Ali Grivani

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EDUCATION

McMaster University   **Hamilton, Canada**
Ph.D. in Electrical Engineering   *Sep 2018 - Aug 2022 (Expected)*
CGPA: 12/12

Sharif University of Technology   **Tehran, Iran**
B.Sc. in Mechanical Engineering   *Sep 2013 - June 2017*
GPA: 3.96/4 (18.89/20)

RESEARCH EXPERIENCE

Aerial Robotics: Human Supervised Control of Multiple UAVs   *Sep 2018 - Present*
- Convex Optimization
- Model Predictive Control
- Collision Avoidance
- Control of Quadrotors
- Motion Planning
- Computational Geometry
  - *Under supervision of Prof. Shahin Sirouspour, McMaster University*

Modeling and Control of a Micro-Robot's Motion in a Fluid   *2016*
  - *Under supervision of Prof. Nejat Pishkenari, Sharif University of Technology*

ACADEMIC EXPERIENCE

McMaster University   *Sep 2018 - Present*
- Research Assistant
- Teaching Assistant
  - ECE 4CL4: Control Systems Design, 2018-20.
  - ECE 3CL4: Introduction to Control Systems, 2019-20.

Sharif University of Technology   *Sep 2016 – May 2017*
- Teaching Assistant
  - Engineering Drawing for Mechanical engineering
  - Engineering Mechanics Dynamics

PROFESSIONAL EXPERIENCE

Saipa Heavy Dies Manufacturing Co.   **Tehran, Iran**
Internship   *May 2016 - Oct 2016*
- Research and Development Section, Member of Design and Manufacturing Team.

Sina Robotics and Medical Innovators Co., LTD.   **Tehran, Iran**
Junior Designer   *May 2017 - Oct 2017*
- Member of the Telesurgery Robot Design Team.

Tosan – Electrical Vehicles Company   **Tehran, Iran**
Design and Production Management   *Jan 2018 - June 2018*
- Setting up a production line for electric motor-cycles.
- Providing design plans, BOMs and other documents required for manufacturing process.

Skills

Software Skills:
- **Programming**: C++/C, Python, MATLAB
- **Data Processing**: Image Processing and Computational Photography, Deep Learning
- **Design**: SolidWorks, Autodesk Inventor Professional, ADAMS
- **Engineering Analysis**: MATLAB (Simulink, Simmechanics), ADAMS
- **Other**: Adobe Photoshop, MS. Office

HONORS AND AWARDS

- Distinguished Undergraduate Student, Sharif University of Techonology, 2018
- Privileged to directly enter Master's degree at Sharif University of Technology, exempted from the national entrance examination, 2017
- Ranked 2nd among more than 120 students of Mechanical Engineering department at Sharif University of Technology, 2017
- Ranked 23rd among 250,000 participants in nationwide university entrance exam (Top 0.5%), 2013
- Member of National Elites Foundation and financially supported by this foundation, 2013 - 2018

RELATED ACADEMIC COURSES

McMaster University   *Sep 2018 - Present*
- Matrix Computations in Signal Processing
- 3D Image Processing and Computer Vision
- Engineering Optimization
- Algorithms for Parameter and State Estimation

CERTIFICATES

Deep Learning Specialization   *Sep 2019*
- Coursera

Image and Video Processing   *Oct 2020*
- Coursera

PUBLICATIONS

IEEE/ASME Transactions on Mechatronics   *2020*
- *Control of Multiple Quad-copters with a Cable-suspended Payload Subject to Disturbances*
  - Mohammadi, Keyvan, Shahin Sirouspour, and Ali Grivani.

IEEE/ASME Transactions on Mechatronics   *Under Review*
- *Passivity-Based Control of Multiple Quad-Rotors Carrying a Cable-Suspended Payload*
  - Mohammadi, Keyvan, Shahin Sirouspour, and Ali Grivani.

REFERENCES

Prof. Shahin Sirouspour

Professor

Department of Electrical and Computer Engineering

McMaster University

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