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## *S. Amir Yahyavi Firouz Abadi*

### **Education**

- Ph.D. in Computer Science: 2009 – ...
  - School of Computer Science, McGill University
  - GPA: 4/4 – Passed the PhD comprehensive exam
  - Advisors: Dr. Bettina Kemme
  - Research Topic: P2P Architectures in Massively Multiplayer Online Games
  - Finished coursework and passed PhD comprehensive exam
- M.Sc. in Information Technology : 2006 – 2008
  - ECE Department, University of Tehran - Among top three universities in Iran
  - GPA: 19.00/20
  - Advisors: Dr. Yazdani and Dr. Dehghan
  - Thesis: "Sleep Scheduling in Wireless Sensor Networks"
- B.Sc. in Information Technology: 2002 - 2006
  - CEIT Department, Amirkabir University of Technology (Tehran Polytechnic) - Among top three universities in Iran
  - GPA: 16.2/20
  - Advisor: Dr. Dehghan
  - Thesis: "Profiling & Fraud Detection in Cellular Networks"

### **Honors and Achievements**

- McGill Principal's Graduate Fellowship
- McGill Entrance Scholarship
- McGill Provost Award
- Graduation as the first rank among IT graduate, students University of Tehran(GPA: 19.00/20) (2008)
- Ranked 42nd in the Graduate university entrance examination among more than 8,000 IT & Computer students (2006)
- Graduation among top 10 in BS degree, Amirkabir Univ. of Tech. (GPA: 16.2/20) (2006)
- Offered M.Sc. Admission to Amirkabir Univ. Of Tech. without national examination
- Ranked 540st in the university entrance examination among more than 400,000 students (2002)
- Reached first level of National Math and Computer Olympiad (2001)

### **Research Interests**

- Peer-to-Peer Networks
- MMO Game Engines
- Wireless & Ad-Hoc Networks
- Artificial Intelligence

### **Academic Experiences**

#### **Publications:**

- A. Yahyavi, K. Huguenin, B. Kemme, "Interest Modeling in Games: The Case of Dead Reckoning", *Multimedia Systems Journal*. *Submitted*
- A. Yahyavi, K. Huguenin, B. Kemme, "AntReckoning: Dead Reckoning using Interest Modelin by Pheromones," in *Proceedings of 10th ACM/IEEE International Workshop on Network and Systems Support for Games (NetGames)*, Ottawa, Canada, 2011.
- K. Huguenin, A. Yahyavi, B. Kemme, "Cheat Detection and Prevention in P2P MOGs", in

*Proceedings of 10th ACM/IEEE International Workshop on Network and Systems Support for Games (NetGames), Ottawa, Canada, 2011. (Poster)*

- A. Yahyavi, B. Kemme, "P2P Architectures for Massively Multiplayer Online Games," *ACM Computing Surveys Journal (CSUR), Submitted.*
- 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 (ICSMAO'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. 536-547.
- 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*, Trieste, Italy, 2005. (Full Scholarship)
- A. Yahyavi, A. Ghoorchian, O. Mirabzadeh, "A Survey on eBanking", *Rayaneh Khabar Journal*, 2005. [Persian]

#### **Conferences and workshops:**

- Attended SIGCOMM 2011, Toronto, Canada
- Tomlinson Project in University-Level Science Education (T-PULSE) Graduate Teaching Workshop for Science Graduate Students, January 2010, McGill University, Montreal, Canada
- ICTP's Workshop on Wireless ICT in Developing Countries and 2nd Awareness Workshop on the Relevance of Wireless ICT Solutions, Feb. - March 2009, The Abdus Salam International Centre for Theoretical Physics, Trieste, Italy. (With full Scholarship)
- 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. (Talk)
- Oral Presentation at SMC2008, IEEE International Conference on Systems, Man, and Cybernetics, Oct. 2008, Singapore
- Participated in Fuzzy Systems workshop, Amirkabir University, Oct. 2007, Iran
- Participated in 1<sup>st</sup> International information and knowledge Technology Conference, Amirkabir University of Technology 2003

#### **Memberships:**

- IEEE & IEEE Computer Society Student Member (2006-present)
- Alumni Association of Faculty of Engineering, University of Tehran (2008 – present)
- Alumni Association of Amirkabir University of Technology (2006-present)
- Student executive committee of 1st 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

**Teaching Experience:**

- Fall 2011: McGill University, Distributed Systems (TA)
- Winter 2011: McGill University, Database Systems (TA)
- Spring 2009: University of Tehran, Operating Systems Lab (Course Instructor)
- Fall 2008: University of Tehran, Operating Systems Lab (Course Instructor)
- Spring 2008: University of Tehran, Operating Systems Lab (Course Instructor)

**Research Experience:**

- Fall 2009 – Present: Distributed Information Systems Lab, McGill University
  - Research Assistant
  - Advisor: Dr. Bettina Kemme
  - Topic: Peer-to-Peer Architectures for MMOGs
- Fall 2006 – Spring 2009: Router Laboratory, University of Tehran
  - Research Assistant
  - Advisor: Dr. Yazdani and Dr. Dehghan
  - Wireless Sensor Networks
  - Sleep Scheduling in Wireless Sensor Networks
  - Power Awareness in Real Time Protocols in Wireless Sensor Networks
- Fall 2005 – Summer 2006: Ad-hoc and Wireless Networks Laboratory, Amirkabir Univ. of Tech.
  - Advisor: Dr. Dehghan
  - Application of Artificial Intelligence in detecting Fraudulent Behavior in Cellular Mobile Networks
  - Time Synchronization in Wireless Sensor Networks

**Selected Academic Projects:**

- Winter 2010: Simplified "Time Warp" implementation using Message Passing Interface (MPI).
- Fall 2009: Distributing an application through Middlewares and JAVA RMI. Distributed Systems Course.
- Fall 2009: A reusable software fault tolerance library in Java. Software Fault Tolerance Course.
- Spring 2006: Application design and development for a Electronic Store with inventory management, using ASP.NET and Microsoft SQL server
- Spring 2006: Implementation of a Visual Management Information Base for SNMP Protocol (Pull Model), using C++ and QT-Designer in Fedora Core.
- Fall 2005: Design and Prototype Implementation of a Case Management System for Courts Based on Web Services, Using PHP and NuSOAP.
- Spring 2003, Design and Implementation of a Multiplayer Game (Age of Empires Prototype), Using C++ and Socket Programming

**Work Experiences**

- ASP.NET programmer, Behbahan Cement Company (Sep 2005 -Dec 2005)
- Software expert, Chista Software Group (Summer 2005)
- Web Developer, Oil Industries and Construction Company (Jan 2005, March 2005)
- C++ Programmer & Software Analyst, Metanet Amirkabir Company (Summer 2004)

**Language**

- TOEFL IBT Oct. 2008: 114/120 (Native). Reading:30/30, Listening: 30/30, Speaking: 24/30, Writing: 30/30

**Proficiency**

- 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: moderate

**Computer Skills**

- Programming & Scripting: C++, Java (+RMI), Python, C#, Linux Shell programming, .Net Framework
- Database Systems: DB2, Oracle, Microsoft SQL Server, MySQL
- Web development: PHP, ASP.NET, JavaScript, HTML, CSS
- Simulation: NS, PeerSim, J-Sim, TOSSIM, Message passing interface (MPI)
- Operating systems: Windows , Linux, Mac (Experience with Linux Kernel and Kernel module programming)

*References will be furnished upon request*