Divya Raghunathan

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EDUCATION

Princeton University 2019 - Present
Ph.D. in Computer Science *GPA: 4.0/4.0*

Advisor: Aarti Gupta

Princeton University 2019 - 2021
Master of Arts in Computer Science *GPA: 4.0/4.0*

Indian Institute of Technology Bombay 2015 - 2019
Bachelor of Technology (Honors) in Computer Science and Engineering *GPA: 9.49/10*

RESEARCH INTERESTS

Formal Methods, Networking, Programming Languages, Algorithmic Game Theory

PUBLICATIONS

Towards Integrating Formal Methods into ML-Based Systems for Networking
Fengchen Gong, Divya Raghunathan, Aarti Gupta, Maria Apostolaki.
ACM Workshop on Hot Topics in Networks (HotNets) 2023.

CaT: A Solver-Aided Compiler for Packet-Processing Pipelines
Xiangyu Gao, Divya Raghunathan, Ruijie Fang, Tao Wang, Xiaotong Zhu, Anirudh Sivaraman, Srinivas Narayana, Aarti Gupta.
Architectural Support for Programming Languages and Operating Systems (ASPLOS) 2023.

ACORN: Network Control Plane Abstraction using Route Nondeterminism
Divya Raghunathan, Ryan Beckett, Aarti Gupta, David Walker.
Formal Methods in Computer-Aided Design (FMCAD) 2022.

The Derby Game: An Ordering-based Colonel Blotto Game
Akash Gaonkar, Divya Raghunathan, S. Matthew Weinberg.
Economics and Computation (EC) 2022.

Switch Code Generation Using Program Synthesis
Xiangyu Gao, Taegyun Kim, Michael D. Wong, Divya Raghunathan, Aatish Kishan Varma, Pravein Govindan Kannan, Anirudh Sivaraman, Srinivas Narayana, Aarti Gupta.
Special Interest Group on Data Communication (SIGCOMM) 2020.

Knowledge Compilation for Boolean Functional Synthesis
S. Akshay, Jatin Arora, Supratik Chakraborty, S. Krishna, Divya Raghunathan, Shetal Shah.
Formal Methods in Computer-Aided Design (FMCAD) 2019.

INTERNSHIPS

Amazon Web Services Summer 2023
Proactive Security Group *Applied Scientist Intern*

Designed an algorithm to evaluate the impact of a network configuration change on network access

Amazon Web Services Summer 2022
Automated Reasoning Group *Applied Scientist Intern*

Worked on automated techniques for synthesis of network configurations

Google Summer of Code with MuseScore Summer 2017
Mentor: Marc Sabatella *Independent Developer*

Improved the accessibility of MuseScore (an open-source music notation software) for visually impaired users by making it easier to read, edit, and create scores using only the keyboard

TEACHING AND MENTORING EXPERIENCE

Graduate Student Mentor, Princeton - Intel REU Program, Summer 2021

Teaching Assistant (Princeton University)
Automated Reasoning about Software (Fall 2020)
Computer Science: An Interdisciplinary Approach (Spring 2021)

Teaching Assistant (IIT Bombay)
Calculus (Fall 2016)

AWARDS AND HONORS

2019 **Francis Robbins Upton Fellowship**, Princeton University
2016 **Institute Academic Prize**, IIT Bombay (awarded to **10 out of 900** students based on GPA)
2013 **Kishore Vaigyanik Protsahan Yojana (KVPY) Scholarship**, SX stream, Govt. of India
2010 **National Talent Search Examination (NTSE) Scholarship**, Govt. of India

EXTRACURRICULARS

- Member (violist), **Princeton University Sinfonia**
- Member (violist), **India National Youth Orchestra and Chorus** (INYOC)
- Represented India at **Culture 2014**, the official cultural program of the **Commonwealth Games**, Glasgow, as a member of the **Scokendia Ensemble**
- Participated in the training program and tour of the **National Youth Orchestra of Canada**, 2012, as one of four musicians from India (INYOC)