

# Elahe Jalalpour

## Curriculum Vitae

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### Research Interests

- o Computer Networks
- o Software Defined Networking
- o Internet of Things
- o Computer and System Architectures
- o FPGA

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### Education

2012–2016 **B.Sc. Computer Engineering**, *Amirkabir University of Technology*, Tehran.

- o GPA – 17.31 out of 20
- o B.Sc. Final Thesis: Implementation of software defined VPN by MPLS  
Supervisor: Prof.Khorsandi

2008–2012 **High School, Diploma of Math & physics**, *Manzoumeh Kherad Institute*, Tehran.

- o GPA – 19.74 out of 20

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### Honors & Awards

2015 Eligible for applying to Direct Admission Program for M.Sc. at Department of Computer Engineering, Amirkabir University of Technology without taking the **National Entrance Exam for Graduate Schools** as a reward of high academic records and achievements

2013–2015 Ranked in top 4 Computer Hardware Engineering Students

2014 Eligible to choose **second major** due to outstanding performance

2012 Ranked in top 0.8% of Nation-wide University Entrance Exam among all Iranian Students of Math. & Physics

- 2012 Ranked in top 0.9% of Nation-wide University Entrance Exam among all Iranian Students of Foreign Languages (English)
- 2011 **1st** Place in Iran Open Robocup Competition Demo League as a Member of *Kherad* team
- 2010 & 2011 **Semi-finalist** at National Mathematics Olympiad
- 2009 Earned **Merit Medal** in International World Youth Mathematics Competition (IWYMIC) Durban, South Africa

## Research Experiences

- 2015 **Consistent Update in SDN**, *E.Jalalpour*, Research Methods Course.  
Technical report for Research Method and Technical Report Writings course (In Persian)
- June **research on a department-wide platform for IoT and building management**
- 2015-present **systems**, *under supervision of Prof.Bakhshi*, Department of Computer Engineering and Information Technology, Amirkabir University of Technology, Tehran, Iran.  
Research on different operating systems, frameworks and platforms in IoT

## Working Experiences

- Summer 2015 **Iranian Telecommunication Research Center (ITRC)**, *Tehran, Iran*.  
Summer internship in the country's leading research center of telecommunication network systems.

## Patents

- Title *Intelligent Control System of Steering Wheel*
- Issued 03 / 2011
- IR Patent 69363

## Teaching Experiences

- Fall 2015 **Teacher Assistant**, INTRODUCTION TO PROGRAMMING, Amirkabir University of technology, Under Supervision of Prof.Bakhshi.
- Fall 2015 **Teacher Assistant**, COMPUTER NETWORKS II, Amirkabir University of technology, Under Supervision of Prof.Sabaei.
- Fall 2015 **Teacher Assistant**, OPERATING SYSTEMS, Amirkabir University of technology, Under Supervision of Prof.Zarandi.
- Winter 2015 **Teacher Assistant**, COMPUTER ARCHITECTURE, Amirkabir University of technology, Under supervision of Prof.Zarandi.

## Skills & Expertise

- **Programing & Hardware Design Languages.**  
Java, C/C++, Python 3, Verilog, VHDL, 8086 Assembly, AVR Assembly
- **Networking.**  
Mininet, GNS3, Wireshark, Cisco Packet Tracer, Ryu SDN Controller, OpenFlow

- **Typesetting.**  
L<sup>A</sup>T<sub>E</sub>X, Microsoft Word, LibreOffice, Pages, Vim
- **Hardware Simulators.**  
Xilinx ISE Design Suite, P-Spice, H-Spice, Proteus, Quartus II
- **DB Management.**  
MySQL
- **Operating Systems.**  
Windows, OS X, Ubuntu, Fedora
- **Other.**  
Netbeans, Eclipse, Matlab

## --- Languages

- Persian **Native proficiency**  
(Farsi)
- English **Professional working proficiency**
- French **Elementary proficiency**

## --- Graduate Courses

- Fall 2015 **Advance Computer Networks**, *Professor Siavash Khorsandi*.
- Fall 2015 **Optimization and its Applications in Computer Networks**, *Professor Bahador Bakhshi*, (Audited).

## --- Projects

- 2015-present **Final thesis project**, PYTHON.  
Implementation of software defined VPN by MPLS
- 2015 **SDN101**, PYTHON.  
Implementation of SDN based firewall (SDWall) and topology manager on ryu platform
- 2014 **FAT Parser**, C.  
Implementing FAT-16 and FAT-32 parser with delete, list and retrieve support
- 2014 **HTTP Proxy**, JAVA.  
Implementation of a HTTP and HTTPS proxy server
- 2012 **Phone Book**, C.  
Implementation of Phone Book with file
- 2013 **JUMONG (Java Ultimate Maze Obstacle Neutralizer Game)**, JAVA.  
Implementation of a graphical game with multiplayer support
- 2013 **River Rider**, JAVA.  
Implementation of a graphical game with multi-threading support
- 2013 **Bubbles**, JAVA.  
Implementation of a Java based bubbles screen saver
- 2014 **Disassembling DOS Executable File**.

- 2015 **FPGA Co-Design, C & VHDL.**  
Implementing hardware modules in VHDL and using them for having a cryptographic algorithm in a software environment
- 2015 **Transistor Level Ripple Adder, HSPICE.**  
Designing and implementing transistor level ripple adder in three families: Static CMOS, Dynamic CMOS and DCVSL
- 2013 **Simon Game, Proteus.**  
Design and implementation of Simon game's logic circuit

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## References

**Professor Bahador Bakhshi, Assistant Professor.**

Computer Engineering and IT Department, Amirkabir University of Technology  
Email: bbakhshi@aut.ac.ir

**Professor Hamid Reza Zarandi, Assistant Professor.**

Computer Engineering and IT Department, Amirkabir University of Technology  
Email: h\_zarandi@aut.ac.ir

**Professor Masoud Sabaei, Assistant Professor.**

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