

Mohammadreza Hallajiyen

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Summary

I'm a graduate research assistant at the University of British Columbia and a member of the Dependable Systems Lab. My research interests lie in the area of Secure Cyber-physical and Networked Systems, the Internet of Things, and Machine Learning. Currently, I'm conducting research on "Robust and Resilient Machine Learning for Connected Healthcare Device Systems" in which we aim to address the security issues for using ML in healthcare domain.

Education

University of British Columbia

Ph.D. Student in Electrical and Computer Engineering

Vancouver, CA

Sept 2022 - Current

Amirkabir University of Technology

M.Sc. in Electrical Engineering - Control Systems

Tehran, Iran

Sept 2020 - Jun 2022

- Thesis Title: False Data Injection Detection on Measurement Units of Smart Grid Systems using Petri Net
- Ranked 2nd among the master's students in Control Systems - Class of 2022
- Ph.D. Entrance Test Exemption Nominee
- GPA: 3.88/4.00

Amirkabir University of Technology

B.Sc. in Electrical Engineering - Control System

Tehran, Iran

Sept 2015 - Jun 2020

- Thesis Title: Uncertain Dynamic and Kinematic Control of Endoscope Camera Holder in the Presence of Flexible Shaft
- Ranked 82th in University Entrance Exam for B.Sc. among 40,000 participants
- GPA: 3.05/4.00

Work Experience

University of British Columbia

Graduate Research Assistant

Vancouver, CA

Sept 2022 - Current

- Working on the healthcare device security in cooperation with National Research Council Canada (NRC)

University of British Columbia

Graduate Teaching Assistant

Vancouver, CA

Jan 2023 - Current

- ELEC221 - Signal and Systems

Amirkabir University of Technology

Research Assistant

Tehran, Iran

Sept 2020 - Jun 2022

- Conducting research reviews through several course projects on: Multi-variable Dynamic Control Systems, Multi-vehicle Control Systems, Stochastic Control Systems, Diagnosis and Fault-Tolerant Control Systems, Model Predictive Control and System Identification

Amirkabir University of Technology

Teaching Assistant

Tehran, Iran

Sept 2018 - Jun 2019

- Technical English for Electrical Engineers

MAPNA Group

Automation System Engineering Intern

Tehran, Iran

Jun 2018 - Sept 2018

Publications

JOURNAL ARTICLES

Resilient control of multi-microgrids against false data injection attack

Negar Yassaie, Mohammadreza Hallajiyen, Iman Sharifi, HA Talebi

ISA transactions 110 (2021) pp. 238–246. Elsevier, 2021

CONFERENCE PROCEEDINGS

Min-Max-Based Resilient Consensus of Networked Control Systems

Mohammadreza Hallajiyen, Ali Doustmohammadi

2022 8th International Conference on Control, Instrumentation and Automation (ICCIA), 2022

Consensus and Reputation-Based Resilient Control of Networked Microgrids
Mohammadreza Hallajiyani, Hossein Hassani, Roozbeh Razavi-Far, Mehrdad Saif
2021 4th IEEE International Conference on Industrial Cyber-Physical Systems (ICPS), 2021

Resilient Control Strategy for Detection and Mitigation of Disruptions in Microgrids
Negar Yassaie, Mohammadreza Hallajiyani, Iman Sharifi
2020 28th Iranian Conference on Electrical Engineering (ICEE), 2020

Skills

Programming Python (Pandas, PyTorch, NumPy, Scikit-learn. etc.), C/C++, HTML/CSS, SQL.

Hardware Arduino, AVR and ARM Microcontroller, PLC, Raspberry Pi, ESP

Miscellaneous Linux, \LaTeX , Tableau, Microsoft Office, Git.

Soft Skills Time Management, Teamwork, Problem-solving, Documentation, Engaging Presentation, Teaching

Licenses & Certifications

2020 **Certified**, ISA Transactions Recognized Reviewer

Elsevier

2022 **Licensed**, Machine Learning Specialization (Credential ID BXKX2EX6K9J5)

Coursera

Languages

English Professional proficiency

Persian Native proficiency

References

Karthik Pattabiraman

University of British Columbia

- Professor and associate head of Electrical and Computer Engineering
- **Email:** karthikp@ece.ubc.ca
- **Address:** Rm. 4048, Fred Kaiser Building, 2332 Main Mall, Vancouver, BC V6T1Z4

Vancouver, CA

Ph.D. Supervisor

Ali Doustmohammadi

Amirkabir University of Technology

- Associate Professor in Electrical Engineering
- **Email:** dad@aut.ac.ir
- **Address:** No. 350, Hafez Ave, Valiasr Square, Tehran, Iran 1591634311

Tehran, IRI

MSc. Supervisor