

# DAVID GRAY WIDDER HE/HIM/HIS

313 TCS Hall  
School of Computer Science, Carnegie Mellon University  
5000 Forbes Ave, Pittsburgh PA, 15213

dwidder@cmu.edu  
@davidthewid  
www.davidwidder.me

## Education

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**School of Computer Science, Carnegie Mellon University, Pittsburgh, Pennsylvania.**

- PhD student advised by Laura Dabbish & James Herbsleb, 2017- Present
- Masters of Science in Software Engineering, 2017-2021

**Robert D. Clark Honors College, University of Oregon, Eugene, Oregon.** 2013-2017

- Bachelor of Science in Computer Science, GPA: 3.95, Major GPA: 4.15, *Magna Cum Laude*

## Related Work Experience

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**Research Intern, Socio-Technical Systems, Intel Labs. Remote.** July 2021 – May 2022

- Interviewed 27 AI engineers about their perceived ethical agency and responsibility
- Led two workshops to translate findings into AI Ethics process and artifact improvements
- Presented findings to 150+ practitioners in two internal invited talk series
- Findings informed AI Ethics recommendations presented to C-suite decision makers

**Research Intern, Microsoft Research. Redmond, Washington.** February – May 2020

- Interviewed adopters of AI Ethics guidance to find technical and organizational barriers to use
- Presented findings to C-suite decision maker to inform internal Ethical AI policy roll out

**Research Intern, Jet Propulsion Laboratory, NASA. Pasadena, California.** June – August 2019

- Conducted interviews, participant observation, and user studies to study software engineer's trust in an automated software engineering tool
- Presented usability improvements to software team to improve software framework

## Peer-Reviewed Publications

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**David Widder**, Dawn Nafus, Laura Dabbish, James Herbsleb. "Limits and Possibilities for 'Ethical AI' in Open Source: A Study of Deepfakes". To appear in: *Proceedings of the ACM Conference on Fairness, Accountability, and Transparency (FACCT)*, 2022. [Link](#).

Hana Frluckaj, Laura Dabbish, **David Widder**, Sophie Huilian Qiu, James Herbsleb. "Open Source Software Participation Trajectories for Male and Female Participants" To appear in: *Proceedings of the ACM Conference on Computer-Supported Cooperative Work And Social Computing (CSCW)*, 2022. Preprint available soon.

**David Widder**, Laura Dabbish, James Herbsleb, Alexandra Holloway, Scott Davidoff. "Trust in Collaborative Automation in High Stakes Software Engineering Work: A Case Study at NASA". In: *Proceedings of the ACM Conference on Human-Computer Interaction (CHI)*, 2021. 26% acceptance rate. [Link](#).

**David Widder**, Michael Hilton, Christian Kästner, and Bogdan Vasilescu. "A Conceptual Replication of Continuous Integration Pain Points in the Context of Travis CI". In: *Proceedings of the ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (FSE)*, 2019. 24% acceptance rate. [Link](#).

**David Widder**, Joshua Sunshine, Stephen Fickas. “Barriers to Reproducible Scientific Programming”. In: *Proceedings of the IEEE Symposium on Visual Languages and Human-Centric Computing, Short Research Papers Track (VL/HCC)*, 2019. 44% acceptance rate. [Link](#).

Zack Coker, **David Widder**, Claire Le Goues, Christopher Bogart, and Joshua Sunshine. “A Qualitative Study on Framework Debugging”. In: *Proceedings of the IEEE Conference on Software Maintenance and Evolution (ICSME)*, 2019. 23% acceptance rate. [Link](#).

Courtney Miller, **David Widder**, Christian Kästner, and Bogdan Vasilescu. “Why do People Give Up FLOSSing? A Study of Contributor Disengagement in Open Source”. In: *Proceedings of the Conference on Open Source Systems (OSS)*, 2019. [Link](#).

**David Widder**, Christian Kästner, Michael Hilton, Bogdan Vasilescu. “I’m Leaving You, Travis: A Continuous Integration Breakup Story”. In: *Proceedings of the Conference on Mining Software Repositories, Short Research Papers Track (MSR)*, 2018. 27% acceptance rate. [Link](#).

## Public Scholarship and Advocacy

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- Wrote article for software engineering practitioner blog: “‘Ethical AI’ isn’t just how you build it, it’s how you use it”, David Gray Widder writing in the [Stack Overflow blog](#), 30 May 2022.
- Email interview, research paper quoted in practitioner blog: “The robots are coming for (the boring parts of) your job”, Eira May writing in the [Stack Overflow blog](#), 21 April 2022.
- Podcast interview: “Computers Aren’t Demigods: On the existence of Bias-Free systems”, Ellie Young and Matt Lepinski on [Byte Size](#), 4 May 2021.
- City Council testimony, newspaper interview: “Pittsburgh City Council told facial recognition bill should be stronger”, Tom Davidson reporting for [TribLive](#), 2 September 2020.

## Invited Talks

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- “AI Trust in a High Stakes Workplace: An Ethnography at NASA”, hosted by Senior Lecturer Rikke Jensen at the [Information Security Group](#) at Royal Holloway University of London, 1 June 2022.
- “Situating ‘AI for Social Good’ and ‘AI Ethics’ at Carnegie Mellon & in our Future Careers”, for Professors Emma Strubell and Alan Black’s [Computational Ethics for NLP](#) course, Language Technologies Institute at Carnegie Mellon University, 5 April 2022.
- “‘Ethical AI’ Across the AI Supply Chain: The Developer’s Perspective”, with Dawn Nafus at the *Intel Insights Discussion Forum* talk series, hosted by Michael Jacobson at Intel Corporation, 16 December 2021.
- “‘Ethical AI?’ Complicating and Situating Accountability, Transparency, and Trust”, at the *Data Science Center of Excellence* talk series, hosted by Joyce Weiner at Intel Corporation, 9 September 2021.

## Non-Refereed Publications

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**David Widder**. “Gender and Robots: A Literature Review”. *Technical Report*, 2019. On arXiv.org.

**David Widder**. “Gender in Open Source Communities: Different Migration Patterns and Forms of Work”. *VL/HCC Graduate Consortium*, 2019. [Link](#).

**David Widder**. “Tensions Between Scientific Programming and the Scientific Method”. *Undergraduate Honors Thesis*. Pass with Honors, 2017. [Link](#).

**David Widder**. “What Are Barriers to Efficient ROS Debugging?” *REUSE Poster Session*. 2016.

## Teaching Activities

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- Advocated for introducing ethics content into core Software Engineering PhD curriculum, developed and delivered this content for *Intro Course for Software Engineering PhD Students*, Spring 2022. With input from Professors Jonathan Aldrich and Christian Kästner, I developed and delivered two lectures, assigned reading, graded reading responses, and facilitated discussion.

- Teaching Assistant for *Ethics and Policy Issues in Computing*, Spring 2021. Course Instructors: Laura Dabbish and James Herbsleb, Carnegie Mellon University. Held office hours, lead breakout discussions, graded and gave feedback on exams and assignments.
- Teaching Assistant for *Human Factors*, Fall 2019. Course Instructor: Laura Dabbish, Carnegie Mellon University. Guest lectured, held office hours, graded and gave feedback on exams and assignments.

## Student Mentorship

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Lyric Sampson, 2022 – Present, in CMU's summer undergraduate research program

Derrik Zhen, 2022 – Present, in CMU's summer undergraduate research program

Hana Fruckaj, 2019 – 2020, now a PhD Student at University of Texas at Austin

Courtney Miller, 2018 – 2019, now a PhD Student at Carnegie Mellon University

Jamie Rosas-Smith, 2018, now a Software Engineer at JP Morgan Chase

## Institutional Service

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**Application Reviewer, Research Experience for Undergraduates in Software Engineering, 2018-Present**

Reviewed 25-35 applications for the REUSE program yearly.

**Dean's PhD Advisory Committee, Co-Director, 2017 - 2020, Member, 2020 - 2021**

Advocating for SCS PhD student interests to Dean: i.e. healthcare, anti-racism, advisor issues.

**Departmental Climate Task Force, Student Co-Chair, 2018 - 2019**

Committee tasked with improving departmental climate, inclusiveness, and diversity.

**Research Experience for Undergraduates in Software Engineering Mentor, 2018, 2020**

Mentored summer undergraduate research interns as part of the REUSE summer program

## Professional Service

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Conference on Human-Computer Interaction (CHI), 2021 Reviewer

International Conference on Automated Software Engineering (ASE), 2018 Sub-reviewer

Transactions on Software Engineering (TSE), 2018 Sub-reviewer

Conference on Computer Human Interaction (CHI), 2020 Reviewer

## Memberships

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Association for Computing Machinery, & Special Interest Group on Software Engineering

Upsilon Pi Epsilon, Honor Society for Computing and Information Disciplines

Phi Beta Kappa, Liberal Arts Honors Society