

# Shayan Rezvankhah

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## Educational Status

- [2012-2014]     **M.Sc. in Computer Science**  
McGill University, Montreal, Quebec, Canada. GPA: **3.70/4**
- [2008-2012]    **B.Sc. in Information Technology (Engineering)**  
School of Electrical and Computer Engineering, University of Tehran, Tehran, Iran  
GPA: **3.71/4** (17.37/20)
- [2007]           **Diploma in Mathematics and Physics from NODET**  
(National Organization for Development of Exceptional Talents)  
Allameh Helli High School, Tehran, Iran. GPA: **4/4** (19.09/20)
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## Awards and Honors

- **Ranked 1st** among the Information Technology students of the University of Tehran, 2009 and 2011
  - **Gold Medal** awarded for new invention , Germany IENA 2006 and Korea ISIE 2006
  - Acceptance into NODET (**exceptional talents**) high school, selected to study more advanced subjects
  - ARCA special award for **young inventor**, Union of Croatian innovators, 2006
  - Member of University of Tehran **ACM-ICPC** representative **team** in regional contests 2009 and 2010.
  - Received **full scholarship** of undergraduate program, University of Tehran, [2008-present].
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## Publications

**S. Rezvankhah**, A. A. Bagherzadeh, H. Moradi, B. Nadjar Araabi. "A Real-time Velocity Estimation using Motion Blur in Air Hockey," IEEE ROBIO 2012. Accepted, yet to be published.

A.A. Bagherzadeh, **S. Rezvankhah**, S. Farahi, K. Khalvati, P. Mousavi, A. Dehghan, B. Ghaderi, H. Moradi. "A Multi-Agent Architecture for Tracking User Interactions in Browser-based Games," IEEE DIGITEL 2012.

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## Patents

S. Rezvankhah. "Using laser pointer instead of computer mouse as input." Iran Patent 36320, Sep. 20. 2006.

Using a laser pointer instead of a computer mouse is achieved by having a webcam face the projector screen (or monitor). By capturing the video and finding the relative coordinates of the laser pointer on the screen and performing perspective transformations and tracking techniques we simulate the appropriate mouse functions. Laser pointers are much more user friendly when using a Projector screen.

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## Fields of Interest

- Computer graphics, game development and design: AI, particle system and fluid simulations
- Computer vision: object and gesture recognition, tracking, 3D vision (e.g. KINECT)
- Virtual reality and medical appliances
- Machine Learning

## Technical Skills

- **Programming skills:**
    - **Expert:** C++/C, JavaScript/Ajax
    - **Intermediate:** OpenGL, KINECT SDK , OpenCV, C#, HTML5, Java, PHP, MATLAB, ASP.net, MySQL,
    - **Beginner:** Cg Shading Language, NVIDIA CUDA, PhysX, Verilog HDL, Visual Basic
  - **Unity game engine**
  - Object oriented programming(OOP), UML
  - PhoneGap: app development for mobile devices (android, iPhone, etc.)
  - Blender(Beginner), Adobe Photoshop(Beginner), Audacity(Beginner), Latex(Intermediate)
  - Linux kernel module developing, web development, Drupal, Moodle module development and 3D soccer simulation
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## Teaching Experience

- **Head Teaching Assistant** of “Design and Analysis of Algorithms”, Fall 2011 and T.A. in Spring 2011
  - Teaching Assistant of “Database Systems”, Spring 2011
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## Researches and Projects

- M.Sc. thesis on “Depth Discrimination in Cluttered Scenes Using Fishtank **Virtual Reality**”
  - Real time video transformation using CUDA for patients with brain injuries in visual area
  - Member of **Advanced Robotics** Lab in UT
    - **environment modeling** and **path finding** with KINECT for a robot
    - B.Sc. Project: A Real-time **Velocity Estimation using Motion Blur** in Air Hockey
  - Multiple light source position estimation from shading using **KINECT**
  - Self-Reconfiguration of Modular Robots using graph algorithms
  - Optical Character Recognition for Persian language
  - An innovative scalable multi-view video coding method
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## Languages and Test Scores

- English:
  - TOEFL PBT score: **663/677** (Section1 65, Section2 68, Section3 66, TWE 3), IELTS 7.5/9
  - GRE Revised score: **156/170**-77%(Verbal), **170/170**-99%(Quantitative) , 3-11%(Analytical)
- Other: Native Persian, Fluent Azari in Turkish, Beginner in Arabic