



## Seyed Amir Yahyavi Firouz Abadi

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### Areas of interest

- Wireless Sensor Networks
- Ad-Hoc Wireless Networks
- Network Management and Security
- Artificial Intelligence

### Education

**Sep 2006 - Present University of Tehran, Tehran, Iran**

*Master of Information Technology, (Univ. of Tehran is among three most prestigious Universities in Iran)*

- GPA 19.01/20 (3.80/4) – Top Student
- Thesis: “Sleep Scheduling in Wireless Sensor Networks”
- Advisor: Dr. Nasser Yazdani & Dr. Mehdi Dehghan
- Passed Courses:
  - Seminar (on Query Processing in Wireless Sensor Network)
  - Advanced Operating Systems
  - Intelligent Information retrieval
  - Electronic Commerce (Advanced Course)
  - Computer Networks (Advanced Course)
  - Information Technology Management
  - Database Design (Advanced Course)
  - Biological Computing
  - Ad-Hoc Networks

**Sep 2002 – June 2006 Amirkabir University of Technology, Tehran, Iran**  
***Bachelor of Information Technology Engineering, (Amirkabir Univ. of Tech. is among three most prestigious Universities in Iran)***

- GPA: 16.2 /20 (3.24/4). (among top ten students)
- Last Year GPA: 17.75/20
- Two Last Years: 16.88/20
- Thesis: “Fraud Detection in Cellular Mobile Networks”
- Advisor: Dr. Mehdi Dehghan

**Sep 1998 – June 2002 Farzan High School, Tehran, Iran**  
***Diploma of Math and Physics***

- GPA 19.63 from 20, Top Student.

**Publications**

- A. Yahyavi, "Designing a Cross Layer Protocol for Wireless Sensor Networks, A Case Study", ICTP's Workshop on Wireless ICT Solutions, The Abdus Salam International Centre for Theoretical Physics, Feb. - March 2009, Trieste, Italy. (Won Full Scholarship)
- H. Khalili, A. Yahyavi, Farhad Oroumchian, "Web Graph Pre-compression for similarity based algorithms", In Proceedings of Third International Conference on Modeling, Simulation, and Applied Optimization (ICMAO'09), Sharjah, UAE, 2009.
- A. Yahyavi, “Sleep Scheduling In Wireless Sensor Networks”, M.Sc. Thesis, University of Tehran, Tehran, Iran, 2008.
- A. Yahyavi, L. Roostapour, R. Aslanzade, M. Dehghan, N. Yazdani, "Intrusion k-coverage in wireless sensor Networks", In Proceedings of WinSYS2008 International Conference on Wireless Information Networks and Systems, Porto, Portugal, 2008, p41-46.
- A. Yahyavi, H. Khalili, N. Yazdani, "Delay Efficient MAC Protocol for Diffusion Based Routing in Wireless Sensor Networks", In Proceedings of WinSYS2008 International Conference on Wireless Information Networks and Systems, Porto, Portugal, 2008, p88-91.
- A. Yahyavi, L. Roostapour, R. Aslanzade, N. Yazdani, "Dykco, Dynamic k-Coverage in Wireless Sensor Networks", In Proceedings of 2008 IEEE

International Conference on Systems, Man, and Cybernetics, Suntec, Singapore, 2008, p2804-2809.

- S. Nazemi, A. Nasiri, L. Roostapour, A. Yahyavi, M. Dehghan, “SLTP: Scalable Lightweight Time Synchronization Protocol for Wireless Sensor Network,” Lecture Notes in Computer Science, vol. 4864, MSN2007, 2007, p. 536.
- A. Yahyavi, “Fraud Detection in Cellular Mobile Networks”, B.Sc. Thesis, Amirkabir University of Technology, Tehran, Iran, 2006.
- L. Roostapour, A. Yahyavi, “Shahid Beheshti DLN Center a Case Study”, ICTP Workshop on Web enabling technologies for e-Learning, 2005, Trieste, Italy. (Full Scholarship)
- A. Yahyavi, A. Ghoorchian, O. Mirabzadeh, “A Survey on eBanking”, Rayaneh Khabar Journal, 2005. [Persian]

## **Teaching**

### **Fall 2008 Operating Systems Lab**

*Linux Kernel Architecture, Module Programming, ...*

### **Spring 2008 Operating Systems Lab**

*Linux Kernel Architecture, Module Programming, ...*

## **Academic Activities**

### **Fall 2006 – Present Router Lab, University of Tehran**

*Sleep Scheduling in Wireless Sensor Networks*

*Under Dr. N. Yazdani & Dr. M. Dehghan’s Supervision*

- Ongoing research.
- Currently working on Power Aware Real Time Protocols in Wireless Sensor Networks

### **Spring 2007 Database Lab, University of Tehran**

*Compression of the Inverted Index of Web Graph*

*Under Dr. F. Oroumchian’s Supervision*

- Resulted in a Conference Paper in ICMSAO'09.

**Spring 2007 Router Lab, University of Tehran**

*Query Optimization and aggregation in Wireless Sensor Networks*

*Under Dr. N. Yazdani & Dr. M. Dehghan's Supervision*

- The Topic for my “Seminar course”.
- A research proposal to Iran Telecommunication Research Center.
- A detailed survey on Query/Multi-Query processing and aggregation methods in wireless sensor networks.

**Fall 2006 University of Tehran**

*Research on BPR methodologies and a case study of a BPR project in University of Tehran Learning System.*

*Under Dr. F. Taghiyare Supervision*

- Led to a presentation and an analysis document in Farsi.

**March 2005 – September 2006 Amirkabir University of Technology**

*BS Thesis on Fraud Detection Methods in Cellular Mobile Networks*

*Under Dr. M. Dehghan Supervision*

- Use of Elman and LSTM Recurrent Neural Networks in fraudulent usage recognition in cellular mobile networks.
- My BS Thesis.
- Didn't lead to a publication due to unavailability of reliable test data.

**Spring 2006 Amirkabir University of Technology**

*Research on How to Use Multimedia in e-Learning (Content Production)*

*Under Dr. A. Kardan Supervision*

- Led to a guideline document and a presentation in Farsi.

**Fall 2005 Amirkabir University of Technology**

*Research on Decision Making Concepts regarding to Organizational Behavior*

*Under Dr. Barati Supervision*

- Led to a presentation in Farsi.

**Spring 2005 Amirkabir University of Technology**

*Research on Requirement engineering in software engineering specifically in Agile Software Development Methodologies.*

*Under Mr. A. Ajdari Supervision*

- Led to a guideline document and a presentation in Farsi.

**Spring 2005 Amirkabir University of Technology**

*Research on developing an online e-Court system based on complicated judgmental rules and regulations of Iran. Edalat Juridical Complex, Tehran, Iran.*

*Under Mr. S. M. Hosseininejad Supervision*

- Led to a software engineering analysis document and a presentation in Farsi.

## **Selected Academic Projects**

**Fall 2007 E-Commerce (Advanced Course), UT**

**ASP.NET programmer**

- Application design and development for a Electronic Store with inventory management
- Analysis of Business Strategies, Value Chain Models, Advertising, etc

**Spring 2005 Information Technology 2 Course, AUT**

**Design a Management Information Base for SNMP (Pull Model).**

- Creating a visual user interface by QT-Designer in FC3 for an SNMP MIB.

**Fall 2005 Information Technology 1 Course, AUT**

**Design a CMS for Electronic Courts by using web-services**

- Design and Prototype Implementation of a Case Management System for electronic courts by using PHP + NuSOAP.

**Spring 2003 Advanced Programming Course, AUT**

**Design and Implementation of a Multiplayer Game (Age of Empires Prototype)**

- Using C++ and Socket Programming

## **Work Experience**

**Sep 2005 - Dec 2005 Behbahan Cement Company Tehran, Iran.**

**ASP.Net Programmer**

- Designing and Implementation of Behbahan cement Co. Web Site. (ASP.NET, Macromedia Flash, PhotoShop)

**June 2005 - Aug2005** Chista Software Group, Tehran, Iran  
**Software Engineer & ASP.Net Programmer**

- Design and Implementation of a prototype and RFP for Building Industry Information Center. (Rational Rose, Visio, ASP.NET)

**Jan 2005 - March 2005** Oil Industries Engineering & Construction Co., Tehran, Iran  
**Software Project Manager & Developer**

- Personnel Computer Request Management system of OEID (SSADM, C#, SQL Server, ASP.NET)

**June 2004 - Sep 2004** MetaNet AmirKabir, Tehran, Iran  
**Software Analyzer & C++ Programmer**

- Performance Comparison of UNIX Based Firewalls.

## **Honors and Awards**

- Graduation as the first rank among IT graduate students (GPA: 19.01/20) (2008)
- Graduation among top 10 in BS degree (GPA: 16.2/20) (2006)
- Offered Admission to Amirkabir Univ. Of Tech. without national examination
- Ranked 540st in the university entrance examination among around 400,000 students (2002)
- 2001 Reached first level of National Math and Computer Olympiad (2001)

## **Memberships**

- Alumni Association of Faculty of Engineering, University of Tehran (2008 – present)
- IEEE & IEEE Computer Society Student Member (2006-present)
- Alumni Association of Amirkabir University of Technology (2006-present)
- Student executive committee of 1<sup>st</sup> International information and knowledge Technology Conference, Amirkabir University of Technology 2005.
- Member of Amirkabir University of Technology contest, The 2003 ACM-ICPC World Regional Contest, Amirkabir University of Technology, Tehran, Iran, 2003

## Qualifications

### Language

- Farsi (Persian): Native
- TOEFL IBT Oct. 2008: 114/120 (Native). Reading:30/30, Listening: 30/30, Speaking: 24/30, Writing: 30/30
- IELTS 7.5/9: DEC. 2006; Reading: 9/9, Listening: 7/9, Writing: 7/9, Speaking: 7/9
- GRE Oct. 2008: Verbal: 520/800 (Percentile: 66%), Quantitative: 780/800 (Percentile: 90%), Analytical: 3.5/6.0 (Percentile: 20%)
- GRE Oct. 2007: Verbal: 350/800, Quantitative: 800/800, Analytical: 3.5/6.0
- French: Basic

### Software Development

- Process Engineering, methodology tailoring, business software analyzing and designing using Power Designer, Microsoft Visio (SSADM).
- Experience in UML and RUP with Rational Rose suite.
- Some research on Agile Software Methodologies.
- Some research on requirement engineering in software development.

### Windows Programming

- Proficient in C/C++, VC++ / Borland C++ Builder and C# professional programming.
- Fluent in Working with “Code Smith” and “Net Tiers”.
- Experience with Java programming

### Linux Programming

- Kernel Architecture, Kernel Module Programming, ....
- Fluent in Linux shell programming.
- Fluent in X Programming with QT-Designer.
- Fluent in network programming.

### Web Development

- Proficient in ASP.NET programming.
- Fluent in web design with PHP, JavaScript.
- Fluent in working with XML & Web Services. (NuSOAP & ASP.NET)

## Database Design, Analysis and Management

- Fluent in SQL-Server DB Management
- Fluent in MySQL server DB Management.
- Experience in Oracle 9i/10g Server DB Management
- Experience in working with Oracle9i Designer, Power Designer, MySQL Front for Database design and management

## Information Technology

- Familiar with Information Technology Concepts, e-Banking, e-Commerce, e-Learning, Multimedia, Value Chain Models, BPR.
- Familiar with Control Project, I.T. Strategic Planning, Organizational Behavior Management.
- Tools and Environments: MS Project, MS Office.

## References

Will be furnished upon request.

## Hobbies

- Music: Going to classical music concerts, trying to learn how to play guitar.
- Sport: **swimming**, chess, mountain climbing, and computer games.
- Reading: **technical news**, **history**, novels, and politics.
- Other hobbies: watching films and **business related tricks**.