MARZIE LAFOUTI

ARAS Robotics Researcher

PROFILE

I am currently a researcher at ARAS (Advanced Robotics and Automated System) laboratory. Now, I am doing a Master's student of control engineering under supervision of Prof. Hamid D. Taghirad, Prof. Mahdi Tavakoli and Prof. Seyed-Farzad Mohammadi.

RESEARCH INTEREST

Visual Object Tracking
Medical Robotics
Control Systems
Machine Learning
Deep Learning

CURRENT RESEARCH TOPICS

Single Object Tracking
Surgical Instrument Tracking

CONTACT

LINKEDIN:
https://www.linkedin.com/in/marzie-lafouti-486a67185/
EMAIL:
Lafuti@email.kntu.ac.ir

EDUCATION

2020-Present: M.Sc. Student in Electrical-Control Engineering at K. N. Toosi University of Technology, Tehran, Iran.

2016-2020: B.Sc. in Electrical Engineering at K. N. Toosi University of Technology, Tehran, Iran.

2012-2016: High school and pre-university at Farzanegan7 (Sampad NODET), Tehran, Iran.

EXPERIENCE

Being member of ARAS Robotics Lab. (Advanced Robotics and Automated System), K. N. Toosi University of Technology, 2020-Present.

Being teaching assistant of Signals and Systems, Electrical Circuits (2), Project Control and Physics (2), 2018-2020.

Being member of Farzanegan7 Robotics team, high school, 2012-2015.

SKILLS

- Languages: Persian (Native), English (Good).
- Programming Languages: Python, MATLAB, C++, C.
- General Software: Microsoft office (Word, PowerPoint, Excel), LaTeX.
- Engineering Software: Altium Designer, Proteus, Code Vision, Arduino IDE, Pspice.
- Operating Systems: Windows, macOS, Linux.
- Strong analytical skills and ability to acquire new knowledge, apply it, and spread it to others.
- Strong communication skills and good presentation skills.
- Ability to formulate problems and solve them independently and in groups.

HONORS AND AWARDS

- Being member of K. N. T. University Honors.
- Among top 10% of M.Sc. students of Control Engineering, K. N. Toosi University of Technology, 2020-2022.
- Accepted in Master of Control Engineering without entrance exam as an Honors member, 2021.
- Certificate of "ARAS Deep Learning and Vision", held by ARAS Academy under supervision of the Robotics Society of Iran (RSI) in collaboration with IEEE IRAN Section KNTU Student Branch, 2021.
- Certificate of "ARAS Artificial Intelligence (Advanced)", held by ARAS Academy under supervision of the Robotics Society of Iran (RSI) in collaboration with IEEE IRAN Section KNTU Student Branch, 2021.
- Certificate of "ARAS Artificial Intelligence (Intermediate)", held by ARAS Academy under supervision of the Robotics Society of Iran (RSI) in collaboration with IEEE IRAN Section KNTU Student Branch, 2021.
- The second-best student (2/120) in the department among top 5% of B.Sc. students of Electrical Engineering, K. N. Toosi University of Technology, 2016-2020.
- Being among the top B.Sc. students of the Faculty of K. N. T. University Electrical Engineering (Dean's List Certificate), 2019-2020.
- Ranked 1st in high school and pre-university, Farzanegan7 (Sampad, NODET), 2012-2016.

ARTICLES

- Lafouti, M., Ahmadi, M.J., Allahkaram, M.S., Gandomi, I., Lotfi, F., Mohammadzadeh, M., Abdi, P., & Taghirad, H. D. (2022). Surgical instrument tracking for Capsulorhexis eye surgery based on Siamese networks. 2022 10th RSI International Conference on Robotics and Mechatronics, ICROM 2022.
- Armoon, M., Lafouti, M., Tavassoli, B., & Taghirad, H. D. (2022). Robust Inverse Dynamics Control of the Remotely Operated Underwater Vehicle Manipulator. 2022 8th International Conference on Control, Instrumentation and Automation (ICCIA), 1–6.
- Armoon, M., Lafouti, M., & Nikoofard, A. (2022). Intelligent fault detection of planetary gearbox using vibration signal processing by empirical mode decomposition and an integrated artificial neural network-support vector machine classifier. 2022 9th Iranian Joint Congress on Fuzzy and Intelligent Systems, CFIS 2022.
- Yektamoghadam, H., Lafouti, M., & Nikoofard, A. (2020). Optimal perimeter control for three Urban regions. 2020 28th Iranian Conference on Electrical Engineering, ICEE 2020.

PROJECTS

- "Design and construction of a 4-channel recording system for vital sounds" as B.Sc. thesis, under supervision of Dr. M. Vali, K. N. Toosi University of Technology, 2020.

OTHER ACTIVITIES

- Sports – Red belt in Taekwondo, Swimming
- Music – Professional in playing Santoor, Good at playing Sitar

REFERENCES

- Prof. Hamid D. Taghirad, Professor and the Director of the Advanced Robotics and Automated System (ARAS), Department of Systems and Control, Faculty of Electrical Engineering, K.N. Toosi University. https://aras.kntu.ac.ir/taghirad/ E-mail: taghirad@kntu.ac.ir

- Prof. Mahdi Tavakoli Afshari, Professor, Department of Electrical & Computer Engineering, Faculty of Electrical & Computer Engineering, University of Alberta. https://apps.ualberta.ca/directory/person/mtavakol E-mail: mahdi.tavakoli@ualberta.ca