

Amirhossein Rasooli

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Date of Birth: July 25th 1992



EDUCATION

Tehran University of Medical Sciences, Tehran, Iran

MSc. Biomedical Engineering

September 2014- August 2017

Thesis: Characterization of changes in cerebellum structures and balance induced by anti-gravity locomotor training in children with cerebral palsy

Top student (Average 19.13 out of 20)

Shahed University, Tehran, Iran

BS. Biomedical Engineering

September 2010- September 2014

Final Project: Design and develop a monitoring device for respiratory system

Top 4 student (Average 16.31 out of 20)

SKILLS

Computer Skills – Matlab software (semi-professional), Programming Languages: Python and C++ and C# (non-professional), Design and Implementation of Graphical User Interfaces (GUIs),

Several popular image analysis packages like **SPM12**, DTIstudio, **FSL**, Manngo and **ExploreDTI**

Neuroscience Skill – Passed basic neuroscience course (4.5 Units) under supervision of Dr. MohsinRaza Heydari (**Top 2 Student**)

Personal Interests – Neuroscience, neuroimaging, Postural balance, Cerebellum, neural engineering, Rehabilitation,

Clinical Skill –

Clinical Tests of Balance:

Berg Balance Scale (BBS), Time Up and Go (TUG), 10 Meter Walk Time, Ashworth

Working with Biosignals data acquisition Systems:

EEG, ECG, EMG, Transcranial Magnetic Stimulation (TMS), Posturography

Analysis Skills –

Processing Structural Images for Voxel Based Analysis (SPM)

Processing Diffusion Images for DTI Reconstruction (ExploreDTI)

Processing EPI data of fMRI (FSL)

Image processing using Matlab

Real-Time Video analysis using OpenCV

Bio-signal Processing and feature extraction: EMG, ECG, Posturography, Gait Analysis

Modeling Systems using Artificial neural networks, Fuzzy system and Parametric models using Matlab

PUBLICATIONS (Journal Papers)

AH Rasooli, M Ashtiyani, PM Birgani, S Amiri, P Mirmohammadi, MR Deevband (2018), “MRI segmentation using Fuzzy C-means and radial basis function neural networks.”, Current Science (00113891), Volume 115, Issue 6

PUBLICATIONS (Conferences Full Length Papers)

Sh Azizi, Hengameh Marzbani, S Raminfar, Parmida Moradi Birgani, **AH Rasooli**, Mehdi M Mirbagheri (2017), “The impact of an anti-gravity treadmill (AlterG) training on walking capacity and corticospinal tract structure in children with cerebral palsy”, 2017/7/11, 39th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC), Pages 1150-1153, Publisher IEEE

AH Rasooli, Parmida Moradi Birgani, Sh Azizi, Amin Shahrokhi, Mehdi M Mirbagheri (2017), “Therapeutic effects of an anti-gravity locomotor training (AlterG) on postural balance and cerebellum structure in children with Cerebral Palsy”, 2017/7/17, International Conference on Rehabilitation Robotics (ICORR), Pages 101-105, Publisher IEEE

Parmida Moradi Birgani, Meghdad Ashtiyani, **Amirhossein Rasooli**, Maryam Shahrokhnia, Amin Shahrokhi, Mehdi M Mirbagheri (2016), “Can an anti-gravity treadmill improve stability of children with cerebral palsy?”, 2016/8/16, 38th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC), Pages 5465-5468, Publisher IEEE

MR Kharazi, AH Memari, A Shahrokhi, H Nabavi, S Khorami, **AH Rasooli**, HR Barnamei, AR Jamshidian, MM Mirbagheri (2015), “Validity of microsoft kinectTM for measuring gait parameters”, 2015/11/25, 22nd Iranian Conference on Biomedical Engineering (ICBME), Pages 375-379, Publisher IEEE

**COURSES/PARTICIPATED
WORKSHOS and
SEMINARs**

- Advanced MRI Educational Course on DWI/DTI (2015)
- Advanced workshop of Biofeedback Based on EMG (2016)
- Basic Neuroscience Course for non-medical students [4.5 units] (2016)
- Attending Discussion Writing and Quick Abstract Editing of Scientific papers, workshops (2017)
- Vocational Course of "Maintenance and Error Diagnosis of Clinical Equipment" (2012)
- Vocational Course of "Calibration Equipment" (2012)
- Participating in "The First Iranian Conference of Mobile Robots" (2011)