

Radhika Ghosal

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EDUCATION

Harvard University

Ph.D. in Computer Science

Cambridge, MA

September 2019 - May 2025 (Projected)

Advisors: [Vijay Janapa Reddi](#), [David Brooks](#), [Gu-Yeon Wei](#)

Research Interests: Domain-specific architectures, runtime systems, programming languages

Indraprastha Institute of Information Technology, Delhi

B.Tech. in Computer Science & Engineering

New Delhi, India

August 2019

Advisor: [Aman Parnami](#)

Bachelor's thesis: Rapid prototyping of pneumatically-actuated inflatables

RESEARCH EXPERIENCE

Harvard University

Ph.D. Student

Cambridge, MA

August 2019 - Present

Investigating performance modeling of accelerators and runtime systems for robotics.

Microsoft Research

Undergraduate Research Intern

Redmond, WA

Summer 2018

Built a modified instruction cache for Microsoft's FPGA-based Deep Neural Network accelerator.

First undergraduate intern to work on [Project Catapult](#).

Mentors: [Ming Liu](#), [Steve Reinhardt](#)

École Polytechnique Fédérale de Lausanne (EPFL)

Summer@EPFL Intern

Lausanne, Switzerland

Summer 2017

Implemented a new High-level Synthesis (HLS) technique in LLVM for generating efficient hardware designs from high-level languages (C/C++/OpenCL).

Advisors: [Paolo Ienne](#), Lana Josipovic

IIIT-Delhi

Undergraduate Research Assistant

New Delhi, India

August 2018 - July 2019

Worked on a toolkit for low fidelity prototyping of pneumatically-actuated soft robots.

Advisor: [Aman Parnami](#)

Undergraduate Research Assistant

August 2016 - December 2017

Worked on compiler optimizations for embedded systems; wrote transformation passes for LLVM for the AVR architecture, optimizing for power consumption.

Advisors: [Rahul Purandare](#), [Alexander Fell](#)

PUBLICATIONS

Radhika Ghosal, Bhavika Rana, Ishan Kapur, Aman Parnami; Rapid Prototyping of Pneumatically Actuated Inflatable Structures. **UIST (Adjunct Volume) 2019**: 78-80. Poster.

Lana Josipovic, **Radhika Ghosal**, Paolo Ienne; Dynamically Scheduled High-level Synthesis. **FPGA 2018**: 127-136. **Best paper award nominee**.

TEACHING EXPERIENCE

IIIT-Delhi

Teaching Assistant, Computer Organization

New Delhi, India

August 2017 - December 2017

Held weekly tutorials and office hours, helped prepare and grade assignments and exams.