Ehsan Hosseini

Control Engineering,
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Personal Website

EDUCATION

2010 – 2014   **B.S. in Electrical Engineering (Control),**
Electrical and Computer Engineering Department, University of Tehran, Tehran, Iran,
(Last year GPA 16.03/20)

2006 – 2010   **High School Diploma and Pre-University Course, Mathematics and Physics**,
Allame Tabatabai High school, Tehran, Iran
(Diploma GPA 19.60/20.00)

2005-2006   **Marsden High School,**
West Ryde, Sydney, Australia

RESEARCH INTEREST

- Game Theory and Optimal Control
- Cyber-physical Systems
- Non-linear Control
- Robotics and Mechatronics
- Renewable Energy Systems

HONORS & AWARDS

Fall 2014   Received **full governmental fellowship** for domestic master studies
Spring 2012   **Rank 2nd in AUTRONIC** electronic design competition
Summer 2011   **Rank 1st in robotic competition** in university of Tehran
Fall 2010   Recognized **exceptional talent** by NODET
Fall 2010   Received **full governmental fellowship** for bachelor studies
Summer 2010   **Rank top 0.1%** of the Nationwide Matriculation Exam (Konkoor)

RESEARCH & PRACTICAL EXPERIENCES

Spring 2014   **Game Theory research-** I worked on evolutionary game theory concepts and its application in targeted cancer therapy. I found some mathematical conditions that maximize the chance of succeed in anticancer drugs. Under supervision of Dr H.Kebreai.

Fall 2013   **Advance control project –** I worked on modeling and analyzing a VTOL aircraft and linearizing for implementing state space and designing a state feedback for stabilization and control, and comparing it with PID classic controllers. Under supervision of Dr H.Kebreai.

Sumer 2013   **Advance Robotic lab** – I worked on several robotic projects with graduate students. My major activities was programming under Linux for arm microprocessors and control the motors and sensors via wireless communication and I2C protocol. Under supervision of Dr H.Moradi.

Spring 2013   **Mechatronics lab** – I worked on designing and implementing a complete mechatronic system "Inverse pendulum". Modeling the physical system, extracting state equation, linearization, designing discrete time controller, designing PCB and constructing the plant. Under supervision of Dr T.Abbasian.

Fall 2012   **Mechatronics workshop**- I built a complete path finder robot from lathing mechanical parts to designing and assembling electrical parts. Under supervision of Dr M.Fakhrai.

TEACHING EXPERIENCE

Fall 2014   **Automatic Control (Linear Control Systems) – Teacher Assistant**
Lecturer: Dr M.Ayati

Spring 2014   **Digital and non-linear control systems – Teacher Assistant**
Lecturer: Dr A.Rahimi Kian

Spring 2014   **Industrial Electronic Lab – Teacher Assistant**
Lecturer: Prof S.Farhangi

WORK EXPERIENCES

Internship:

Summer 2013   **Renewable Energy Organization of Iran – Wind Energy office**
Thesis: *Wind Turbines control and monitoring systems, DCS & SCADA*
Advisor: Prof S.Farhangi

Tutoring:

2012-2013   **Advance robotic instructor** – Saramad Co.
2011-2014   **Mathematics & physics** tutor of high school students

INNOVATIONS

Using micro wind turbines in automobiles*

Advisor: Dr B.Asai

*more information available upon request

SELECTED TEAM PROJECTS

2012   **Iranian Persian Ghazal III** (solar car), University of Tehran
Expected to attend International competition

2013   **Dome Robot** (Repair & Wash Domes), Mobile Robot lab, University of Tehran,

SKILLS

Computer Skills:

HDL (Hardware Description Language)	Verilog
Programming Tools and Languages	C, C++, Assembly
Simulating and Designing Tools	Altium Designer, Matlab, Proteus, Modelsim, Codevision, Quartus, Multisim, Hspice, PSCAD
Miscellaneous	Microsoft Office Package, AutoCAD
Operating Systems	Linux, Windows
Microcontroller	AVR, ARM

Languages:

English: **TOEFL iBT**
   Overall: 92
   Reading: 24 Listening: 20 Speaking: 23 Writing: 25

   GRE (General test)
   Verbal: 149 - %41 Quantitative: 162 - %83

References

- **Ashkan Rahimi Kian**, Associate Professor, University of Tehran.
  Email: arkian@ut.ac.ir

- **Hamed Kebriai**, Assistant Professor, University of Tehran.
  Email: Kebriaei@ut.ac.ir

- **Hadi Moradi**, Assistant Professor, University of Tehran.
  Email: moradih@ut.ac.ir

- **Moosa Ayati**, Assistant Professor, University of Tehran
  Email: m.ayati@ut.ac.ir