HAYLEY LEBLANC

hleblanc @utexas.edu

EDUCATION

University of Texas at Austin Austin, Texas Ph.D. in Computer Science GPA: 3.89

Denison University

Granville, Ohio B.S. in Computer Science and B.A. in Mathematics Final GPA: 3.93 (Summa Cum Laude)

RESEARCH INTERESTS

Operating systems, file and storage systems, crash consistency, formal methods, persistent memory

PUBLICATIONS

Verus: A practical foundation for systems verification.

Andrea Lattuada, Travis Hance, Jay Bosamiya, Matthias Brun, Chanhee Cho, Hayley LeBlanc, Pranav Srinivasan, Reto Achermann, Tej Chajed, Chris Hawblitzel, Jon Howell, Jay Lorch, Oded Padon, and Bryan Parno.

ACM Symposium on Operating Systems Principles (SOSP), 2024. Distinguished Artifact Award

SquirrelFS: using the Rust compiler to check file-system crash consistency. Hayley LeBlanc, Nathan Taylor, James Bornholt, and Vijay Chidambaram. USENIX Symposium on Operating Systems Design and Implementation (OSDI), 2024.

Chipmunk: Investigating crash-consistency in persistent-memory file systems. Hayley LeBlanc, Shankara Pailoor, Om Saran K R E, Isil Dillig, James Bornholt, and Vijay Chidambaram.

ACM European Conference on Computer Systems (EuroSys), 2023. Best Paper Award

Intra-consortia data sharing platforms for interdisciplinary collaborative research projects. Max Schröder, Hayley LeBlanc, Sascha Spors, and Frank Krüger. it - Information Technology, 62(1):19–28, 2020

INTERNSHIPS

Research Intern

Microsoft Research

Mentor: Jay Lorch Project: Developed a verified key-value store for persistent memory.

Research Intern

Microsoft Research

Mentor: Jay Lorch

Project: Built a verified crash-consistent and corruption-detecting persistent memory log using the Verus Rust verification tool.

Summer 2024 Redmond, WA

Summer 2023

Redmond, WA

2020-present

2016-2020

Applied Scientist Intern

Amazon Web Services

Mentor: Rajeev Joshi Project: Developed a prototype S3 file connector and executable specification in Rust. Developed an S3 mock layer to test the file connector in the presence of non-deterministic S3 errors (e.g., throttling).

Applied Scientist Intern

Amazon Web Services

Mentor: Rajeev Joshi

Project: Modeled the design of a persistent B-tree library in Rust to check for concurrency and crash consistency bugs.

DAAD RISE Intern

Universität Rostock

Mentor: Max Schröder

Project: Worked on data management tools for interdisciplinary research in the CRC 1270 ELAINE research group.

Anderson Summer Research Scholar	Summer 2018
Denison University	Granville, OH
Mentor: May Mei	
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Project: Developed algorithms to analyze and understand the structure of aperiodic tilings.

Software Engineering Intern	Summer 2017
SICDrone	Portland, OR
Project: Developed flight control firmware and worked on embedded syste	ms for drones in C and C++

Project: Developed flight control firmware and worked on embedded systems for drones in C and C++and modified the PX4 drone autopilot codebase for new drone designs.

TALKS

Crash-consistent file systems for persistent memory UT Austin Computer Architecture Seminar Series, University of Texas at Austin	February 7, 2023
Crash-consistent file systems for persistent memory <i>Turing Scholars Student Association, University of Texas at Austin</i>	October 31, 2022
Finding crash consistency bugs in persistent memory file systems Languages, Systems, and Data Seminar, University of California Santa Cruz (Vir	November 19, 2021 tual)
Finding crash consistency bugs in persistent memory file systems EuroSys Doctoral Workshop 2021, Virtual	April 26, 2021
Finding file system crash-consistency bugs through fuzzing and verification University of Texas Systems Research Consortium Symposium, The University (Virtual)	November 16, 2020 of Texas at Austin
Algorithmic investigation of substitution tilings and their associated graph Laplacians Ohio College Summer Research Symposium, Ohio Wesleyan University	July 27, 2018

Summer 2022 Seattle, WA

Summer 2021 Seattle, WA (Remote)

> Summer 2019 Rostock, Germany

Summer 2019

HONORS AND AWARDS

University of Texas at Austin Graduate School Dissertation Writing Fellowship	2024
SOSP Distinguished Artifact Award	2024
EuroSys Best Paper Award	2023
University of Texas at Austin Dean's Strategic Fellowship	2020
Denison University John L. Gilpatrick Award	2020
Denison University Alice Hutchinson Lytle Award	2020
Denison University Provost's Academic Excellence Award	2020
Phi Beta Kappa Honor Society	2020
Denison University Math and Computer Science Department Fellow	2019
Denison University Daniel Donald Bonar Math and Computer Science Award	2019
Goldwater Scholarship	2019
Pi Mu Epsilon National Honor Society	2019
Denison University Chosaburo Kato Memorial Award	2018
Denison University Forbes B. Wiley Award	2018
Upsilon Pi Epsilon International Honor Society	2018
Denison University Anderson Scholarship for Excellence in Science	2018
Denison University Phi Society	2017
Denison University Forbes B. Wiley Award	2017
Intel Andy Grove Scholarship	2017
National Merit Scholarship Program Letter of Commendation	2016
NCWIT Certificate of Distinction	2016
NCWIT Affiliate Award for Aspirations in Computing	2015

TEACHING ASSISTANTSHIPS

Virtualization (CS360V) UT Austin	Spring 2023
Virtualization (CS360V) UT Austin	Fall 2021
Data Systems (CS181) Denison University	Spring 2020
Introduction to Computer Systems (CS281) Denison University	Fall 2019
Introduction to Computer Systems (CS281) Denison University	Spring 2019
Data Systems (CS181) Denison University	Fall 2018
Introduction to Computer Science (CS111) Denison University	Fall 2017
Introduction to Computer Science (CS111) Denison University	Spring 2017

SERVICE

- ASPLOS 2024 Artifact Evaluation Committee Member
- UT Austin Women in Computer Science (WiCS) Graduate Mentor (2022)
- UT Austin Graduate Application Assistance Program (GAAP) Mentor (2020)
- OSDI 2020 Ask Me Anything (AMA) Session Co-organizer (2020)