

# Mohammad Hadi Shadmehr

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B.Sc. Student in Electrical Engineering- Bioelectric • University of Tehran

## Personal

**Born:** Mehr 15<sup>th</sup>, 1372 – October 7<sup>th</sup>, 1993 in Tehran • Tehran • Iran  
**Nationality:** Iranian

## Education

**Bachelor of Science, Electrical Engineering- Bioelectric**

Sep. 2011– Now

University of Tehran

Current GPA: 15.73/20 (3.13/4)

**Diploma in Physics and Mathematics Discipline**

Sep. 2006–

Hatef High School • Tehran • Iran

June 2010

GPA: 19.07/20

## Research Interests

**Systems Neuroscience**

**Biophysics**

**Machine Learning**

## Related Coursework

**Physiology I and II**

**General Chemistry 1**

**Artificial Intelligence**

**Specific Topics in Biomedical Engineering 1** Dynamic Systems in Neuroscience • graduate

**Pattern Recognition** • graduate

**Digital Signal Processing** • graduate

## Awards, Grants, And Honors

**1<sup>st</sup> Place at First Health Inotech (Innovation Technology)**

Sep. 2015

Awarded **Technology Grant** for proposing a gamification project in health care field

Kermanshah University of Medical Sciences

**1<sup>st</sup> Place at Second National Digital System Design Contest of Iran**

May. 2015

FPGA Challenge • Trax game

**Ranked as Top 0.19% among Around 270,000 Participants**

June 2011

Iran's National University Entrance exam

**Iranian National Olympiad in Informatics (INOI)**

Sep. 2010

Bronze medal

Young Scholars Club (YSC) • Tehran • Iran

## Publications

Sajjad Mozaffari • Bardia Azizian • Mohammad Hadi Shadmehr • “**Highly Efficient Alpha-Beta Pruning Minimax Based Loop Trax Solver on FPGA**” • The 18th CSI International Symposium on Computer Architecture & Digital Systems (CADS 2015)

Ehsan Qasemi • Amir Samadi • Mohammad Hadi Shadmehr • Bardia Azizian • Sajjad Mozaffari • Amir Shirian • Bijan Alizadeh • “**Highly Scalable, Shared Memory , Monte-Carlo Tree Search based Blokus Duo Solver on FPGA**” • International Conference on Field-Programmable Technology (ICFPT 2014)

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## Work Experience

**Teaching FPGA Hardware Design**  
*University of Tehran • Tehran • Iran*

*Fall 2015*

**Internship as Biomedical Engineer**  
*Erfan Hospital • Tehran • Iran*

*Summer 2014*

**Teaching Robotic**  
*Hatef High School • Tehran • Iran*

*June– Dec. 2013*

**Teaching C/C++ Programming**  
*Private Teaching*

*June– Dec. 2013*

**Teaching Olympiad**  
*Physics and Informatics Olympiads*  
*Hatef High School • Tehran • Iran*

*2012*

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## Volunteer Work Experience

**President of the Biomedical Engineering Student Branch**  
*University of Tehran • Tehran • Iran*  
Publishing *the Biotech Magazine*  
Holding relative classes such as “Digital Signal Processing” • “Theoretical Neuroscience” • “FPGA”  
Holding *the 1st Biomedical Engineering Ideas Competition (IdeasBazaar)* with Cooperation of Amirkabir University • Tehran • Iran

*May 2014– Dec. 2015*

**Public Relations Manager of the Biomedical Engineering Student Branch**  
*University of Tehran • Tehran • Iran*  
Holding 20th *Iranian Conference on Biomedical Engineering (ICBME)*  
Managing to visit *Noor-afshar Hospital*

*May 2013– May 2014*

**Teacher Assistant for "Digital Logic Design Laboratory" Course**  
*Instructor: Prof. Zainalabedin Navabi*  
*University of Tehran • Tehran • Iran*

*Spring 2014*

**Teacher Assistant for "Physiology" Course**  
*Instructor: Prof. Mohammad Reza Raoufy*  
*University of Tehran • Tehran • Iran*

*Spring & Fall 2014*

**Teacher and Group Manager in Education Department of a NGO**  
*Imam Ali's Popular Students Relief Society • Farahzad Iranian House*

*Sep.2013– Oct. 2015*

## Research and Projects

<b>Design and Implementation of a Model of Retina on FPGA with the Aim of Improving its Performance</b> <i>Supervisor: Prof. Fariba Bahrami and Prof. Bijan Alizadeh</i>	June 2015– Now
<b>Design and Implementation of Quadruped Robot with Compliant Spine for Energy Optimization</b> <i>Supervisor: Prof. Majid Nili Ahmadabadi</i>	Nov. 2014– Now
<b>Design and Implementation of a Fall Detection Method Based on Camera Feed in MATLAB</b> <i>Supervisor: Prof. Fariba Bahrami</i>	Spring 2015
<b>Design and Implementation of "Blokus Duo" Solver on FPGA</b> <i>Presented in International Conference of Field-Programmable Technology (ICFPT 2014) • Shanghai</i> <i>Supervisor: Prof. Bijan Alizadeh</i>	Spring– Fall 2014
<b>Design and Implementation of a Sport Watch, in Order to Detect the Movement of Body</b> <i>Supervisor: Prof. Seyed Kamaledin Setarehdan</i>	Spring 2014
<b>Implementation of a Smart Agent Team for Soccer 2d Simulation Using an Innovative Approach Called Safe Magnetic Path</b> <i>IranOpen2012 • Tehran • Iran</i>	Summer 2011– Spring 2012
<b>Design and Implementation of a Game Engine for Online Soccer Named Jcup</b> <i>Supervisor: Mr. Milad Mohajer</i>	Summer 2011
<b>Design and Implementation of an Artificial Arm</b> <i>12th <a href="#">Khwarizmi Youth Award</a></i>	Spring 2010

## Attended Contests

<b>Second National Digital System Design Contest</b> <a href="#">Amirkabir University of Technology</a> • Tehran • Iran	May. 2015
<b>International Design Competition</b> <a href="#">ICFPT 2014</a> • Shanghai • China	Dec. 2014
<b>Soccer 2D Simulation</b> <i>IranOpen2012 • Tehran • Iran</i>	Aug. 2012
<b>ACM ICPC Asia</b> <a href="#">Sharif University</a> • Tehran • Iran	Feb. 2010

## Languages

<b>Persian</b> • Native Language
<b>English</b> • TOEFL IBT (2015, October 25th): Total: 82/120
<b>Deutsch</b> • Some Familiarity
<b>Arabic</b> • Some Familiarity

## Computer Skills

<b>Programming and Description Language</b>	C/C++ • Professional (7 Years of Experience) Verilog/SystemVerilog • Professional SystemC/SystemC-ams • MATLAB • Java • LaTeX • Intermediate Python • Assembly • HTML • Basic
<b>Software</b>	<b>Neuromorphic Related</b> Modelsim • Quartus • Neuron • Intermediate
	<b>Electronic Related</b> CodeVision(AVR) • Logo!Soft Confort(PLC) • MultiSim • LabView • PSpice • Proteus • Intermediate
	<b>Mechanic Related</b> MATLAB Mechanical Engineering Tools • SAM • AutoCAD • Intermediate
	<b>Development Tools</b> Eclipse • Visual Studio • Qt-Developer • Intermediate
	<b>Operating Systems</b> Windows • Linux • Intermediate
	<b>Graphics</b> Adobe Photoshop • Adobe Flash Maker • 3DMAX • H264 • Intermediate

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## Hobbies and Activities

Reading Books  
Writing  
Watching Movies  
Going to the Theaters  
Photography  
Biking  
Table Tennis • Hiking • Swimming • Soccer • Intermediate  
Taekwondo • Blue Belt

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## References

### **Prof. Fariba Bahrami**

Associate Professor • Faculty of Electrical and Computer Engineering  
University of Tehran

### **Prof. Bijan Alizadeh**

Assistant Professor • Faculty of Electrical and Computer Engineering  
University of Tehran

### **Prof. Majid Nili Ahmadabadi**

Professor • Faculty of Electrical and Computer Engineering  
University of Tehran

### **Prof. Seyed Kamaledin Setarehdan**

Associate Professor • Faculty of Electrical and Computer Engineering  
University of Tehran

### **Prof. Mohammad Reza Raoufy**

Assistant Professor • Faculty of Physiology  
Tarbiat Modares University