Michelle Thalakottur

WVH 330, Northeastern University
Boston, Massachusetts
michelledaviest@gmail.com
michelledaviest.github.io

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

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]