

MOHAMED MEHDI JAMSHIDY

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RESEARCH INTERESTS

Computer Networks, Real-time and Distributed Systems, Dependable Systems, Information Security, Artificial Intelligence, Multimedia Systems and Networking, Mobile Ad-hoc Networks

EDUCATION

Sept. 2003 **Sharif University of Technology**, Tehran, Iran.
July 2009 *Sharif University is the top ranked technical school in Iran*
B.Sc. in **Computer Engineering**, Minor in Information Technology
Last 2 Years GPA: 3.54/4.00
Thesis: Simulation and Evaluation of Mobility Aware Multimedia Streaming Protocol in Mobile Ad-Hoc Networks.
Related Courses: (Grading system 0-20)
Internet Engineering: 19.8 Computer Networks: 18.0
Signals & Systems: 19.5 E-Commerce: 18.0
Application Engineering: 19.0 Information Technology: 18.0
Hardware/Software Co-design: 19.0 Multimedia Systems 17.4

Sept. 1998 **Kamal High school**, Tehran, Iran.
July 2002 Diploma in Mathematics & Physics
GPA: 18.51 / 20

HONORS

2003 **Ranked 176th** among more than 350,000 applicants in the Iranian Nationwide University Entrance Exam.
2001 Honorable place in the National Computer Olympiad.
2001 Honorable place in the National Physics Olympiad.

PUBLICATIONS

July 2008 **Mohamed M. Jamshidy**, " An Analysis of Residential Energy Intensity in Iran, A System Dynamics Approach", In the [Proceedings of the 2008 International Conference of the System Dynamics Society, Athens, Greece](#)

RESEARCH EXPERIENCE

Oct. 2012 **Dependable and Real-Time Systems Lab, University of Tehran**, Tehran, Iran
Present Research Advisor: Prof. Mehdi Kargahi
Working on Mathematical Behavior Modeling and Optimization of Real-Time Systems.

July 2008 **Digital Media Lab, Sharif University of Technology**, Tehran, Iran
Sept. 2009 Research Advisor: Prof. Hamid R. Rabiee
Member of Wireless Networks Research Team, Working on Protocols for Routing and multimedia streaming in mobile ad-hoc networks (MANET).

WORK EXPERIENCE

- Aug. 2010 Present **Technical Manager/ R&D Software Engineer, MAHARAN INTL.**, Tehran, Iran **Full-time**
Management/design of the computing platform for safe execution of safety-critical applications in MAHARAN. The project will be developed to conform to CENELEC standards, with highest Safety Integrity Level (SIL 4).
Management Activities:
Creating and executing development plans. Managing the development lifecycle and technical risks throughout the project. Keeping project manager well informed of status of project development. Liaison between development staff and project manager. Enforcing coding standards.
Engineering Activities:
Designing the component architecture of the system. Designing and implementation of generic middleware consists of scheduling, considering replica determinism, and voting mechanisms for a fault-tolerant hard real-time system. Designing and implementation of a real-time communication protocol for a closed transmission system. Evaluation and selection of a safe RTOS as a Commercial off-the-shelf (COTS) product.
- Current Project (March 2011 Present)
- Former Project (Aug. 2010 March 2011) Participating in development of software for railway control and protection system based on CENELEC standards, with the highest Software Safety Integrity Level (SSIL 4). The project is under assessment by CERTIFER, a European Railway Certification Agency.
Activities:
Applying Design by Contract (DbC) methodology for Design Specification by writing Pre-condition, Post-condition and Class-invariant with Object Constraint Language (OCL). Providing verification procedure for Source Code Standard Verification according to MISRA-C++:2008 (Use of C++ in Critical Systems) and ISO-IEC Official C++ language Specification. Test Case Design for performing Unit Testing and Integration Testing with White Box Techniques including all kinds of Logic-Coverage Test as well as Black Box Techniques including Boundary Value Analysis, Equivalence Partitioning and Error Guessing. Tool Qualification and Assessment for SIL4 usage.
- Feb. 2011 Jul. 2011 **Software Engineer, MABNA CARD ARIA**, Tehran, Iran **Part-time**
Developing a smart card printer driver for SCO Unix 5.6
- Oct. 2009 Feb. 2012 **R&D Software Engineer, MOJ E HOOSHMAND Co.**, Tehran, Iran **Part-time**
Participating in a project for design and production of a Mobile Ad-Hoc Network of wireless embedded devices.
Activities:
Multimedia Network System Design. Design and implementation of a TDMA MAC layer. Design of an algorithm to be the Ad-Hoc routing protocol. Implementation of the Ad-Hoc routing protocol for a digital signal controller (DSC) of Texas Instruments.
- Aug. 2009 Aug. 2010 **R&D Software Engineer, HASIN TECHNOLOGY Co.**, Tehran, Iran **Full-time**
Participating in a Mobile Payment pilot project for Mobile Communication Company of IRAN as the main member of the communication team. Telephony signaling protocol was Signaling System No.7 (SS7). The project was the first in its kind in IRAN.
Activities:
Design and Implementation of a Gateway MSC as a Messaging Gateway for Mobile Payment, based on 3GPP standards for Short Message Service (SMS) and Mobile Application Part (MAP) and ITU-T recommendation for Transaction capabilities formats and encoding (TCAP layer). Acquiring communication link from MCI's core network. Setting up signaling cards on Sun Servers, Compiling the Linux kernel 2.6 with the signaling card driver. Setting up the signaling card configuration according to MCI's core network configuration.

March 2008 Present	CTO, RAHBORD MABNA TRADING Co. , Tehran, Iran Co-founder and IT specialist.	Part-time
Sept. 2004 June 2009	Lecturer, Nooralmahdi High School , Tehran, Iran Teaching Fundamentals of Computer to high school students	Part-time

TEACHING EXPERIENCE

Spring 2008	Teaching Assistant for 40424 Operating Systems , Computer Engineering Dept, Sharif University of Technology.
Spring 2008	Teaching Assistant for 40242 Signals and Systems , Computer Engineering Dept, Sharif University of Technology.
Fall 2008	Teaching Assistant for 40317 Internet Engineering , Computer Engineering Dept, Sharif University of Technology.
Fall 2008	Teaching Assistant for 40438 Electronic Commerce , Computer Engineering Dept, Sharif University of Technology.

Responsibilities included preparing and grading of homework and exams, proposing and evaluating course projects, holding regular problem-solving sessions, maintaining course web page.

ACTIVITIES

July 2011	Attending Two-Day Workshop on Thinking in GPU Programming , High Performance Computing (HPC) Laboratory in Institute for Research in Fundamental Sciences (IPM).
2008	IEEE student member
2008	Member of Computer and Communication societies of IEEE
2003	Honor member of the Student Council of Computer Engineering Department

TECHNICAL SKILLS

Programming	C, C++, Java, MATLAB, OCL, Shell Scripting
Simulation	OMNET++:INET/MANET framework(Network Simulator) Vensim (Social Systems Simulator)
OS	Linux, SCO Unix and MS Windows
Modeling	Rational Software Architect (Model-Driven development with UML)

ENGLISH PROFECIENCY

TOEFL iBT: 101	Reading: 28	Listening: 24	Speaking: 22	Writing: 27
GRE General	Quantitative : 163	Verbal: 146	Analytical Writing: 3.0	

REFERENCES

Thesis Advisor	Prof. Hamid R. Rabiee (email)
Research Advisor	Prof. Mehdi Kargahi (email)
Manager	Mr. MohammedReza Behnam (email), Mr. Vahid Rahimian (email)