IEEE MICRO Top Picks (2020, 2021), Top Picks in Hardware and Embedded Security 2020

**Conference Program Committee Co-Chair:** Top Picks in Hardware and Embedded Security 2022

**Conference Program Committees:** ASPLOS (2017, 2020, 2021, 2024), MICRO (2017, 2019, 2020, 2021), ISCA (2019, 2020, 2022, 2023), HPCA (2021, 2022), DAC (2018, 2019), HPCA 2019 (industrial track), IEEE Security and Privacy/Oakland (2022, 2023), Usenix Security 2021, CCS 2017, ICCD 2016, HOST 2017, HASP (2018, 2019, 2020), CHES 2019

**Workshop Program Committees:** FastPath 2020, YArch (2019, 2020, 2021), SPSL 2021

**External Review Committees:** Asia CCS 2017, ISCA (2017, 2021, 2024), HPCA 2019

**Conference Organizing Committees:** MICRO 2017, ISCA 2023 (AE co-chair)

**Conference Session Chair:** MICRO (2017, 2019), ISCA 2019, ASPLOS 2021

**NSF Review Panels:** Spring (2018, 2020)

**DARPA ISAT Workshops (Participant):** USHER’18, PHI’19, HC’20

**DARPA ISAT Workshops (Organizer):** DOPLR’21 (~ 45 attendees in each of 4 meetings held throughout Fall 2020 - Spring 2021; study findings presented to all of DARPA I2O)

**Book reviews:** Morgan & Claypool series on Computer Architecture’18

**Misc:** Reviewer for TACO, IEEE MICRO, CAL

## TEACHING

**CS61A:** Structure and Interpretation of Computer Programs, U.C. Berkeley

**CS150:** Components and Design Techniques for Digital Systems, U.C. Berkeley

**6.S092:** Introduction to Software Engineering in Java (IAP), M.I.T.

**6.172:** Performance Engineering of Software Systems, M.I.T.

**CS598clf:** Secure Processor Design, UIUC

**CS433:** Computer Systems Organization, UIUC

**CS563:** Advanced Computer Security, UIUC

1. Instructor (Student Approval Rating: 4.6/5) Spring 2023  
*CS433*; course website: <http://cwfletcher.net/433sp23.html>
2. Instructor (Student Approval Rating: 4.8/5 - **Rated excellent by students**) Fall 2022  
*CS563*; course website: <http://cwfletcher.net/563fa22.html>
3. Instructor (Student Approval Rating: 4.4/5) Spring 2022  
*CS433 (partly online)*; course website: <http://cwfletcher.net/433sp22.html>
4. Instructor (Student Approval Rating: 4.7/5 - **Rated excellent by students**) Fall 2021  
*CS563 (partly online)*; course website: <http://cwfletcher.net/563fa21.html>
5. Instructor (Student Approval Rating: 4.2/5) Spring 2021  
*CS433 (online)*; course website: <http://cwfletcher.net/433sp21.html>
6. Instructor (Student Approval Rating: 4.4/5) Fall 2020  
*CS563 (online)*; course website: <http://cwfletcher.net/563fa20.html>
7. Instructor (Student Approval Rating: 4.9/5 - **Rated excellent by students**) Spring 2020  
*CS433 (partly online)*; course website: <http://cwfletcher.net/433sp20.html>
8. Instructor (Student Approval Rating: 4.6/5 - **Rated excellent by students**) Fall 2019  
*CS598clf*; course website: <http://cwfletcher.net/598fa19.html>
9. Instructor (Student Approval Rating: 4.6/5) Spring 2019  
*CS433*; course website: <http://cwfletcher.net/433sp19.html>
10. Instructor (Student Approval Rating: 4.4/5) Spring 2018  
*CS433*; course website: <http://cwfletcher.net/433sp18.html>
11. Instructor (Student Approval Rating: 4.8/5 - **Rated excellent by students**) Fall 2017  
*CS598clf*; course website: <http://cwfletcher.net/598clf.html>

12. Teaching Assistant (Student Approval Rating: 6.7/7)  
*6.172*; under: Charles Leiserson and Saman Amarasinghe **Fall 2013**
13. Instructor **January 2012**  
*6.S092*; with: Anirudh Sivaraman and Kasia Hayden
14. Teaching Assistant (Student Approval Rating: 5/5) **Spring 2010**  
*CS150*; under: John Wawrzynek
15. Teaching Assistant (Student Approval Rating: 4.7/5) **Spring 2009**  
*CS150*; under: John Wawrzynek
16. Head Teaching Assistant (Student Approval Rating: 4.8/5) **Fall 2008**  
*CS150*; under: Kris Pister
17. Grader **Fall 2007**  
*CS61A*; under: Brian Harvey
18. Lab Assistant **Spring 2007**  
*CS61A*; under: Brian Harvey