



INDRAPRASTHA INSTITUTE of
INFORMATION TECHNOLOGY
DELHI

Networking and Security Lab (NSL)

B515 R&D Block,
Indraprastha Institute of Information Technology Delhi (IIIT Delhi),
Okhla Phase III
New Delhi 110020

Call for applications - PhD candidates & Research Assistant

Focus areas: Network Security, Programmable Networks

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Overview

Network security

Cyberspace has become the 21st-century battleground for wars, dissent, and geopolitics. Security issues – ranging from vulnerable personal computing resources, corporate and business equipment, government and defense cyberinfrastructure, cyber dissidence, espionage and counter-espionage. The role of cybersecurity research is to explore complex problems of such varied natures and provide efficient ingenious solutions. It is an interdisciplinary field, involving cryptography, software systems, computer networking, social media, computer hardware, policy management, law and ethics.

Programmable networks (SDN+P4)

Have you heard that some cloud application programs run at network switch hardware or network cards? Yes, this is true. Centralized and automated control and programmable network hardware have become fundamental components of every data center today. A programmable network environment provides request processing throughput of up to a few Tbps, response latencies in microseconds, automated control, and centralized management. Network applications

such as the 5G networks, Internet Of Things (IoT), firewall, load balancer, NAT, IDS, and IPS have shown significant performance improvements when deployed using programmable networks. Applications from the non-networking domain such as social networks, big data, machine learning, and artificial intelligence have also benefited significantly. The realm of programmable networks has become the new focus of the network research community and industry folks. We have several exciting challenges in this space to solve.

We at NSL focus on various research projects related to network security, threats and threat prevention, intrusion detection, network performance measurements, *etc.* Are you proactive, enthusiastic, and a talented programmer/coder with strong C/C++, computer network, and operating systems background? Do you have a keen interest to pursue research in areas related to Networking and Security? If you think you fit the bill, look no further. Contact us (details below) with your detailed CV, for the following exciting positions.

Doctoral Fellows

Job description: We are also welcoming applications from prospective doctoral candidates, willing to pursue PhD in areas related to Computer Networks and Security. The PhD students are generally the lieutenants of any research exercise/project. Like most world class research universities, the PhD students of NSL@IIITD focus on fundamental research problems and we try and find ingenious solutions to them. Not only are applicants expected to have good **computer networking, OS, C/C++ programming** skills, but should be very willing to tinker around with low-level, systems and networks stuff, network devices like routers and switches, *etc.* You must be willing to work very hard, think on your feet, and be generally a curious-minded individual.

Minimum qualifications: B.Tech (Computer Sc., ECE, IT) with strong background in C/C++ programming, OS and Computer Networks.

Salary: Comparable to what is given by Govt. of India DST sponsored research projects (> **Rs. 30,000 / month**).

Funding source: A defense organization under the Government of India.

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 to nsl-app@iiitd.ac.in, with subject line “PhD app” by Sept 25, 2021.

Research Assistant

Job description: Role of research assistants would be similar to that of Research Engineers and would help in the design, implementation and data collection processes. However, unlike Research Engineers, we are open to applications from 3rd/4th year B.Tech students as well.

Minimum qualifications: B.Tech (Computer Sc., ECE, IT, Instrumentation, Mech.) students and graduates from reputed engineering institutions in the country with strong background in C/C++ programming. Knowledge of OS and Computer Networks essential.

Salary: Comparable to what is offered to RAs in top-tier IITs (> **Rs. 30,000 / month**).

Funding source: A defense organization under the Government of India.

Position type: Contract renewed every six months subjected to performance and productivity, after a one month probation period. Possibility of promotion to the position of Research Engineer, contingent upon excellent performance.

How to apply: Send an email attached with your CV to nsl-app@iiitd.ac.in, with subject line “RA app” by Sept 25, 2021.

For queries and more information, please contact

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