
Education

- 2021 - Present **PhD in Computer Science**, *Northeastern University, Boston, Massachusetts, USA*,
Advised by Frank Tip, Amal Ahmed
- 2021 - 2024 **Master of Science in Computer Science**, *Northeastern University, Boston, Massachusetts, USA*, Awarded on attaining PhD Candidacy
- 2017 - 2021 **B.Tech. in Computer Engineering**, *University of Pune, Pune, Maharashtra, India*,
Advised by Uday Khedker

Work Experience

- Fall 2023 **Teaching Assistant**, *Northeastern University, Boston, MA, USA*
Fundamentals of Software Engineering
- Summer 2023 **Graduate Research Intern**, *Fastly, San Francisco, CA, USA*
WebAssembly Team, Interpreter Performance
- Fall 2022 **Teaching Assistant**, *Northeastern University, Boston, MA, USA*
Accelerated Fundamentals of Computer Science 1
- 2020 **Undergrad Research Intern**, *IIT Bombay, Mumbai, MH, India*
Data Flow Analysis, Compilers
- Summer 2019 **Undergrad Research Intern**, *IIT Patna, Patna, BR, India*
Dimensionality Reduction, Machine Learning

Funding

- Google **Unrestricted Gift \$40,000**, *Sept 2025*
Supported work on creating tooling to use Multi-Language Static Analysis in v8's workflow.
- Fastly **Unrestricted Gift \$100,000**, *Sept 2024*
Supported work on Multi-Language Static Analysis between WebAssembly and JavaScript.

Research Publications

- Preprint **Bridging the Gap: Precise Static Analysis of WebAssembly in a JavaScript World**
[\[PDF\]](#)
- ICSE26 **An Empirical Study of WebAssembly Usage in Node.js**, *Michelle Thalakottur, Maxwell Bernstein, Daniel Lehmann, Michael Pradel, Frank Tip*
[\[PDF\]](#) [\[Artifact\]](#) [\[DOI\]](#)
- PLDI24 **RichWasm: Bringing Safe, Fine-Grained, Shared-Memory Interoperability Down to WebAssembly**, *Michael Fitzgibbons, Zoe Paraskevopoulou, Noble Muthak, Michelle Thalakottur, Jose Sulaiman Manzur, Amal Ahmed*
[\[PDF\]](#) [\[Artifact\]](#) [\[DOI\]](#)
- ISSTA23 **That's a Tough Call: Studying the Challenges of Call Graph Construction for WebAssembly**, *Daniel Lehmann, Michelle Thalakottur, Frank Tip, Michael Pradel*
[\[PDF\]](#) [\[Artifact\]](#) [\[DOI\]](#)

- ICONIP19 **Semi-supervised Regularized Coplanar Discriminant Analysis**, Rakesh Kumar Sanodiya, Michelle Thalakottur, Jimson Mathew, Matloob Khushi
[DOI]
- CEC19 **Multi-objective Approach for Semi-Supervised Discriminant Analysis with Relative Distance**, Rakesh Kumar Sanodiya, Sriparna Saha, Jimson Mathew, Michelle Thalakottur, Utkarshinee Aadya
[DOI]
- IEEEAccess **A New Transfer Learning Algorithm in Semi-supervised Setting**, Rakesh Kumar Sanodiya, Jimson Mathew, Sriparna Saha, Michelle Thalakottur
[DOI]

Awards

- ISSTA23 **Distinguished Artifact**, *That's a Tough Call: Studying the Challenges of Call Graph Construction for WebAssembly*
- OPLSS22 **Fellowship Grant**, *Oregan Programming Languages Summer School*

Invited Talks

- November 2025 **NEPLS, Boston University**, *Bridging the Gap: Precise Static Analysis of WebAssembly in a JavaScript World*
- August 2025 **Penn PL Club**, *Bridging the Gap: Precise Static Analysis of WebAssembly in a JavaScript World*
- June 2025 **CISPA Andreas Zeller's Group**, *Propagating Host Types for Multi-Language Static Analysis of WebAssembly*
- June 2025 **Dagstuhl Seminar 25241: Utilising and Scaling the WebAssembly Semantics**, *Propagating Host Types for Multi-Language Static Analysis of WebAssembly*
- April 2023 **IIT Bombay Seminar Series**, *That's a Tough Call: Studying the Challenges of Call Graph Construction for WebAssembly*
- March 2023 **Dagstuhl Seminar 23101: Foundations of WebAssembly**, *That's a Tough Call: Studying the Challenges of Call Graph Construction for WebAssembly*

Service

- 2026 **Student Volunteer Chair**, *OOPLSA 2026*
- 2025 **Student Volunteer Chair**, *OOPLSA 2025*
- 2024 **Artifact Evaluation Reviewer**, *ECOOP 2024*
- 2023 **Artifact Reviewer**, *Science of Computer Programming Journal*
- 2022 - 2023 **Student Volunteer**, *POPL23, ECOOP22*
- 2023 **PhD Social Committee Vice Chair**, *Khoury College of Computer Sciences at Northeastern University*
- 2020 - 2021 **Mentorship Talk**, *Pursuing Undergraduate Research*, [PPT]