Farshad Samadi Kohnehshahri

Ph.D. Student & Researcher Fellow in Bioengineering

University of Bologna

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Education

Ph.D. Student in Bioengineering
University of Bologna, Italy

Nov 2022 – Present

Research Topic:

Identification of Patterns and Biomarkers in the Gait of Patients with Neurological Pathologies using Classical Techniques and Machine Learning

Supervisor: Prof. Rita Stagni

Co-Supervisor: Dr. Andrea Merlo

M.Sc. In Electrical Engineering (Control)
University of Tabriz, Iran

Sep 2010 – Jan 2013

Research Topic:

Real-Time Ankle Adjustment and Gait Generation of Humanoid Robot in Rough Terrains

Supervisor: Prof. S. Khanmohammadi

Co-Advisor: Prof. A. R. Ghiasi

B.Sc. in Electronic Engineering
Urmia University, Iran

Sep 2005- Sep 2009

Research Topic:

PID control of AC motor using PLC and Inverter

Supervisor: Prof. D. Nazarpour

Research Interests

- Rehabilitation
- Gait and Motion Analysis
- Machine Learning Algorithms
- Pattern Generation for Humanoid Robots
- Human-Robot Interacting Systems

Teaching Assistantship

University of Tabriz
Jan 2012- Jan 2013- Tabriz, Iran

Achievements/Tasks

- Linear Control Systems *Teacher: Dr. A. R Ghiasi*
- Robotics *Teacher: Dr. A. R Ghiasi*
- Engineering Math *Teacher: Dr. M. Badamchizadeh*
- Linear Control Systems *Teacher: Dr. S. Ghaemi*

Work Experiences

Milad In Hospital

08/2016 - 11/2022, *Urmia, Iran*
International Medical Center

Achievements/Tasks

- Involving in AI and Robotic systems
- Rehabilitation systems
- Research on application of AI methods in medical procedures
- Preventive Maintenance for mechatronics, and Medical Systems
- Development of maintenance policies and guidelines
- Root Cause Analysis for system failures
- Troubleshooting of mechatronics and electrical systems
- Planning periodic tests and evaluation of systems
- Identification of critical failures for systems and proposing preventive methods
- Documentation and analysis of the outcome of the applied maintenance system
- Designing electrical and mechatronic systems
- Design and Integration of control systems for ensuring high reliability and safety

Pakdis Co.

02/2016 - 08/2016, *Urmia, Iran*
one of the leading companies in providing different kinds of fruit juice and beverages in Iran

Achievements/Tasks

- Maintenance of electrical and instrumentation systems
- Design and Integration of sensors and actuators with control systems in product lines
- Troubleshooting of mechatronics and electrical systems
- Programming and troubleshooting of PLCs
- Root Cause Analysis for failures
- Investigation of the integration of control schemes in mechatronic systems
- Developing precision systems to perform reliability and safety in the product lines

Fazar Tajhiz Jam Co.

03/2015 - 02/2016, *Tehran, Iran*

one of the main suppliers of measurement equipment in the petrochemical industry such as Gas Analyzers, Gas & Liquid Flowmeters

Achievements/Tasks

- Design and Implementation of gas analyzing systems including control and Instrumentation integration
- Test and calibration of sensory measuring equipment
- Documentation and extracting As-Built plans for projects

Asan Pak Sanat Co.

05/2014 - 03/2015, *Tehran, Iran*

Food Sector of Tomra Company in Iran and supplier of Sorter Machines

Achievements/Tasks

- Installing and customer service for sorter machines
- Installing, Implementation, and Troubleshooting of X-RAY sorters
- Involving in laser sorter machines and troubleshooting of mechatronic parts, laser generators, optics, and software
- Implementation and Troubleshooting of colored sorters

Certificates

Programmable Logic Controllers

09/2012
Professional Technical Organization/ Iran

Embedded C Programming

06/2014
Tehran Institute of Technology/ Iran

ARM 7

08/2014
Tehran Institute of Technology/ Iran

Language Skills

- English   *Fluent (Overall Score in IELTS: 6.5)*
- Turkish   *Fluent*
- Azeri   *Mother tongue*
- Persian   *Mother tongue*

Hobbies

- Studying
- Sport (Basketball, Volleyball, Workout)
- Watching Movie
- Walking

Publications

1. Farshad Samadi, Sohrab khanmohammadi, Amir R.Ghiasi, "Foot and Body Control of Humanoid Robots using Fuzzy Algorithm", *International Journal of Robotics and Automation.* *Vol 32, Issue 4,2017.*

2. Saeed Aghaie, Sohrab Khanmohammadi, Hamid Moghadamfar and Farshad Samadi, "Adaptive Vision Based Control of Robot Manipulators Using the Interpolating Polynomial", *Transactions of the Institute of Measurement and Control.* *vol. 36 no.6, pp 837-844, August 2014.*

3. Hamid Mogadamfar, Sohrab Khanmohammadi, Sahraneh Gaemi, Farshad Samadi, "Human Age-Group Estimation Based on ANFIS using the HOG and IBP features", *Electrical and Electronic Engineering: An International Journal EEEIJ, Vol 2, No 1, February 2013.*

4. Hamid Moghadam-Fard and Farshad Samadi, "Active Suspension System Control Using Adaptive Neuro Fuzzy (ANFIS) Controller*", IJE TRANSACTIONS C: Aspects Vol. 28, No. 3 (March 2015) 360-369*

5. Farshad Samadi, Hamid Moghadamfard, "Pattern Generation for Humanoid Robot with Natural ZMP Trajectories*", IEEE 2nd RSI International conference on Robotics and Mechatronics, 15-17 October 2014, Tehran, Iran.*

6. Sohrab Khanmohammadi, Amir R. Ghiasi, Farshad Samadi "Real-time pattern generation for humanoid robot to walk on rough terrain using preview control", *9th International Conference on Electronics, Computer and Computation, 1st- 3st nov 2012 Ankara, Turkey.*

7. Aliasghar Keyvani, Morteza Sadeghi, Farshad Samadi, "Computation of Electromagnetic Field Distribution on a MEMS Proximeter Using Meshless Galerkin Method", *1st National conference on MEMS 16-17 Nov. 2011 Khoy Azad university, Iran.*