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M.Sc. Electronics Engineering

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## ➤ Academic Honors and Awards

- ✓ 1<sup>st</sup> place in Khwarizmi Youth Festival, 2010
- ✓ 2<sup>nd</sup> place in Khwarizmi National Competition in the field of Surgeon Robot, 2009
- ✓ Gold Medal Award of the Innovation and Prosperity Festival, 2008
- ✓ Gold Medal (1<sup>st</sup> place award) in The 6<sup>th</sup> “Iranian Intelligent Mice Robotic Contest” Shooting Robots league on July 7-9, 2008
- ✓ Members of the National Elite Foundation, since 2009
- ✓ Referee of Babol's Robotics Tournament, 2011
- ✓ Bronze Medal Award of the Innovation and Prosperity Festival, 2007
- ✓ Members of the Association of Iranian Inventors, 2007
- ✓ Gifted And Talented Students In UAST By Department Of Education, 2008
- ✓ Elected as top researcher in province by governor, 2008
- ✓ Association of Iranian Researchers, 2007
- ✓ Special Award Winner for Smallest size robot in the Iranian Students Line Tracking Robotic Contest(NIT) on March , 2007

## ➤ Professional Activities

- ✓ Referee Committee member of 2<sup>st</sup> International robotic competition pishgamanrobo, 5 March – 7 March, 2015, Rasht, Iran.
- ✓ Referee Committee member of 1<sup>st</sup> International robotic competition **FeizCup**, 26 October - 1 March, 2014, Kashan, Iran.
- ✓ Secretary of the Scientific Committee on Tehran Robotics Tournament , Tehran, Iran 2011
- ✓ Referee of the National SamaCup competitions, Shiraz Iran, 2011
- ✓ Judging for Fighter Robots league, national robotic competition (MUST Cup), Mazandaran University of Science and Technology, Babol, Mazandaran, Iran. 27-30 November 2011.
- ✓ Head of Technical and Scientific Committee, MineSweeper Robots, IRI National Robotic Competitions and judging for Demo robots League, Tehran, Iran, 19-21 October, 2011.
- ✓ Technical Director of the shooter robot field in Sabzevar Robotics Competition
- ✓ Sabzevar Robotics Tournament's Secretary of the Referee Committee Sabzevar, Iran 2007
- ✓ Referee for the “7th Robofire” (Fire Fighting Robots Contest) national robotics competitions, April, 2009, Babol, Mazandaran, Iran.
- ✓ Judging for the “1<sup>st</sup> Khwarizmi Young Festival Robotics Competitions” in Iran December, 2008, Asr e Enghelab Complex, Tehran, Iran.
- ✓ Co-Chair of the “6<sup>th</sup> Iranian Students Robotic Contest (NIT)”, April, 2008, Babol, Mazandaran, Iran.
- ✓ Teaching Robot Design & Setup (Elementary & Advanced)
- ✓ Member of management committee & technical committee of several robotics competitions, (2002-2013)

## ➤ Scientific Societies Membership:

- ✓ Member of the **Association of Iranian Inventors**
- ✓ Member of the **National Elite Foundation**
- ✓ Member of the **Institute of Electrical and Electronics Engineers (IEEE)**, IEEE Robotics and Automation Society
- ✓ Member of Iranian **Society of Mechatronics Engineers**
- ✓ Member of Iranian **Organization for Engineering Order of Building**
- ✓ Member of Iranian **Association of Electrical and Electronics Engineers**
- ✓ **Laboratory of Robotic Research**, Department of *Electrical* and Computer Engineering, Nooshirvani Institute of Technology

## ➤ Computer Skills

- ✓ Expert in Matlab Programming & Simulation
- ✓ Proficient in Altium Designer Summer( PROTEL), Advanced Design System, Dreamweaver
- ✓ Programming Languages: Delphi , C++, Assembly, Visual Basic, Pascal, VB.Net  
Familiar with Android App Development (MIT App Inventor, ADT for Eclipse IDE).
- ✓ Design and Programming of Microcontroller-based systems  
Hardware: AVR families, PIC families, 8051,  
Language: Assembly, C, Basic  
Software: Bascom, Codevision  
Proteus Simulation
- ✓ Familiar with PHP, JavaScript, HTML, Verilog HDL, SQL.
- ✓ Computer Aided Design (CAD), Solid works, Catia, AutoCAD.
- ✓ Computer Aided Manufacturing (CAM), SGears, CNC Programming, Industrial Robotic Programming.
- ✓ Computer Graphics, Finite Element Analysis, Optimization in Engineering Design, Design of Hydraulic and Pneumatic Systems (ME0507), ANSYS Mechanical, Structural, Fluid Flow, CFD, Fluent, Multiphase Systems, Motion Analyze.
- ✓ Numerical Simulations for Mechanical Engineers, Visual Programming and its applications, Advanced Finite Element Analysis (Advanced Mechanism Design)
- ✓ Composite Materials and Mechanics, Advanced Strength of Material simulations.

## ➤ Some of Member's Publications

- ✓ **"Accelerate the Face Detection Optimization with Edge Detection and the Discrete Cosine Transform (DCT)."** International Journal of Computer Applications 82 (2013).
- ✓ **"Driver's Head Pose Estimation Using a Hierarchical Classification on an Effective Feature Space"**, *Proceedings of the Institution of Mechanical Engineers, Part D: Journal of Automobile Engineering*,, vol. 226, no. 9, pp. 1233-1242, September 2012
- ✓ **"A Novel Method for Optimum Electrical Energy Harvesting from Wind Turbines: A Space-Time Model for Wind Farm by Neuro-Fuzzy Strategy."** Journal of Control 6.3 (2012).
- ✓ **"Force Distribution Differences in L&R Fore/Hind foot in Patients with Mechanical LBP during Standing"**, *5<sup>th</sup> Annual Iranian Congress of Rheumatology Association & the First International Rheumatology Congress of Iran*, 23 - 25 November, 2011. *Iranian Journal of Allergy, Asthma and Immunology*, Volume 10, Supplement 8, p. 78, December, 2011

- ✓ “**A New Head Pose Estimating Algorithm Based on a Novel Feature Space for Driver Assistant Systems**”, *IEEE International Conference on Signal & Image Processing Applications (ICSIPA 2011)*, November 16-18, Kuala Lumpur, Malaysia, (2011). pp. 180 - 185
- ✓ “**Common Techniques and Bio-Inspired Hierarchical Architecture for Automatic Farsi Handwritten Word Recognition Systems**”, *International Journal of Hybrid Information Technology (IJHIT)*, Vol. 4 No. 3, July, pp. 1-14, (2011).
- ✓ “**A New Combination Method Based on Different Representation of Data**”, *International Journal of Hybrid Information Technology (IJHIT)*, Vol. 4 No. 3, July, pp. 51-60, (2011).
- ✓ “**A Robust Head Pose Tracking and Estimating Approach for Driver Assistant System**”, *IEEE International Conference on Vehicular Electronics and Safety*, July 10-12, Beijing, China, pp. 180-186, (2011).
- ✓ “**Feasibility of Using Nano Textiles for Hypothermia or Applied to a Part of the Body for Warmth**”, *2nd National and 1st International Congress on Cellular and Molecular Advances in Non-Contagious Diseases*, May 16-18, 2011, Babol, Mazandaran, Iran. *Cell Journal (Yakhteh)*, Volume 13, p. 40, spring 2011.
- ✓ “**An Enhanced Approach In Motion Detection Of Human Movements**”, *17<sup>th</sup> International Conference on Engineering Mechanics (EM 2011)*, Svratka, Czech Republic, May 9-12, pp. 163-166, (2011).
- ✓ “**Expression Invariant Face Recognition Using Biologically Inspired Features from Visual Cortex Mechanism**”. *Australian Journal of Intelligent Information Processing Systems (AJIIPS)*, Vol. 12, No. 4, pp. 25-29, (2010)

### ➤ **Some of Member’s Recorded Patents:**

- ✓ Designing a new capacitive touch sensor, 2013
- ✓ Automatic system of combined press unit and making ring gaskets, 2012
- ✓ Graphic communication of AVR microcontrollers with user, 2008
- ✓ Durability testing of the electric car window glass lift (intelligent), 2004
- ✓ Visual control of companies or institutes via telephone line, 2005
- ✓ CNC dividing machine, 2007
- ✓ Fault-Tolerant Control of Wind Turbines Based on fuzzy controller, 2013
- ✓ New Mechanism for Rotary Internal Combustion Diesel Engines, 2012
- ✓ Small Printer, capable of printing paper in unlimited size, 2008
- ✓ A new blood cell counter set, 2008

### ➤ **A Selection of Researches and Projects which worked by Member**

- ✓ Sound processing of musical water fountains, 2009
- ✓ Designing and making a robot with the capability of automatic search and track record – artificial intelligence genius (called space probe robot), 2013
- ✓ Separating different products in a factory through image processing, 2007
- ✓ Sound processing of musical water fountains, 2009
- ✓ Processing brain signals, 2006
- ✓ Correcting multiple-choice questions through image processing, 2003
- ✓ Calculating the area of irregular objects through image processing, 2013
- ✓ Puncturing printed circuit boards through image processing, 2008
- ✓ Making a text writing system through a phone line (for the deaf), 2005
- ✓ Intelligent Control of Vehicle using image processing – vehicle without a driver – Local GPS, 2005
- ✓ DC motor control using PC, 2006-2007

- ✓ Wireless control and monitoring of water engines and centers with a range of 40 km in agricultural systems, 2003
- ✓ Control and monitoring of temperature through a phone line, 2007
- ✓ Identification of numbers through image processing, 2006
- ✓ Barcode Reader through image processing, 2007
- ✓ Face Recognition, 2013
- ✓ High Speed pick Robot System using magnetic joint
- ✓ Vehicle electromagnetic suspension system, 2013
- ✓ Co-worker robotic arm. Human-Machine Interaction, human-friendly design, 2012
- ✓ Intelligent Control of Vehicle using image processing – vehicle without a driver, 2011
- ✓ High Speed pick Robot System using magnetic joint, 2013

## ➤ **References**

References available upon request.