INDRAPRASTHA INSTITUTE of
INFORMATION TECHNOLOGY
DELHI

Programmable Networking Lab (PNL) @ IIIT-Delhi

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Call for applications -- PhD.

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Overview

Data center networking has been continuously evolving over the past few decades, from virtualized applications to containerized applications, and from renting server/compute resources (Infrastructure-as-a-service) to cloud computing followed by serverless computing (SaaS, etc.). Cloud applications such as autonomous robots/vehicles, AR/VR, and streaming audio/video come with different performance requirements such as strict latency constraints, high throughput, reliability, and scalability. Hyperscale cloud providers constantly innovate the network architectures and operations to scale efficiently and increase agility to satisfy the requirements of handling 10s of Tbps of network traffic, under millisecond end-to-end latency, and low tail latencies. Enterprises are embracing hybrid multi-cloud strategies and running workloads in multiple clouds (including edge cloud, public and private clouds), choosing the right cloud to match the requirements of each application.

We, at PNL @ IIIT-Delhi focus on solving the challenges that arise due to the evolving network architectures and newer applications at the intersection of networked systems and security. Our focus is to (1) design flexible, scalable, secure, and fault-tolerant solutions for data center, cloud, and telco applications, (2) design tools and frameworks that simplify the management of applications offloaded to programmable data planes including software (DPDK, eBPF, XDP), and hardware targets (NPUs, FPGAs, programmable switches).

Do you have keen interest in pursuing research in networked systems and security? Contact us (details below) with your detailed CV, for the following exciting position:

Doctoral Fellow

To pursue PhD in areas related to Computer Networks, Security, Cloud and Datacenter Networking. You are expected to have good computer networking, OS, C/C++ programming skills and should be very willing to tinker around with low-level, systems and networks hardware. You must be curious minded, hard worker and a persistent individual.

Minimum qualifications: B.Tech/M.Sc/MCA (Computer Sc., ECE, IT) from a recognized institution in the country. Check eligibility criteria details and FAQs.

Salary: Comparable to what is given by Govt. of India DST sponsored research projects (***over Rs. 37,500 / month***).

Principal Investigator: Dr. Rinku Shah, Assistant Professor, IIIT-Delhi

Funding source: multiple (IHUB NTIHAC IIT Kanpur, defense organization under the Government of India, etc.)

Job type: There is no overall time limit for doctoral research. Normally, at IIIT Delhi, students complete their doctoral thesis work in about 5 years. However, the actual duration may vary, subject to students' interest and chosen research problem(s).

How to apply:

Send an email attached with your CV and transcripts to rinku@iiitd.ac.in, with subject line **"Position -- PhD"** by Aug 20, 2023.