

Alireza Nezamzadeh

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PhD Researcher in Energy and Process Engineering, NTNU

Date of Birth: 8 July 1997 | Marital status: Married



KEY QUALIFICATIONS

- PhD researcher in Energy and Process Engineering at NTNU, with an MSc and BSc in Electrical Engineering
- Specialist in robust, fault-tolerant control for nonlinear and linear systems under uncertainty, noise, and disturbance
- Combines classical control with machine learning and reinforcement learning; hands-on in MATLAB, Python, PyTorch, and Simulink
- Published researcher and former Teaching Assistant, skilled at explaining technical work in a clear, simple way
- International research background spanning the USA, Canada, Norway, and Australia; building a long-term career in Norway

EDUCATION

2026 – Present	PhD in Energy and Process Engineering <i>Norwegian University of Science and Technology (NTNU)</i> Supervisor: Prof. Laurent Georges.
2019 – 2022	MSc in Electrical Engineering, Control <i>Isfahan University of Technology (IUT)</i> GPA: 18.08 / 20.00 (4.00 / 4.00) Ranked 3rd of 15 students Supervisor: Assoc. Prof. Marzieh Kamali.
2015 – 2019	BSc in Electrical Engineering, Power Systems <i>Shahrekord University (SKU)</i> GPA: 15.92 / 20.00 Ranked 1st of 24 students Supervisor: Assoc. Prof. Navidreza Abjadi.

RELEVANT EXPERIENCE

2026 – Present	PhD Researcher • Develop data-driven and optimal control methods for building energy systems.	<i>NTNU, Trondheim, Norway</i>
2024 – 2025	Research Collaborator (remote) • Fault detection and fault-tolerant control for electrical machines.	<i>Murdoch University, Australia</i>
2023 – 2025	Research Assistant • Designed and tested robust controllers for an inverted pendulum, a twin-rotor system, and piezoelectric actuators under real-world noise and disturbance at the Nonlinear Control Lab.	<i>Isfahan University of Technology</i>
2020 – 2022	Teaching Assistant • Supported courses in Adaptive Control, Linear Control Systems, and Artificial Neural Networks.	<i>Isfahan University of Technology</i>
2022 – 2023	Electrical Engineer • Worked on electrical safety and power distribution projects.	<i>Esfahan Regional Electrical Company (EREC)</i>

- Short internship in an industrial electrical engineering environment.

SELECTED PUBLICATIONS

- A. Nezamzadeh, M. Esmailidehkordi, N. Drigal, *Robust Control of Affine Nonlinear Systems Using an Energy-Efficient Gray-Box Framework: A Practical Validation*, IEEE Access, 2026.
- A. Nezamzadeh, M. Esmailidehkordi, A. Yazdani, H. Habibi, *Fault Detection and Fault-Tolerant Control of Permanent Magnet Linear Motors Using an Emotional Learning-Based Neural Network and a Linear Extended State Observer*, Energies, 2026.
- A. Nezamzadeh, M. Esmailidehkordi, *Disturbance Rejection in a Quadruple-Tank System by Proposing a New Reinforcement Learning Method*, ICCKE 2024.

Full publication list available on request or via [Google Scholar](#).

LANGUAGES

Persian: Native **English:** Fluent **Norwegian:** Intermediate

TECHNICAL SKILLS

Programming: MATLAB, Python, and C++. **ML & Simulation:** PyTorch, Simulink, Jupyter Notebook, Google Colab, Modelica, and Proteus. **Version Control & DevOps:** Git, GitHub, Docker. **Microcontrollers:** AVR, PLC, LOGO.

RELEVANT COURSES & CERTIFICATES

2016 – 2025 **Certificates:** Professional Engineering License, PLC Programming, LOGO Programming, Electrical installations in residential buildings, Starting electrical motors with contactors, MATLAB Programming.

2019 – 2026 **Graduate courses:** Big Data, Sparsity and GenAI in Control, HVAC Engineering, Optimal Control Systems, Multivariable Control Systems, Adaptive Control, Predictive Control, Neural Networks, System Identification.

VOLUNTEER WORK

2026 – Present **Peer Reviewer**
IEEE Transactions on Industrial Electronics

Jun – Jul 2026 **Team Member, Indoor Air Quality Project**
St. Olavs Hospital, Trondheim

2022 – 2023 **Volunteer Team Lead**
Iranian Red Crescent Society

2018 – 2019 **Member, Electrical Engineering Student Scientific Association**
Active member of the scientific association at Shahrekord University.

2018 – 2019 **Editorial Board Member**
Served on the editorial board of Avesta Scientific Journal.

REFERENCES

- Prof. Laurent Georges, PhD Supervisor, NTNU, Norway.
- Dr. Amirmehdi Yazdani, Research Collaborator, Murdoch University, Australia.
- Assoc. Prof. Marzieh Kamali, MSc Thesis Supervisor, Isfahan University of Technology, Iran.
- Nikolai Drigal, Research Collaborator, NTNU, Norway.

Contact details available on request.