

Shyam Krishna Khadka

Network Security Engineer | Internet Security Researcher | Enterprise Network Architect

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shyamkkhadka.github.io | LinkedIn | Google Scholar | GitHub

Education

University of Twente, The Netherlands	03/2023–Present (Expected 2026)
PhD Candidate , Computer Science. Researching Internet-scale network security with emphasis on routing security, DDoS resilience, and resilient Internet infrastructure.	
University of Crete, Greece	2016
MSc , Computer Science.	
Tribhuvan University, Nepal	2015
MSc , Computer Engineering.	
Tribhuvan University, Nepal	2022
Bachelor of Law (LLB) .	
Tribhuvan University, Nepal	2009
Bachelor of Computer Engineering .	

Research Experience

University of Twente — Doctoral Researcher	2023–Present
- Designed Internet-scale measurement methodologies for assessing the security of BGP and Autonomous Systems. - Designed and implemented novel methodologies to detect exposed BGP routers and characterize global DDoS scrubbing deployments. - Published and presented research at international networking and Internet measurement venues. - Presented research findings at international networking forums, including RIPE and IETF. - Assisted with the Advanced Networking course, with a focus on data-plane programming using P4.	

Selected Publications

Detecting and Characterizing Exposed BGP Routers	TMA 2026
Detecting and Characterizing DDoS Scrubbing from Global BGP Routing	PAM 2026
A First Look at the Adoption of BGP-based DDoS Scrubbing Services	CNSM 2025
Assessing the Security of Internet Paths	ANRW 2024

Professional Experience

Nepal Telecom — Senior Engineer	2010–2022
Progressed from Software Developer and Network/System Engineer to Senior Engineer at Nepal's largest telecommunications provider.	
- Led technical evaluation and deployment of SD-WAN, HCI, EDR, Wi-Fi 6, next-generation firewalls, and enterprise networking solutions involving Cisco, Juniper, Huawei, Check Point, Palo Alto, VMware, and Nutanix. - Managed routing, switching, and Linux system administration. - Handled technical procurement, compliance testing, and network operations. - Developed internal web applications and services using Java, ASP.NET, JavaScript, and Nginx.	
CloudFactory — Software Developer	2009–2010
- Developed web applications using Ruby on Rails and built database-driven applications. - Worked in Agile software development teams and collaborated with international engineering teams.	

Selected Talks & Outreach

- Presented research on BGP security and DDoS resilience at RIPE and IETF forums.
- Published research summaries through APNIC and RIPE Labs.
- Discussed research findings on DDoS scrubbing and Internet routing security in an industry podcast hosted by FastNetMon.

Awards & Recognition

- IRTF Diversity Grant, IETF 126, Vienna, 2026.

- One of the three best measurement blogs for 2025, APNIC.
- Erasmus Mundus Scholarship, University of Crete.
- Faculty Topper, Bachelor of Computer Engineering.
- Full Scholarship, Bachelor and MSc in Computer Engineering.

Technical Skills

Networking: BGP, OSPF, MPLS, routing, switching, SD-WAN, Wi-Fi 6, NGFW, CCNP training

Security: NGFW, XDR, firewalls, BGP security, DDoS mitigation

Programming: Python, Java, Ruby, C/C++, JavaScript

Systems: Linux, VMware, HCI, virtualization, Git, RHCE training

Research: Internet measurement, network security, data analysis, technical writing and presentations

Languages

English — Professional proficiency

Nepali — Native

Dutch — Basic (A2)