Christopher W. Fletcher

Contact

E-mail: cwfletch@illinois.edu *Website:* http://cwfletcher.net *Last updated:* November, 2022

Current Position

Assistant Professor
University of Illinois at Urbana-Champaign
Computer Science Department

Address

Siebel Center for Computer Science
201 N. Goodwin Ave, Urbana, IL 61801

Education

Massachusetts Institute of Technology **June 2016**

Ph.D., Electrical Engineering and Computer Science
Thesis: "Oblivious RAM: From Theory to Practice" **(Winner of the George M. Sprowls Award for outstanding Ph.D. thesis in CS at MIT)**
Advisor: Srini Devadas

Massachusetts Institute of Technology **May 2013**

S.M., Electrical Engineering and Computer Science
Thesis: "Ascend: An Architecture for Performing Secure Computation on Encrypted Data"
Advisor: Srini Devadas

The University of California, Berkeley **May 2010**

B.S., Electrical Engineering and Computer Science
Advisor: John Wawrzynek

Viewpoint School, Calabasas **June 2006**

{Elementary, High} School Diplomas

Papers/Etc.

Please see http://cwfletcher.net/Pages/Research.php for a complete list of published papers, theses, talks, posters, press and funding.

Awards and Distinctions

College of Engineering Dean's Award for Excellence in Research	**2023**
C.W. Gear Outstanding Junior Faculty Award	**2023**
IEEE Micro Top Picks Paper	**2023**
Faculty Ranked Excellent by Their Students	**Fall 2022**
Conference halls of fame: ISCA, ASPLOS	**2022**
2nd Place, CSAW'22 Applied Research Competition	**2022**
Honorable Mention Paper, Intel Hardware Security Academic Award	**2022**
Paper selected for Pwnie Award – Best Cryptographic Attack	**2022**
Faculty Ranked Excellent by Their Students	**Fall 2021**
Intel Rising Star Award	**2021**
Paper selected as a Nominee for Pwnie Award – Most Innovative Research	**2021**
First Place Paper, Inaugural Intel Hardware Security Academic Award	**2021**
IEEE Micro Top Picks Paper	**2021**
Faculty Ranked Excellent by Their Students	**Spring 2020**
Paper selected to appear in CACM Research Highlights	**2020**
NSF CAREER Award	**2020**
Google Faculty Award	**2020**
Intel Corporate Research Council Outstanding Researcher Award	**2020**
3x IEEE Micro Top Picks Papers	**2020**
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. Assistant Professor **Fall 2017 - Present**
   Affiliation: *University of Illinois at Urbana-Champaign; Computer Science Department*
2. Research Post-Doc **Fall 2016 - Fall 2017**
   Affiliation: *Nvidia Corporation; Nvidia Research; Architecture Research Group*
   Advisor(s): Joel Emer, Steve Keckler
3. Research Assistant **Fall 2010 - Spring 2016**
   Affiliation: *MIT; CSAIL; Computation Structures Group*
   Advisor(s): Srini Devadas
4. Undergraduate Researcher **Spring 2008 - Spring 2010**
   Affiliation: *U.C. Berkeley; BWRC, ParLab; RAMP, Berkeley Reconfigurable Group*
   Advisor(s): John Wawrzynek, Garry Nolan, Greg Gibeling, Narges Asadi
5. Software Engineering Intern **Summer 2008**
   Oracle Corporation; Project: JDeveloper-JIRA Connector

Students

Please see http://cwfletcher.net/Pages/Students.php 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), 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~~[1], ISCA 2022, Dagstuhl weeklong seminar on hardware security (planned; 2023-24)
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

[1] This tutorial was accepted and planned to appear, but was cancelled due to its parent event ASPLOS'20 being cancelled.

2022
Conference Program Committees: ASPLOS (2017, 2020, 2021), 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), HPCA 2019
Conference Organizing Committees: MICRO 2017
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 ($\sim$ 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

1. Instructor (Student Approval Rating: 4.8/5 - **Rated excellent by students**) **Fall 2022**
   CS563; course website: http://cwfletcher.net/563fa22.html
2. Instructor (Student Approval Rating: 4.4/5) **Spring 2022**
   CS433 (partly online); course website: http://cwfletcher.net/433sp22.html
3. Instructor (Student Approval Rating: 4.7/5 - **Rated excellent by students**) **Fall 2021**
   CS563 (partly online); course website: http://cwfletcher.net/563fa21.html
4. Instructor (Student Approval Rating: 4.2/5) **Spring 2021**
   CS433 (online); course website: http://cwfletcher.net/433sp21.html
5. Instructor (Student Approval Rating: 4.4/5) **Fall 2020**
   CS563 (online); course website: http://cwfletcher.net/563fa20.html
6. Instructor (Student Approval Rating: 4.9/5 - **Rated excellent by students**) **Spring 2020**
   CS433 (partly online); course website: http://cwfletcher.net/433sp20.html
7. Instructor (Student Approval Rating: 4.6/5 - **Rated excellent by students**) **Fall 2019**
   CS598clf; course website: http://cwfletcher.net/598fa19.html
8. Instructor (Student Approval Rating: 4.6/5) **Spring 2019**
   CS433; course website: http://cwfletcher.net/433sp19.html
9. Instructor (Student Approval Rating: 4.4/5) **Spring 2018**
   CS433; course website: http://cwfletcher.net/433sp18.html
10. Instructor (Student Approval Rating: 4.8/5 - **Rated excellent by students**) **Fall 2017**
    CS598clf; course website: http://cwfletcher.net/598clf.html
11. Teaching Assistant (Student Approval Rating: 6.7/7) **Fall 2013**
    6.172; under: Charles Leiserson and Saman Amarasinghe
12. Instructor **January 2012**
    6.S092; with: Anirudh Sivaraman and Kasia Hayden
13. Teaching Assistant (Student Approval Rating: 5/5) **Spring 2010**
    CS150; under: John Wawrzynek
14. Teaching Assistant (Student Approval Rating: 4.7/5) **Spring 2009**
    CS150; under: John Wawrzynek

15. Head Teaching Assistant (Student Approval Rating: 4.8/5) **Fall 2008**
    CS150; under: Kris Pister
16. Grader **Fall 2007**
    CS61A; under: Brian Harvey
17. Lab Assistant **Spring 2007**
    CS61A; under: Brian Harvey