

# Rasoul Sadeghian

## *Curriculum vitae*

📍 Human and Robot Interaction Laboratory,  
Faculty of New Sciences and Technologies,  
University of Tehran  
Amir Abad, North Kargar Street, Tehran,  
Iran  
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☎ +98 (912) 2213408  
✉ rasoul.sadeghian.1987@ieee.org

- ★ Heuristic algorithm design
- ★ Proteus
- ★ NXT LEGO
- ★ Arduino
- ★ Innovation methods
- ★ Linear Control
- ★ Advanced Engineering Mathematics

## RESEARCH INTERESTS

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- ★ Visual servoing
- ★ Kinematic and dynamic of robotic system
- ★ Control and system identification
- ★ Aerial Robots
- ★ Fuzzy control
- ★ Motion planning
- ★ Mobile robots
- ★ Artificial intelligence
- ★ Autonomous navigation
- ★ Factory and warehouse automation

## EDUCATION

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2012 – 2015

### Master of Science

### Mechatronics Engineering

Qazvin Branch, Islamic Azad University, Qazvin, Iran (QIAU)

Thesis title:

Design, Analysis and Development of a Spherical Mobile Robot and Path Planning Based on Visual Servoing Concepts

**GPA: 17.56/20**

2007 – 2012

### Bachelor of Science

### Applied mathematics

Vali E Asr University (VRU)

Thesis title:

Increasing the security of data by using of hypergroups and designing an interface with C#

**GPA: 12.93/20**

## TEACHING SKILL

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- ★ MSC ADAMS
- ★ MATLAB(Simmechanics) and coding
- ★ Catia
- ★ Solidworks
- ★ Fuzzy logic control
- ★ C, C++

## SELECTED COURSES

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- ★ MSc Thesis(20/20)
- ★ MSc Seminar(20/20)
- ★ Advanced Engineering Mathematics (20/20)
- ★ Mechatronics 1(19/20)
- ★ Mechatronics 2(17.5/20)
- ★ Industrial Automation (17.5/20)
- ★ Modern Control (17/20)
- ★ Sensors & Calibration (16.75/20)
- ★ Haptic (13.25/20)

## PATENT

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★ **A novel mechanism which can protect the elevator box and passengers when the earthquakes or the other natural disasters happening.**

Iran Patent 51041 Issued August 2, 2008.

★ **A novel airplane rescue mechanism which is separating the passengers salon from the main body of airplane.**

Iran Patent 51395 Issued August 9, 2008.

★ **Autonomous reboot anti-frost device which can used to control the farm important parameters and send it with a text message to the farmer.**

Iran Patent 71156 Issued August 20, 2011.

## JOURNAL PAPERS

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▷ Rasoul Sadeghian and M.Tale Masouleh "An Experimental Study on Controller Tuning Based on Optimization Algorithms on a Novel Spherical Rolling Robot", accepted in Journal of Mechanical Science and Technology, 2016.

▷ Rasoul Sadeghian and M.Tale Masouleh "ROBUST ADAPTIVE CONTROLLER DESIGN AND SIMULATION ON A TWO-WHEELED SELF-BALANCING ROBOT", to be submitted in Scientia Iranica journal , 2016.

## CONFERENCES

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▷ Rasoul Sadeghian and M.Tale Masouleh "An Experimental Study on the PID and Fuzzy-PID Controllers on a Designed Two-Wheeled Self-Balancing Autonomous Robot", The 4th International Conference on Control, Instrumentation and Automation (ICCIA), 2016.

▷ Rasoul Sadeghian, H.Bayani and M.Tale Masouleh "Design of an Adaptive Sliding Mode Controller for a Novel Spherical Rolling Robot", The 4th RSI/ISM International Conference on Robotics and Mechatronics (ICRoM), 2015.

▷ H.Bayani, Rasoul Sadeghian and M.Tale Masouleh "On the Control of Planar Cable-driven Parallel Robot Via Classic Controllers and Tuning with Intelligent Algorithms", The 4th RSI/ISM International Conference on Robotics and Mechatronics (ICRoM), 2015.

▷ Mohammad Safary Taze Kand, Rasoul Sadeghian and M.Tale Masouleh "Design, Analysis and Construction of a Novel Flexible Rover Robot", The 4th RSI/ISM International Conference on Robotics and Mechatronics (ICRoM), 2015. ▷ Rasoul Sadeghian

and M.Tale Masouleh "Lyapunov Based PID in Model Reference Adaptive Control For a Spherical Rolling Robot", to be submitted in the 5th RSI/ISM International Conference on Robotics and Mechatronics (ICRoM), 2016. ▷ Ali Ravari, Rasoul Sadeghian

and M.Tale Masouleh "Design and Construct of a Mobile Robot for Implementing Obstacle Avoidance Techniques Based on Vision", to be submitted in the 5th RSI/ISM International Conference on Robotics and Mechatronics (ICRoM), 2016.

## PROJECTS

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2016 **Design & build an jumper robot.**  
TAAR Lab at UT (joint work).

2015 **Design & build an amphibious flexible robot.**  
TAAR Lab at UT (joint work).

2015 **Built a quadrotor.**  
TAAR Lab at university of Tehran (UT)

2014 **Design build a self balancing robot.**  
TAAR Lab at university of Tehran.

2013 **Design & build an amphibious spherical robot.**  
QIAU (joint work)

2013 **Design an aluminum foil rolling machine.**  
Aluminium Hezare Sevom Milad Co.

2012 **Design & build a wheeled manipulator robot.**  
VRU (joint work)

2012 **Design & build a robot serial manipulator.**  
VRU (joint work)

2011 **Design a firefighter robot.**  
VRU (joint work)

2011 **Building of R/C Model helicopter.**  
VRU (joint work)

2011 **Building of R/C Model submarine.**  
VRU (joint work)

2011 **Building of R/C Model ROV robot.**  
VRU (joint work)

2010 **Design & build a line following robot.**  
VRU (joint work)

## HONORS & AWARDS

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▷ Leader of BVRT.masters robotic team in IranOpen2012 robotic championship, 2012.

▷ Top researcher in Faculty of Mathematics at the VRU, 2011.

▷ Ranked 3<sup>rd</sup> in national Championship of zanzan in the field of firefighting robot, 2011.

▷ Member of Iranian Inventors Association.

▷ Member of the Robotics Society of Iran(RISI).

▷ Member of IEEE.

▷ Pass the Robotic Hardware 2 in Tehran Institute of Technology with score (100/100)

▷ Member of ICROM 2015& 2016 reviewers team

## LANGUAGES

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PERSIAN Native

ENGLISH Excellent

## SOFTWARE SKILLS

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PROGRAMING C, C++, C# , Matlab, Maple, OpenCV, Mathematica, ROS.

CAD Catia, Solidworks, Ansys, Siemens NX MSC.ADAMS, Webots, Protel, Proteus.

OTHER Linux,  $\LaTeX$ .

## WORKING EXPERIENCES

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\* **Teacher of courses for training robotic researchers (CATIA-MSC ADAMS-Controller design) 2016**  
July 2016 - Present.

\* **Robotics Engineer as Research assistant at TaarLab (UT).**  
January 2013 - Present.

\* **R&D Manager at ALUMINIUM HEZARE SEVOM MILAD CO.**  
August 2013 - March 2014.

\* **Robotics teacher at Tehran Institute of Technology(Rafsanjan branch).**  
July 2012 - September 2012

\* **Teacher of Robotics Science at VRU.**  
October 2009 - May 2012

## REFERENCES

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\* Prof. Mehdi Tale Masouleh, University of Tehran, Iran.

Email:m.t.masouleh@ut.ac.ir

\* Prof. Alireza Mohammad Shahri, Iran University of Science and Technology, Tehran, Iran.

Email:shahri@iut.ac.ir

\* Prof. Mohammad Reza Jahedmotlagh, Iran University of Science and Technology, Tehran, Iran.

Email:jahed@iut.ac.ir

## HOBBIES

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Play chess, mountain climbing, reading scientific article.