

Manya Bansal

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Research Interests

High-Performance Computing, Compilers, Domain Specific Languages.

Education

- 2023 – Present Massachusetts Institute of Technology
PhD in Electrical Engineering & Computer Science
Advisors: Jonathan Ragan-Kelley & Saman Amarasinghe
- 2019 – 2023 Stanford University
BS in Mathematics

Publications

- PLDI' 25** Lightweight and Locality Aware Composition of Black-Box Functions
Manya Bansal, Dillon Sharlet, Jonathan Ragan-Kelley, Saman Amarasinghe
- PLDI '23** Mosaic: An Interoperable Compiler for Tensor Algebra
Manya Bansal, Olivia Hsu, Kunle Olukotun, Fredrik Kjolstad
(Distinguished Paper Award)

Posters

- SOSP' 24** Using Debug Hardware to Build Tiny and Efficient Dynamic Kernel Checkers
Zachary Yedidia, Akshay Srivastan, Manya Bansal, Dawson Engler

Selected Awards

- 2023 Distinguished Paper Award, PLDI.
- 2023 EECS Alumni Graduate Fellowship, MIT.
- 2019 Stanford University, Reliance Dhirubhai Ambani Scholarship.
Full Scholarship for Indian International Students.
- 2019 Silver Medalist, Team India, International Philosophy Olympiad.
- 2019 Rank 1, Indian Philosophy Olympiad.

Work Experience

Summer 2025	<i>(Incoming)</i> Vector and Numerics Team, Apple.
Spring 2023	Stanford Univeristy, Research Assistant for Prof. Fredrik Kjostad.
Summer 2022	Stanford Univeristy, Research Assistant for Prof. Dawson Engler.
Summer 2021	Autonomous Hardware Team Intern, Tesla.

Selected Talks

Sept 2024	Data is all You Need for Fusion <i>CppCon (C++ Industry Conference)</i>
Sept 2023	Building an interoperable compiler for Sparse Tensor Algebra <i>Google ML Compiler Team</i>
Nov 2022	Tutorial on Sparse Tensor Algebra <i>NVIDIA</i>

Teaching experience

Winter 2023	Teaching assistant, CS 140E: Embedded Operating Systems, Stanford University
2021	Tutor, Stanford University Mathematical Organization <i>Proof-based & applied linear algebra</i>

Service

PLDI' 25	Artifact Evaluation Committee.
MITPLR' 25	MIT Programming Language Review, Program Committee.
2024 - Present	EECS Communication Lab Fellow.
2024 - 2025	Events Coordinator, Graduate Women in Course 6, MIT.