



Aref Moqadam Mehr

Nao biped Lab., Mechatronics
Research Laboratories (MRL), Qazvin
Azad University, Iran

(+98) 281 366 5272 - (4042, 4230)
(+98) 935 395 9149 (Mobile)
Aref.Moqadam@gmail.com
mrl-spl.ir/~moqadam

As of January - 2015

EDUCATION

Qazvin Islamic Azad University (QIAU)

Bachelors Degree of Science in Software Engineering -- 2011-2015

Ranked among top 6 in entrance exam in more than 500 participants.

- Current GPA: 17/20
- Thesis: 3D Image Understanding

Shahid Soltani High School (Part of NODET¹)

Diploma in Mathematics and Physics Discipline - 2004-2011

- GPA: 16.60/20

WORKING EXPERIENCE

Head Member of Distributed Systems Lab.

QIAU -- Since 2013

Supervisor of Modeling and Vision Group of Nao² biped Lab.

QIAU -- Since 2012

PROJECTS

QGrid Project

Distributed System Lab. QIAU -- 2014

QGrid is a grid computing project based on BOINC³ platform and currently producing 10 TFlops computational power.

Dynamic Head Motion and Active Vision

Modeling Group, Nao biped Lab., QIAU -- 2014

Calculation of the best direction to go / look based on previous observations and a model of the world by probabilistic approaches like particle filter.

Modeling the Environment for Nao Robot

Modeling Group, Nao biped Lab., QIAU -- 2013

Estimation, Filtering and Tracking position and behavior of detected objects.

Semi-Automatic Sensor Calibration

Vision Group, Nao biped Lab., QIAU -- 2012

Calibration of camera and gyro sensor displacement using Gauss-Newton optimization method. Calibrations are used for determining the objects position.

Vision Module for Nao Robot

Vision Group, Nao biped Lab., QIAU -- 2012

Object Detection using data analysis and Image Processing for a VGA camera. Implemented with C++ on a weak processor for real-time use.

Smart Mirror Project⁴

Industrial Project -- Ongoing Project

Warn the driver when there is a car in his blind spots. Adjust the mirrors for the driver by detecting and tracking the position of his eyes with a camera.

Autonomous Parallel Parking

Industrial Project

A module for cars to let them park autonomously in almost any parking.

Optical Character Recognizer (OCR)

¹ National Organization for Development of Exceptional Talents

² Aldebaran Nao Robot : <http://www.aldebaran.com/en/humanoid-robot/nao-robot>

³ Berkeley Open Infrastructure for Network Computing

⁴ Cars side mirrors. This feature is already available by some of world large car manufacturer.

MATLAB based project -- 2013

Utilizing Neural Network learning methods to scan image and extract texts.

HONORS AND AWARDS

Recipient of Scholarship from QIAU

Since 2011.

Make it up to Quarter Final in World RoboCup Champion

Standard Platform League, João Pessoa, 2014

3rd place of RoboCup German Open

Standard Platform League, Magdeburg, 2014.

1st place of RoboCup Iran Open

Standard Platform League, Tehran, 2012, 2013, 2014.

Participating to World RoboCup Champion

Standard Platform League, since 2012.

Participating to RoboCup Iran Open

Junior Secondary Soccer League, Tehran, 2010.

Water Amount Controlling Unit (TAC)

One of the selected Proposal over the province - 2005

PUBLICATIONS

- **Aref Moqadam Mehr**, Novin Shahrودي. **A Debugger Tool for Vision on Humanoid Framework**. Iran Open 2013 5th International Symposium (RIOS13) - IEEE indexed. April - 2013
- Majid Lashgarian, Mohammad Shafiei R. N., Mohammad Ali Zakeri Harandi, **Aref Moqadam Mehr**, et al. , **MRL-SPL 2013 Team Description Paper** (TDP), RoboCup 2013 Eindhoven, Netherlands.
- Ehsan Hashemi, Maani Ghaffari Jadidi, Mostafa Yaghobi, **Aref Moqadam Mehr**, et al. , **MRL-SPL Code Release and Team Report** 2012

RESEARCH INTERESTS

I am interested in **computer vision**, **augmented reality**, **probabilistic robotics** and **control system**. I am also planning to get involved in **Natural Language Processing (NLP)** especially for usage in new generation of **operating systems**.

TALKS

Scrum Software Engineering

Qazvin Islamic Azad University - 2014

Active Vision and Head motion

Iran Open Innovation Challenge - 2014

Object Oriented Analysis and Design

Qazvin Islamic Azad University - 2014

A Debugger Tool for Vision on Humanoid Framework

Iran Open Symposium - 2013

SKILLS

- **Natural Languages:** Persian (First Language), English (Fluent), Spanish, German(Beginner), Türkish (Beginner)
- **Programming Languages:** C/C++ (expert), MATLAB (expert), PHP, C#, Java, Python, Shell Script, BASIC (VB.NET), JavaScript, HTML5 and CSS3, Make and QMake, Assembly (Intel x86), MySQL, XML

- **Technologies & Libraries:** Google Protobuf, Video4Linux (V4L), BOINC platform, OpenCL, openMP, openGL
- **Operating System:** Linux, Windows
- **SDK/API:** BOINC, Qt SDK, .NET, Android SDK,
- **IDE/Applications:** MATLAB, GDB, Subversion, Git, Eclipse, Qt Creator, Visual Studio, Vim, 3Ds Max

REFERENCES

Upon Request