

CHOKRI NOUAR

Security & Cryptography Engineer | Network Security | Cybersecurity | Zero Trust

Rabat, Morocco | +212 666 248 596 | chokri.nouar@gmail.com | www.chokrinouar.com
linkedin.com/in/chokri-nouar | github.com/chokripto

PROFESSIONAL SUMMARY

Cybersecurity engineer holding a PhD in Cryptography and Information Security, specializing in applied and post-quantum cryptography (PQC). Combines scientific expertise in PQC, hybrid PKI, and cryptographic protocols with operational experience in SOC environments, Fortinet firewalls, secure network architecture, and Zero Trust.

Developed industry-oriented implementations including hybrid post-quantum secure channels, post-quantum PKI, quantum-resistant ZTNA, and secure IoT communications. Lead author of four research publications in cryptography.

CORE EXPERTISE

- Network and systems security: Fortinet firewalls, VPN, IDS/IPS, NAC, and secure architectures
- Real-time monitoring, security-alert analysis, in-depth investigations, and incident handling
- PQC-secured Zero Trust Network Access architecture
- Applied and post-quantum cryptography: Kyber, Dilithium, hybrid classical/PQC schemes, and hybrid PKI
- IoT security, secure communications, multimedia encryption, key management, and authentication

PROFESSIONAL EXPERIENCE

2025-2026

Cybersecurity Analyst - SOC L1/L2

ALXYR Consulting - Rabat

- Monitored client infrastructures in real time and analyzed security alerts.
- Conducted in-depth investigations, handled complex incidents, and maintained operational procedures.
- Designed and managed internal phishing-awareness campaigns for clients.

2023-2025

Network & Systems Security Engineer

Confidential - Rabat

- Designed, configured, and deployed secure network architectures.
- Implemented Network Access Control and managed IPsec/SSL VPN tunnels.
- Modelled and validated architectures with PnetLab; prepared engineering and compliance reports.

Feb.-Oct. 2023

Research Intern - Post-Quantum Cryptography

University of Ottawa & LoginID - Ottawa, Canada

- Analyzed the resistance of encryption systems to quantum attacks.
- Collaborated with academic and industry teams on the Crypto-DID project.

2017-2025

Lecturer - Mathematics and Cryptography

Mohammed V University / Regional Academy of Education - Rabat

- Supervised PhD students in post-quantum cryptography and information security (2023-2025).
- Taught undergraduate applied mathematics at the Faculty of Sciences of Rabat (2017-2023).

SELECTED TECHNICAL PROJECTS

Post-Quantum Cryptography-Secured ZTNA

Python | Kyber KEM | AES-GCM | Policy-Based Access Control

Zero Trust prototype integrating Kyber key exchange, AES-GCM encryption, device validation, and policy-based access control.

Hybrid PKI Laboratory - Classical and Post-Quantum

Python | X.509 Certificates | Post-Quantum Cryptography

Laboratory for generating, signing, and verifying quantum-resistant digital certificates.

Hybrid PQC Secure Channel - Kyber512 and X25519

Python | liboqs | Docker | AES-GCM | HKDF

Containerized client-server protocol combining classical and post-quantum cryptography.

Secure Post-Quantum Communication for IoT

Python | Kyber KEM | AES-GCM AEAD

Hybrid secure channel between a simulated IoT device and a server, designed with an industry-oriented architecture.

Chaotic Image Encryption - NMGm

MATLAB | Gingerbread Man Map | NIST/DIEHARDER

Image-encryption scheme validated through statistical tests and published in 2025.

Message Authentication Code Application

Java | HMAC MD5/SHA-1 | CBC-MAC DES/AES

Application supporting message integrity and authenticity over unsecured networks.

TECHNICAL SKILLS

Cryptography: PQC (Kyber, Dilithium), hybrid PKI, digital signatures, certificates, hash functions, MAC/HMAC, HKDF

Network security: FortiGate, NGFW, IPS/IDS, IPsec/SSL VPN, High Availability, ZTNA, Nmap, Wireshark

SIEM / EDR-XDR: Splunk, Wazuh, Microsoft Defender for Endpoint, Symantec Antivirus, FortiEDR

Networking and tools: switching, routing, DHCP, TCP/IP, DNS, Python, C/C++, MATLAB, Java, Docker, Linux, Windows, macOS

CERTIFICATIONS

- Fortinet NSE 6 Certified in Secure Networking
- Fortinet NSE 4 Certified in FortiOS
- Fortinet NSE 3 Certified in Cybersecurity
- Fortinet NSE 2 Certified in Cybersecurity
- Fortinet NSE 1 Certified in Cybersecurity
- ISC2 Certified in Governance, Risk, and Compliance (CGRC) Cert Prep - Infosec / LinkedIn Learning, Sep. 2026
- Python 3 - SoloLearn, 2020 | C/C++ - SoloLearn, 2020

EDUCATION

2018-2023	PhD in Cryptography and Information Security Mohammed V University - Rabat
2010-2012	Master's Degree in Mathematics and Statistics Mohammed V University - Rabat
2007-2010	Bachelor's Degree in Mathematics and Computer Science Mohammed V University - Rabat