

# Hessameddin Akhlaghpour

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## RESEARCH INTERESTS:

- **Computational Neuroscience:** recurrent neural networks, neural coding, memory and synaptic plasticity, time perception
- **Theoretical Computer Science:** Graph Theory, Algorithmic Game Theory, Combinatorial Optimization
- **Artificial Intelligence:** Pattern Recognition, Machine Learning

## EDUCATION:

**Sep. 2007 – Jun. 2011** B.Sc., Computer Engineering, Sharif University of Technology  
(expected) **current GPA:** 17.34/20.0

**Sep. 2003 – Jun. 2007** Diploma, Allameh Helli High School  
*Affiliated with the National Organization for Development of Exceptional Talents (NODET)*

## AWARDS & HONORS:

- Feb. 2010** **36<sup>th</sup> Place** team in ACM ICPC World Finals, Harbin, China
- Nov. 2009** **Second Place** team in Asia Regional Contest, ACM ICPC, West Asia Site, Tehran, Iran
- Dec. 2008** **Third Place** team in Asia Regional Contest, ACM ICPC, West Asia Site, Tehran, Iran
- Nov. 2007** **First Place** team in Helli-Net annual programming competition, Tehran, Iran
- May. 2007** Awarding **Outstanding Student Certificate** by Sharif University President
- Aug. 2007** **Silver Medal** in International Olympiad in Informatics (IOI), Zagreb, Croatia
- Mar. 2007** **Gold Medal** in Iranian National Olympiad in Informatics (INOI), Tehran, Iran
- Aug. 2006** **Bronze Medal** in International Olympiad in Informatics (IOI), Merida, Mexico
- Mar. 2006** **Gold Medal** in Iranian National Olympiad in Informatics (INOI), Tehran, Iran

## PUBLICATIONS:

- **Feature-dependant Saccadic Suppression of Neurons in Visual Cortex**, Brittany E. Burrows, Marc Zirnsak, Hessameddin Akhlaghpour, Tirin Moore [*journal publication - currently in preperation*]
- **Optimal Iterative Pricing over Social Networks**, Hessameddin Akhlaghpour, Mohammad Ghodsi, Nima Haghpanah, Hamid Mahini, Vahab Mirrokni, Afshin Nikzad [*to appear in proceedings of the 6<sup>th</sup> Workshop on Internet & Network Economics (WINE 2010)*]

## RESEARCH EXPERIENCE:

- **Summer Research Fellow at Moore's Lab, Stanford University** (Summer 2010)  
Mentor: Dr. Tirin Moore  
Worked on:
  - design and implementation of spike train decoding algorithms based on Bayesian inference
  - implementation of abstract models of the visual cortex to explain electro-physiology observations.
- **Undergraduate Researcher at School of Cognitive Sciences, Institute for Research in Fundamental Science (IPM), Tehran** (Part time, since September 2009)  
Mentor: Abdolhossein Abbasian  
Worked on:
  - Reproducing and exploring results of various papers
  - Specifically worked on chaotic recurrent neural networks, e.g. Sussillo & Abbott (2009)

#### TEACHING & WORK EXPERIENCE:

- Over 100 hours of teaching experience
  - Teaching Assistant (TA), Sharif University of Technology
    - *Formal Languages and Automata Theory*, Fall 2010
    - *Computer Programming Fundamentals*, Fall 2010
  - Teaching courses related to Computer Science at various high schools  
*This includes Designing Algorithms, Flash Actionscript, and C++ programming*
  - Teaching at Iranian National Olympiad in Informatics (INOI) preparation camps, 2008 – present
- Co-Director of the Helli-Net annual programming competition - Nov. 2008
- Problem Designer of the Iranian National Olympiad in Informatics (INOI) finals – Feb. 2008  
*(This annual contest is meant to select the Iranian national team members for the International Olympiad in Informatics (IOI) competition).*

#### TEST SCORES:

- **GRE Subject – Computer Science** (Oct. 2010): [870/900] (percentage below: 98%)
- **TOEFL IBT** (Aug. 2010): [115/120]  
Reading [30/30], Listening [30/30], Speaking [27/30], Writing [28/30]

#### TECHNICAL SKILLS:

- Proficient at programming in C++, Java, Matlab, and Flash Actionscript
- Familiar with PHP, HTML, and Prolog

#### ACTIVITIES:

- **President of of Student Scientific Chapter (SSC)**, Computer Engineering Department, Sharif University, Spring 2009
- **Committee Member of Student Scientific Chapter (SSC)**, Computer Engineering Department, Sharif University, Fall 2008
- **Notable contributor** to Sharif University's renowned magazine, "*Noghte Sar-e Khat*", with three long articles and one long interview, all related to social and cultural issues.

- References available upon request -