Mahdi Amouzadi

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Research Interests

- Connected and Autonomous Vehicles
- Nonlinear Model Predictive Control
- Reinforcement Learning
- Robotics and Automation
- System dynamics and modelling
- Optimal Control Problem

Education

University of Sussex, Brighton, UK

PhD in Engineering, Sep. 2019 - present

- Research student at Smart Vehicles Control Laboratory (SVecLab)

University of Sussex, Brighton, UK

Undergraduate bachelor's in Electrical and Electronics Engineering, Sep. 2016 - June. 2019

- Grade: 1.1
- Final project: Intra-body Communication
- International Global Design (Sep. 2016)
- Professional writing in reports

Bellerbys College, Brighton, UK

Engineering foundation programme, Sep. 2015 - June. 2016

- Grade: 78% (Ranked 2rd among 30 students)

Teaching Experience

University of Sussex, Brighton, UK

- Associate Tutor, Sep 2019 – Present
    - Assisted Dr. A. Moradinegade Dizqah in "Engine Technology" module, ran weekly lab sessions (2019-20).
    - Assisted Dr. A. Moradinegade Dizqah in "Vehicle Technology" module, ran weekly lab sessions (2020-21).
    - Assisted Dr. M. Oner in "Electromechanics" module, ran weekly workshop sessions.
    - Assisted Dr. M. Oner in "Electromagnetism and Introduction to Electrical Machines" module, ran weekly workshop sessions.
    - Assisted Dr. A. Moradinegade Dizqah in "Autonomous Vehicle" module, ran weekly lab sessions (2020-21).
    - Assisted Dr. R. Aviles-Espinosa in "Electronic Circuit & Systems Design" module, ran weekly lab sessions.

Work Experience

Iran Digital Smart Homes, Esfahan, Iran (three continuous summers of 2016, 17, 18)

- Worked as an embedded system engineer.
- Designed and manufactured electronic circuits according to client's requirements.
- Analysed and double checked all systems before handing them to costumers.
- Worked both in groups and individually to plan for each design.

Formula Design Researcher, University of Sussex, UK (July 2018 - August 2018)

- Worked with fellow students on the research team and analysed new motoring regulations as well as applying core efficient solutions.
- Analysing data and statistics from the designs.

Transition mentor, University of Sussex, UK (September 2018 - May 2019)

- Organized weekly sessions for 10 undergraduate students and provided peer support with their studies.
- Responsible for preparing the sessions and providing weekly reports to the department senior mentor.
- Communicated with variety of students effectively.

Research Experience & Notable Projects

University of Sussex, Brighton, UK

Researcher, Sep. 2019 – Present

- Research on "Path Planning of Connected and Autonomous Vehicles" under the supervision of Dr A. Moradinegade Dizqah.

Researcher, Sep. 2018 – Jun. 2019

- Researched and performed experimental validation on "Designing a Capacitive Body Network" under the supervision of Dr N. Munzenrieder.

Researcher, Feb. 2018 – May. 2018

- Research on "Finite State Machines" under the supervision of Dr B. Kha Nguyen.

Researcher, Sep. 2018 – Dec 2018

- Research on "Solar Power" under the supervision of Dr S. Skarvelis-Kazakos.

Researcher, Oct. 2017 – Feb. 2018

- Research on "Electric-Potential-Sensors" under the supervision of Dr N. Munzenrieder.

Researcher, Feb. 2017 – Mar. 2017

- Research on "Frequency Response Systems" under the supervision of Dr Y. Li.

Honors and Awards

- Awarded with the School of Engineering and Informatics' Fully-Funded Scholarship by University of Sussex, September 2019.
- Selected as a Talented Student, Bellerbys College, December 2015.
- Awarded with the School of Engineering, 45% Scholarship, University of Sussex, September 2016.
- Awarded with outstanding achievement for the first year of university, University of Sussex, June 2017.
- Ranked #2 in Elisa 2560 robot competition at University of Sussex, May 2017.

Skills

Software

- Multisim Blue
- Quanser
- Arduino
- familiar with IPSA 2.7
- PSS explore

Programming Language

- MATLAB
- C/C++
- Python

Operating Systems

- Windows (all kinds)
- Mac OS
- Linux
- Android
- iOS

Memberships:

- Member of SVecLab at University of Sussex
- Member of STCS at University of Sussex: Sep 2017 to Sep 2019
- Member of formula design at University of Sussex: Sep 2017 to Feb 2019
- President of Iranian Society at University of Sussex: Sep 2017 to Sep 2018

Activities

- University of Sussex Volleyball team member (from September 2017 until present).
- Swimming
- Listening to music
- Physical Fitness
- Reading Inspirational Books

Languages

- Arabic: Intermediate
- English: Full Professional proficiency
- Persian: Native proficiency

References

University of Sussex, Brighton, UK
Department of Informatics

- Doctor Arash Moradinegade Dizqah
  E-Mail: A.M.Dizqah@sussex.ac.uk
- Doctor Niko Munzenrieder
  E-Mail: N.S.Munzenrieder@sussex.ac.uk
- Mr Masoud Omrani, Manager of Iran Digital Smart Homes
  E-Mail: omrani.masoud@gmail.com

Please feel free to contact any one of them if you should require more information.