Hamed Tirandaz

Ph.D. in Control Engineering
Lecturer at Hakim Sabzevari University, Sabzevar, Iran
Associate Researcher at the KIOS Research Center, Nicosia, Cyprus
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RESEARCH INTERESTS

Intelligent control, Fault Diagnosis/FTC, Neural Networks, Machine Learning, Computational Intelligence.

EDUCATION

Ph.D. in Control Engineering (*Fully Funded Ph.D. position Scholarship*) January 2019 — November 2024
University of Cyprus, Nicosia, Cyprus
Thesis Title: "Actuator Fault Diagnosis And Accommodation In Interconnected Nonlinear Dynamical Systems"
Supervisor: Prof. Marios Polycarpou (Fellow, IEEE)

M.Sc in Mechatronics Engineering, September 2007 — September 2009
Semnan University, Semnan, Iran

B.S. in Applied Mathematics, September 2001 — September 2006
Hakim Sabzevari University, Sabzevar, Iran

ACADEMIC EXPERIENCE

Associate Researcher
KIOS Research Center of Innovation and Excellence, Nicosia, Cyprus January 2019 — November 2024
Lecturer
Hakim Sabzevari University, Sanbzevar, Iran November 2011 — December 2019
SCADA Softwar Developer
Royesh Company, Sanbzevar, Iran November 2009 — November 2011

PUBLICATIONS

Journals:

[1] **Tirandaz, Hamed**, Keliris, Christodoulos , and Polycarpou, Marios. "Actuator Fault Accommodation: An Adaptive Command Filtering-Based Scheme for a Class of Nonlinear Uncertain Interconnected Systems", *IEEE Transactions On Automation Science And Engineering*, [Under Review].

[2] **Tirandaz, Hamed**, Keliris, Christodoulos , and Polycarpou, Marios. "Actuator and Sensor Fault Isolation in a Class of Large-Scale Nonlinear Dynamical Systems", *Journal of Automation and Intelligence*, 2024. DOI: 10.1016/j.jai.2024.03.001

[3] **Tirandaz, Hamed**, Keliris, Christodoulos , and Polycarpou, Marios. "Actuator fault detection and isolation in a class of nonlinear interconnected systems." *International Journal of Control*, 2024. DOI: 10.1080/00207179.2024.2310606

[4] Karami-Mollaee, Ali, **Tirandaz, Hamed**, and Barambones, Oscar. "Neural dynamic sliding mode control of nonlinear systems with both matched and mismatched uncertainties." *Journal of the Franklin Institute* 356, no. 8, 2019. DOI: 10.1016/j.jfranklin.2019.04.019

[5] Karami-Mollaee, Ali, **Tirandaz, Hamed**, and Barambones, Oscar. "State tracking control of nonlinear systems using neural adaptive dynamic sliding mode." *Transactions of the Institute of Measurement and Control* 41, no. 11, 2019. DOI:10.1177/0142331218819705

[6] Karami-Mollaee, Ali, **Tirandaz, Hamed**, and Barambones, Oscar. "On dynamic sliding mode control of nonlinear fractional-order systems using sliding observer." *Nonlinear Dynamics* 92, 2018. DOI:10.1007/s11071-018-4133-1

[7] **Tirandaz, Hamed**, and Ali Karami-Mollaee. "On active synchronization of fractional-order Bloch chaotic system and its practical application in secure image transmission." *International Journal of Intelligent Computing and Cybernetics*, 2018. DOI:10.1108/IJICC-05-2017-0048

[8] Karami-Mollaee, Ali, and **Tirandaz, Hamed** "Adaptive fuzzy fault tolerant control using dynamic sliding mode." *International Journal of Control, Automation and Systems* 16, 2018. DOI: 10.1007/s12555-017-0066-6

[9] **Tirandaz, Hamed**, and Karami-Mollaee, Ali. "Combination synchronization of multiple chaotic systems with uncertain parameters using adaptive hybrid modified projective control method." *Acta Phys. Polonica B* 49, no. 1, 2018. DOI: 10.1155/2018/2031942

[10] **Tirandaz, Hamed**, Saeidi Aminabadi, Saeid and Hamidreza Tavakoli. "Chaos synchronization and parameter identification of a finance chaotic system with unknown parameters, a linear feedback controller." *Alexandria engineering journal* 57, no. 3, 2018. DOI: 10.1016/j.aej.2017.03.041

[11] **Tirandaz, Hamed**. "Chaos synchronization of TSUCS unified chaotic system, a modified function projective control method." *Kybernetika* 54, no. 4, 2018. DOI: 10.14736/kyb-2018-4-0829

TEACHING EXPERIENCES

Master's Courses (at the University of Cyprus)
Role: Teacher Assistant
University of Cyprus, Nicosia, Cyprus

- Research Methodologies& Profess,
- Industrial Control.

Bachelor's Courses
Role: Instructor
Hakim Sabzevari University,Sabzevar, Iran

- Linear Control,
- Linear Algebra,
- C/C++ programming,
- Math I, II,
- Discrete Mathematics
- Numerical Computations,

LANGUAGES

English: Level: Advanced
Arabic: Level: Intermediate

SKILLS

- **Programming:** C/C++, Python, Matlab, Latex

- Controller design/Simulink

Honors and Awards

- Fully Funded Ph.D. position Scholarship on highest-prestige ERC (Water-Futures) project at the KIOS Research and Innovation Center of Excellence (KIOS CoE), which operates within the University of Cyprus, in collaboration with Imperial College London.   2019-2024

REFERENCES

Marios M. Polycarpou
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