

# Chhagan Lal

## Personal Details

Education **PhD in Computer Science and Engineering**  
Address **Sørflåtvegen 88, 4018 Stavanger, Norway**  
Ph. Nos **+47-94444453**  
Nationality **Indian**  
English **Professional Working Proficiency**  
Norwegian **Very Basic A1**

## Work Experiences

- Role **Cybersecurity Researcher**, *Critical Infrastructure Security and Resilience (CISaR) group, Dept. of Information Security and Communication Technology. NTNU, Norway.*  
(<https://www.ntnu.no/ansatte/chhagan.lal>):  
Dates April, 2024 – **Present**  
Tasks Research and development in cybersecurity, and Project Management
- Role **Associate Researcher**, *Human Inspired Technology Research Center – HIT, University of Padova, Italy.*  
(<https://spritz.math.unipd.it/team.html>):  
Dates June, 2023 – November 2023  
Tasks Design and develop Security solutions, and Project Management
- Role **Scientific Cybersecurity Researcher**, *CyberSecurity Group, Department of Intelligent Systems, TU Delft, Netherlands.*  
(<https://www.tudelft.nl/ewi/over-de-faculteit/afdelingen/intelligent-systems/cybersecurity/people/chhagan-lal>):  
Dates February, 2021 – December 2022  
Tasks Research in Network Security, and Preparation and management of Research Projects
- Role **Cybersecurity Research Associate**, *Simula Research Labs, Oslo, Norway.*  
Dates February 1st, 2020 – Jan 31st 2021  
Tasks Research in Distributed Ledger Technologies, and Project management
- Role **EU-H2020 Project - Work Package Leader**, *University of Padua, Padua, Italy.*  
Dates February 1st, 2016 – Jan 31st 2020  
Tasks Network Security, and Preparation and management of Research Projects

Role **Assistant Professor**, *Manipal University Jaipur*, Jaipur, India.  
Department Computer Science and Engineering  
Dates December, 2014 – January, 2016  
Tasks Teaching and Research

Role **Research Assistant**, *University of Saskatchewan*, Saskatoon, Canada.  
Quality-of-Experience provisioning for real-time video streaming in MANETs  
Dates September 1, 2012 – February 28, 2013

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## Experience/Knowledge of

Results-oriented cybersecurity professional with 8 years of experience and a recent achievement of the **Certified Information Systems Security Professional (CISSP)** and **Certified Cloud Security Professional (CCSP)**. Adept at implementing robust security measures to safeguard sensitive information and mitigate cyber threats. I possess comprehensive theoretical and practical knowledge of different areas within the Cybersecurity domain, these includes:

- **Network Security**

I have designed and implemented various new attacks and defenses for the below mentioned networking domains. In most of the defense solutions, I have leveraged *machine learning techniques*. All the outcomes of the work done can be found in the form of research publications at the following link: <https://sites.google.com/site/chhaganlalunipd/research>

- Internet of Things (IoT),
- Software Defined Networking (SDN),
- Information Centric Networking (ICN),
- Vehicular Ad Hoc Networks (VANETs),
- MANETs and WSN

- **Cloud Cybersecurity Expert** (*CCSP certified, Microsoft certified in SC-100/200/300, AZ-500 and AZ-900*)

CCSP certified professional with expertise in cloud security, adept at implementing robust measures to safeguard data and applications in cloud environments. In particular, I have extensive theoretical and hand-on knowledge of the below mentioned topics in cloud security domain:

- Design solutions that align with security best practices and priorities
- Identity and Access Management (IAM)
- Application security in Cloud (*OWASP top 10 and SANS CWE 25*)
- Design security operations, identity, and compliance capabilities
- Design security solutions for infrastructure, applications, and data
- Mitigate threats by using *Microsoft 365 Defender, Defender for Cloud, and Microsoft Sentinel*
- Design and implement Infrastructure as a code templates with tools such as *Ansible and Terraform*
- Implement Information Protection and Compliance in Microsoft 365

- **Network Monitoring and Threat Detection In-depth**

Over the past years (in Research labs at University of Padova and Delft University), I have worked on various solutions and tools that are used for networking monitoring and detection threats in an organization's network. Moreover, I have designed and implemented several Intrusion detection systems for IoT networks. In particular, I could perform the following tasks when it comes to network monitoring and threat detection in a network.

- Advanced knowledge of working with various open-source network analysis and Intrusion Detection tools such as *tcpdump*, *Wireshark*, *Snort*, *Suricata*, *Zeek*, and *NetFlow/IPFIX*.
- To carry out *Network Forensics and Traffic Analysis*, I have competence in analyzing data from multiple sources (e.g. full packet capture, netflow, log files) to identify normal and malicious behaviors.
- Perform network forensics to investigate traffic to identify TTPs and find active threats
- Carve out files and other types of content from network traffic to reconstruct events
- Create BPF filters to selectively examine a particular traffic trait at scale

## Technologies/Tools Knowledge

Programming Languages	<i>C, Python, Go Lang</i>	Operating Systems	<i>Linux, Windows</i>
IDE and Editors	<i>SQL Server Management Studio Manager, Microsoft Azure Storage Explorer, TensorFlow</i>	Databases and Query Languages	<i>Kusto Query Lang (KQL), MySQL, CouchDB, Cosmos DB</i>
Network Simulators/Emulators	<i>Qualnet/Exata, Mininet, Contiki-Cooja, Hyperledger Fabric</i>	Experience with other Softwares/Tools/Technologies	<i>Microsoft Defender and Azure security tools (Azure Active Directory, Microsoft 365 Defender and Defender for cloud, Microsoft sentinel, Azure Firewall, etc), SAML, OAuth, OpenID connect, Nmap, Wireshark, tcpdump, Latex, and GNU PLOT</i>

## Courses and Certifications

Issuing organization **ISC2.**

Name Certified Information Systems Security Professional (CISSP)

Credential URL [https://www.credly.com/badges/db60795d-aa6c-4d7c-8032-300898981ae9/public\\_url](https://www.credly.com/badges/db60795d-aa6c-4d7c-8032-300898981ae9/public_url)

Issuing organization **ISC2.**

Name Certified Cloud Security Professional (CCSP)

Credential URL [https://drive.google.com/file/d/1KLTPGX1df9--Q1B8FC800\\_QQWbK6dWeF/view?usp=sharing](https://drive.google.com/file/d/1KLTPGX1df9--Q1B8FC800_QQWbK6dWeF/view?usp=sharing)

Issuing organization **Microsoft.**

Name SC-100 Microsoft Certified: Cybersecurity Architect Expert

Credential URL <https://learn.microsoft.com/en-us/users/chhaganlal-8583/credentials/a33af1523964f485>

Issuing organization **Microsoft.**

Name SC-200 Microsoft Certified: Security Operations Analyst Associate  
Credential <https://learn.microsoft.com/en-us/users/chhaganlal-8583/credentials/8a555ba56852862c>

Issuing organization **Microsoft.**

Name SC-300 Microsoft Certified: Microsoft Identity and Access Administrator  
Credential <https://learn.microsoft.com/api/credentials/share/en-us/ChhaganLal-8583/4A2593BCFC2DA114?sharingId=2EA34CFF48B8D56C>

Issuing organization **Microsoft.**

Name AZ-500 Microsoft Certified: Azure Security Engineer Associate  
Credential <https://learn.microsoft.com/en-us/users/chhaganlal-8583/credentials/7452dd830c3823ac>

Issuing organization **Microsoft.**

Name AZ-900 Microsoft Certified: Azure Fundamentals  
Credential <https://learn.microsoft.com/en-us/users/chhaganlal-8583/credentials/f449d0b29f000549>

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## Education

Title **PhD in Computer Science and Engineering**, *Malaviya National Institute of Technology*, Jaipur, India.  
Thesis Solutions to improve Quality of Experience for Real-time Video Streaming applications in wireless networks  
Dates July, 2010 – January, 2015  
Supervisor Prof. Manoj Singh Gaur and Prof. Vijay Laxmi

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Title **M.Tech in Information Technology**, *Indian Institute of Information Technology (IIIT)*, Allahabad, India.  
Wireless Communication and Computing  
Thesis Heterogeneity Aware Routing Algorithm for Wireless Sensor Networks using Clustering  
Dates July, 2007 – July, 2009

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Title **B.E in Computer Science and Engineering**, *MBM Government Engineering College*, Jodhpur, India.

Some Major Covered Subjects: Databases, Computer Networks, Web Technologies, Operating Systems, Programming, Algorithms, Software Engineering, Probability and Numerical Analysis

Dates July, 2002 – July, 2006

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## Projects and Publications

Title **Community for Integrating and Opening Cyber Range Infrastructures that Build an Interoperable Cross-Domain and Cross-Sector Cyber Range Federation (2024-2027)..**

My Role Research and Development, Contributions in project deliverable

Funding EU

Agency

Dates 2024 – 2027

Title **Secure management and presentation of Verifiable Credentials/Certificate at user devices (2021-2022)..**

My Role Proposal writing, Contributions in project deliverable

Funding Industry - IOTA Foundation

Agency

Dates 2021 – 2022

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Title **Secure and accountable sharing of medical records using smart contracts and blockchain (2019-2021)..**

My Role Research

Funding Norway Research Council

Agency

Dates 2019 – 2021

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Title **H2020-SU-SEC-2018, LOCARD - Lawful evidence collecting and continuity platform development (2019-2022)..**

My Role Proposal writing, Contributions in project deliverables

Funding European Commission

Agency

Dates 2019 – 2022

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Title **H2020-ICT30-2015 (Internet of Things and Platforms for Connected Smart Objects), TagItSmart! - Smart Tags driven service platform for enabling ecosystems of connected objects..**

My Role Work Package leader, Writing project deliverables, Research

Funding European Commission

Agency

Dates 2016 – 2019

Title **Scientific and Technical Publications.**

Webpage Link <https://sites.google.com/site/chhaganlalunipd/research>

My Role Investigation, Methodology design, Implementation, & Writing

Dates 2010 – Present

## References

**Prof. Mauro Conti** University of Padova, Padova, Italy  
<http://www.math.unipd.it/~conti/>  
 Email: [conti@math.unipd.it](mailto:conti@math.unipd.it)

**Narasimha R.** Special Adviser (Technical Architecture and Digital Innovation), Cancer Registry of Norway (Kreftregisteret), Oslo  
<https://www.linkedin.com/in/vnragavan/>  
 Email: [vnragavan@protonmail.com](mailto:vnragavan@protonmail.com)

**Prof. Sarada Gochhayat** Indian Institute Of Technology, Jammu (IIT–Jammu), India  
[https://www.iitjammu.ac.in/computer\\_science\\_engineering/faculty-list/~saradaprasadgochhayat](https://www.iitjammu.ac.in/computer_science_engineering/faculty-list/~saradaprasadgochhayat)  
 Email: [sarada.gochhayat@iitjammu.ac.in](mailto:sarada.gochhayat@iitjammu.ac.in)

**Prof. George Smaragdakis** Head of Cybersecurity Group at TU Delft, Netherlands  
<https://www.tudelft.nl/ewi/over-de-faculteit/afdelingen/intelligent-systems/cybersecurity/people/george-smaragdakis>  
 Email: [G.Smaragdakis@tudelft.nl](mailto:G.Smaragdakis@tudelft.nl)

**Dr. Wafa Ben Jaballah** Lead Security Researcher, Thales SIX GTS, France.  
<https://www.linkedin.com/in/dr-wafa-b-314a7a27/>  
 Email: [wafa.benjaballah@thalesgroup.com](mailto:wafa.benjaballah@thalesgroup.com)

**Chhagan Lal**

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