

ALI SADEGHI JAHROMI

Ph.D. Candidate | Computer Science | Carleton University (2021–2025)

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As a recent Ph.D. graduate in cybersecurity, I also hold a master's degree in the same field, giving me years of specialized expertise in Internet and system security. Proficient in **systems and network security**, **secure protocol design**, and **security evaluation**. Eager to apply my knowledge to enhance Canada's digital security with innovative cybersecurity solutions.

EXPERIENCE

Internet Security Researcher

Carleton University

Jan 2019 – 2025

Ottawa, Ontario, Canada

- **Carleton Internet Security Lab:** Conducted large-scale measurements and analysis of Internet protocols (e.g., DNS-over-TLS) to evaluate their adoption rates and ensure their compliance with best security practice standards, including NIST.
- **Carleton Internet Security Lab:** Designed novel secure Internet protocols and evaluated their performance using AWS EC2 VPS instances. Additionally, conducted security and privacy evaluations of secure Internet protocols, including formal security analysis of secure Internet schemes.
- **Carleton Internet Security Lab:** Conducted a comprehensive survey and comparative security analysis of secure DNS protocols, evaluating their security, privacy properties. Evaluated the adoption of secure Internet protocols, ensuring compliance with industry security standards.
- **Carleton Internet Security Lab:** Assisted in managing and documenting the lab infrastructure at the *Carleton Computer Security Lab*. Additionally, assisted in configuring and maintaining lab server environments for course assignments.

Teaching Assistant

Carleton University

Jan 2019 – 2025

Ottawa, Ontario, Canada

Teaching Assistant of cyber security and computer science courses, including: • Computer Systems Security • Computer networking • Operating systems

Computer Emergency Response Team

Conducted workshops on: • Fundamental Security of Wireless Networks • Introduction to Computer Networks

PUBLICATIONS

- [1] A. Sadeghi Jahromi, A. Abdou, "Comparative Analysis of DoT and HTTPS Certificate Ecosystems", NDSS MADweb, 2021.
- [2] A. Sadeghi Jahromi, A. Abdou, P.C. van Oorschot "DNSSEC+: An Enhanced DNS Scheme Motivated by Benefits and Pitfalls of DNSSEC", under peer review, 2024.
- [3] A. Sadeghi Jahromi, A. Abdou, P.C. van Oorschot "An evaluation framework for secure DNS schemes", In progress, 2021.
- [4] A. Sadeghi Jahromi, A. Abdou, P.C. van Oorschot "Formal Security Analysis of DNSSEC+", under peer review, 2025.
- [5] A. Sadeghi Jahromi, A. Abdou, Second best poster, "Analyzing Secure DNS alternatives", Serene-risc Workshop, 2020.

EDUCATION

Ph.D. in Computer Science

Carleton University, Ottawa

2021–2025

Ottawa, Canada

(Co-supervised by Professors AbdelRahman Abdou and Paul Van Oorschot, conducted research in Internet security, Internet measurement, the design and analysis of secure DNS protocols, as well as systems security and privacy analysis.)

Coursework: • Authentication and Software Security (A+) • Trusted Computing & Emerging Attacks (A+) • Social Networks (A+)

M.Sc. in Computer Science

Carleton University, Ottawa

Jan. 2019– Apr. 2021

Ottawa, Canada

(Supervised by Professor AbdelRahman Abdou, conducted research in the large-scale measurement of adoption and security of Internet protocols.)

CERTIFICATES

Network-Related:

- **Microsoft:** Certified Solutions Associate (MCSA) and Certified Solutions Expert (MCSE)
- **MikroTik:** Network Associate (MCTNA) and Routing Expert (MCTRE)

Miscellaneous

- Introduction to Git and GitHub (Google)
- Neural Network and Deep Learning (Coursera)

SKILLS

Programming:

• Python • C,C++ • Git • Golang • \LaTeX

Technical:

• Computer Networks • Linux • SIEM (Splunk) • IDS/IPS • VPNs • Security Automation

Network Analysis:

• Wireshark • TCPdump • Airodump • OpenSSL

Compliance & Standards:

• NIST • ISO

Soft Skills:

Critical Thinking • Problem Solving • Self-Learning • Technical Writing • Teamwork and Collaboration