




## BIOGRAPHICAL SKETCH

	<p>Department of Automatic Control, Biomedical Engineering Research Center, Universitat Politècnica de Catalunya, BarcelonaTech (UPC), Building H, Floor 4, Av. Diagonal 647, 08028 Barcelona, Spain.  <a href="mailto:Hamid.reza.marateb@upc.edu">Hamid.reza.marateb@upc.edu</a>  <a href="https://bioart.upc.edu/en/staff/">https://bioart.upc.edu/en/staff/</a></p> <p>Biomedical Engineering Department, Engineering Faculty, the University of Isfahan, HezarJerib.st.              Isfahan, IRAN 81746-734              E-mail: <a href="mailto:h.marateb@eng.ui.ac.ir">h.marateb@eng.ui.ac.ir</a>              Homepage: <a href="http://eng.ui.ac.ir/~h.marateb/">http://eng.ui.ac.ir/~h.marateb/</a></p>	 <p><b>UNIVERSITAT POLITÈCNICA DE CATALUNYA</b> BARCELONATECH</p>  <p>UNIVERSITY OF ISFAHAN</p> <p>Date of Birth: September,5,1978              Home Phone: +98 (31) 37784462              Cell Phone: +98 9133188782              Work Phone: +98 (31) 37935616              Work Phone: +34 (658) 085-138</p>
--	---	--

NAME: Marateb, Hamid Reza

POSITION TITLE: Associate Professor of Biomedical Engineering, University of Isfahan, IRAN

Senior Researcher, Biomedical Engineering Research Center, Universitat Politècnica de Catalunya, Spain

### EDUCATION/TRAINING

INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	Start Date MM/YYYY	Completion Date MM/YYYY	FIELD OF STUDY
Politecnico di Torino, Turin, Italy	Ph.D.	01/2008	12/2010	Biomedical Engineering
AmirKabir University of Technology, Tehran, IRAN	M.Sc.	10/2000	07/2003	Biomedical Engineering
Shahid Beheshti University of Medical Sciences, Tehran, IRAN	B.S.	09/1996	09/2000	Biomedical Engineering

### A. Research Interest

My research is focused on ‘Cognitive Informatics in Health and Biomedicine’. Cognitive informatics (CI), by extension, is an interdisciplinary field comprising of cognitive and information sciences, specifically focusing on human information processing, mechanisms and processes within the context of computing and computer applications. My CI research is mainly on two principal areas namely as biomedical signal processing (EMG and EEG) and medical data mining.

### B. Positions and Honors

#### Positions and Employment

2000-2003	Engineer, Mircompany, Tehran, IRAN
2003-2008	<a href="#">RA</a> , the Electronics and Computer Research Centre of University of Isfahan, IRAN
2008-2009	RA, LISiN , Laboratory of Engineering of Neuromuscular System, Turin, Italy
2009	<a href="#">researcher level II</a> , PAIRE - Palo Alto Institute for Research and Education, Palo Alto, CA
2009	<a href="#">Visiting researcher</a> , <a href="#">Stanford University</a> , CA
2010	Visiting researcher, Aalborg University, Denmark

2012 Visiting professor, UPC, Barcelona, Spain  
 2012-Present Associate Professor, the University of Isfahan, IRAN  
 2015-Present Member, Medical Image& Signal Processing Research Center, Isfahan University of Medical Sciences, IRAN (<http://misp.mui.ac.ir/>)  
 2017 Visiting professor, UPC, Barcelona, Spain  
 2019-Present Head of the Machine Learning of Isfahan Cardiovascular Research Center (ICRC), a WHO-collaborating center (<https://apps.who.int/whocc/Detail.aspx?9Dsb+Z/ZGeLpVAygEBL+Hg==>), with its recent [re-designation](#) and [member list](#).  
 2015-Present Senior Researcher, BIOSignal Analysis for Rehabilitation and Therapy Research Group (BIOART), Universitat Politècnica de Catalunya, Spain; <https://bioart.upc.edu/en>  
 2014-Present Co-Founder, Regenerative Medicine Research Center, Isfahan University of Medical Sciences, <https://rmrc.mui.ac.ir/en/founder-en>

## Other Experience and Professional Memberships

### International memberships

2011-Present **Member, Institute of Electrical and Electronics Engineers (IEEE)**  
 2020-Present [Senior IEEE member](#)  
 2020-Present [Member, IEEE Engineering in Medicine and Biology Society](#)  
 2021-Present [Marie Curie Alumni Association \(MCAA\) member](#)

### Reviewer in the international journals

2010-Present Reviewer in the international journals (Medical and Biological Engineering and Computing, Journal of Electromyography and Kinesiology, Journal of Neuroscience Methods, Medical Engineering & Physics, Physiological Measurement, IEEE Transactions on Biomedical Engineering, Muscle and Nerve, Journal of Neural Engineering, IEEE Transactions on Neural Systems & Rehabilitation Engineering, Computers in Biology and Medicine, Biomedical Signal Processing and Control, International Journal of Electrical Power and Energy Systems, Computer Methods and Programs in Biomedicine, etc.) for a detailed list of reviews please visit <https://publons.com/author/1440056/hamid-reza-marateb#profile>.

### Editorial board in the International journals

2013-Present Basic and Clinical Neurosciences, 2012- Present Advanced Biomedical research, 2018- Present Journal of Medical Signals and Sensors, 2018- Present Frontiers in Physiology; 2019- Present Frontiers in Human Neuroscience; 2019-Prosthesis; 2020-Present Frontiers Biomedical Signal Processing.

### Special issues in International Journals

[https://www.mdpi.com/journal/diagnostics/special\\_issues/computer-assisted\\_diagnosis\\_and\\_treatment\\_of\\_mental\\_disorders](https://www.mdpi.com/journal/diagnostics/special_issues/computer-assisted_diagnosis_and_treatment_of_mental_disorders)  
[https://www.mdpi.com/journal/diagnostics/special\\_issues/COVID\\_risk\\_assessment](https://www.mdpi.com/journal/diagnostics/special_issues/COVID_risk_assessment)  
<https://www.frontiersin.org/research-topics/26420/brain-mapping-from-digital-microscopic-to-gross-macroscopic-brain-imaging>  
<https://www.frontiersin.org/research-topics/28525/brain-function-from-experimental-and-computational-neuroscience-to-brain-engineering-vol-ii>

### Honors and Awards

2014 Outstanding presentation in the idea festival in improving research in Isfahan University of Medical Sciences  
 2015-2018 Outstanding and recognized reviewer in different ELSEVIER journals  
 2019 Recognized in the internationalization of the University of Isfahan  
 2020 Recognized in teaching in the faculty of engineering, University of Isfahan

### Conference fellowships

2010 ISEK 2010 conference, Aalborg, Denmark  
 2012 ISEK 2010 conference, Brisbane, Australia  
 2014 ISEK 2010 conference, Rome, Italy

### Grants

2012 MHE2011-00191, UPC Visiting professor PhD course, <https://www.boe.es/boe/dias/2012/01/14/pdfs/BOE-A-2012-680.pdf>  
 2015-2017 EU Marie Curie TecnioSpring [fellowship](#)

- 2019-2020 CO-PI, MyoSleeve project, to provide personalized and effective forearm rehabilitation treatment based on reliable non-invasive internal muscle data and interactive feedback, CaixaImpulse valorization grant, <https://www.caixaimpulse.com/projects/-/caixaimpulse/project/MYOSLEEVE>
- 2021- Erasmus plus capacity building project “Modernisation and internationalisation of Iranian HEIs via collaborative TEL-based curriculum development in engineering and **STEM**”, European Commission, Being the CO-PI of the University of Isfahan, Iran.

### Scholarships

- 2008-2011 PhD scholarship, Politecnico di Torino, Turin, Italy  
 1996-2003 B.Sc. and M.Sc. scholarship, Iran

### Research projects (projects with Industry, multi-partner collaborations)

- 2018-Present Head of the Machine Learning Department of [Isfahan Cardiovascular Research Center](#) (a [WHO-collaborating center](#)): <https://apps.who.int/whocc/Detail.aspx?9Dsb+Z/ZGeLpVAygEBL+Hg==>,
- 2016-Present Next-generation artificial arms, Imperial London College
- 2015-Present A new EMG sensor, UPC
- 2016-Present Drug target therapy using data mining, Isfahan University of Medical Sciences
- 2016-Present CVD risk assessment and its optimization, ICS, a WHO-collaborating center
- 2018-Present Risk assessment of the CVD-cancer; NIMAD (National Institute for Medical Research Development), Iran ministry of health
- 2018-Present CVD risk assessment in patient with Myocardial Infraction; NIMAD (National Institute for Medical Research Development), Iran ministry of health

### Executive tasks

- 2017- Responsible for Internationalization of Engineering Faculty, University of Isfahan
- 2019- Member of the Internationalization Policy making, University of Isfahan
- 2020 Vice chancellor of Education, Engineering Faculty, University of Isfahan
- 2019-2020 The co-founder of “Mathematical Engineering” graduate major, University of Isfahan

### C. Contributions to Science

[Papers related to Medical Data Mining were highlighted in Grey.]

#### Top five published papers in the research lines

1. Karimimehr S, Marateb HR\*, Muceli S, Mansourian M, Mananas MA, Farina D. A Real-Time Method for Decoding the Neural Drive to Muscles Using Single-Channel Intra-Muscular EMG Recordings. International journal of neural systems. 2017;27(6):1750025 [IF=6.5].
2. Ghaderi P, Marateb HR\*. Muscle Activity Map Reconstruction from High Density Surface EMG Signals With Missing Channels Using Image Inpainting and Surface Reconstruction Methods. IEEE transactions on bio-medical engineering. 2017;64(7):1513-23 [IF=4.5].
3. Marateb, H. R., Z. Tasdighi, M. R. Mohebian, A. Naghavi, M. Hess, M. E. Motlagh, R. Heshmat, M. Mansourian, M. A. Mañanas, H. Binder and R. Kelishadi (2021). "Classification of psychiatric symptoms using deep interaction networks: the CASPIAN-IV study." Sci Rep 11(1): 15706 [IF=4.4].
4. Marateb, H.R.\*, Von Cube, M., Sami, R., Haghjooy Javanmard, S., Mansourian, M., Amra, B., Soltaninejad, F., Mortazavi, M., Adibi, P., Khademi, N., Sadat Hosseini, N., Toghiani, A., Hassannejad, R., Mañanas, M.A., Binder, H., and Wolkewitz, M. (2021). Absolute mortality risk assessment of COVID-19 patients: the Khorshid COVID Cohort (KCC) study. BMC Med Res Methodol 21, 146 [IF=4.4].
5. Mohebian MR, Marateb HR, Mansourian M, Mananas MA, Mokarian F. A Hybrid Computer-aided-diagnosis System for Prediction of Breast Cancer Recurrence (HPBCR) Using Optimized Ensemble Learning. Computational and structural biotechnology journal. 2017;15:75-85 [IF=7.3].

\*: Corresponding Author.

#### Other selected published ISI papers

1. Marateb HR\*, McGill KC, Holobar A, Lateva ZC, Mansourian M, Merletti R. Accuracy assessment of CKC high-density surface EMG decomposition in biceps femoris muscle. Journal of neural engineering. 2011;8(6):066002 [IF=5.4].
2. McGill KC, Marateb HR. Rigorous a posteriori assessment of accuracy in EMG decomposition. IEEE transactions on neural systems and rehabilitation engineering. 2011;19(1):54-63 [IF=4.9].
3. Vujaklija I, Shalchyan V, Kamavuako EN, Jiang N, Marateb HR, Farina D. Online mapping of EMG signals into kinematics by autoencoding. J Neuroeng Rehabil. 2018 Mar 13;15(1):21 [IF=4.5].

4. Hajiaghababa F, Marateb HR\*, Kermani S. The design and validation of a hybrid digital-signal-processing plug-in for traditional cochlear implant speech processors. *Comput Methods Programs Biomed.* 2018 Jun;159:103-109 [IF=5.4].
5. Mohebian MR, Marateb HR\*, Karimimehr S, Mañanas MA, Kranjec J, Holobar A. Non-invasive Decoding of the Motoneurons: A Guided Source Separation Method Based on Convolution Kernel Compensation With Clustered Initial Points. *Front Comput Neurosci.* 2019 Apr 2;13:14 [IF=2.99].
6. Marateb HR\*, Farahi M, Rojas M, Mananas MA, Farina D. Detection of Multiple Innervation Zones from Multi-Channel Surface EMG Recordings with Low Signal-to-Noise Ratio Using Graph-Cut Segmentation. *PloS one.* 2016;11(12):e0167954 [IF=3.2].
7. Behboodi, M., Mahnam, A., Marateb, H., and Rabbani, H. (2020). Optimization of Visual Stimulus Sequence in a Brain-Computer Interface Based on Code Modulated Visual Evoked Potentials. *IEEE Trans Neural Syst Rehabil Eng* 28, 2762-2772 [IF=4.9].
8. Hassannejad, R., Mansourian, M., Marateb, H., Mohebian, M.R., Gaziano, T.A., Jackson, R.T., Angelantonio, E.D., and Sarrafzadegan, N. (2021). Developing Non-Laboratory Cardiovascular Risk Assessment Charts and Validating Laboratory and Non-Laboratory-Based Models. *Glob Heart* 16, 58 [IF=3.4].
9. Mansourian, M., Khademi, S., and Marateb, H.R.\* (2021). A Comprehensive Review of Computer-Aided Diagnosis of Major Mental and Neurological Disorders and Suicide: A Biostatistical Perspective on Data Mining. *Diagnostics (Basel)* 11 [IF=3.7].
10. Marateb, H.R.\*, Ziaie Nezhad, F., Mohebian, M.R., Sami, R., Haghjooy Javanmard, S., Dehghan Niri, F., Akafzadeh-Savari, M., Mansourian, M., Mañanas, M.A., Wolkewitz, M., and Binder, H. (2021). Automatic Classification Between COVID-19 and Non-COVID-19 Pneumonia Using Symptoms, Comorbidities, and Laboratory Findings: The Khorshid COVID Cohort Study. *Frontiers in Medicine* 8, <https://doi.org/10.3389/fmed.2021.768467> [IF=5.1].
11. Marateb HR\*, Muceli S, McGill KC, Merletti R, Farina D. Robust decomposition of single-channel intramuscular EMG signals at low force levels. *Journal of neural engineering.* 2011;8(6):066015 [IF=4.9].
12. Mohebian, M.R., Vedaie, S.S., Wahid, K.A., Dinh, A., Marateb, H.R.\*, and Tavakolian, K. (2021). Fetal ECG Extraction from Maternal ECG using Attention-based CycleGAN. *IEEE J Biomed Health Inform, E-pub ahead of time* [IF=5.8].
13. Rojas-Martínez, M., Serna, L.Y., Jordanic, M., Marateb, H.R., Merletti, R., and Mañanas, M. (2020). High-density surface electromyography signals during isometric contractions of elbow muscles of healthy humans. *Sci Data* 7, 397 [IF=6.4].
14. Sami, R., Soltaninejad, F., Amra, B., Naderi, Z., Haghjooy Javanmard, S., Iraj, B., Haji Ahmadi, S., Shayganfar, A., Dehghan, M., Khademi, N., Sadat Hosseini, N., Mortazavi, M., Mansourian, M., Mañanas, M.A., Marateb, H.R., and Adibi, P. (2020). A one-year hospital-based prospective COVID-19 open-cohort in the Eastern Mediterranean region: The Khorshid COVID Cohort (KCC) study. *PLoS One* 15, e0241537 [IF=3.2].
15. Vedaie, S.S., Fotovvat, A., Mohebbian, M.R., Rahman, G.M.E., Wahid, K.A., Babyn, P., Marateb, H.R., Mansourian, M., and Sami, R. (2020). COVID-SAFE: An IoT-Based System for Automated Health Monitoring and Surveillance in Post-Pandemic Life. *IEEE Access* 8, 188538-188551 [IF=3.4].
16. Abedi, M., H. R. Marateb, M. R. Mohebian, S. H. Aghaee-Bakhtiari, S. M. Nassiri and Y. Gheisari (2021). "Systems biology and machine learning approaches identify drug targets in diabetic nephropathy." *Sci Rep* 11(1): 23452 [IF=4.4].
17. Ghaderi, P., H. R. Marateb\* and M. S. Safari (2018). "Electrophysiological Profiling of Neocortical Neural Subtypes: A Semi-Supervised Method Applied to in vivo Whole-Cell Patch-Clamp Data." *Front Neurosci* 12: 823 [IF=3.6].
18. Marateb, H. R.\* and S. Goudarzi (2015). "A noninvasive method for coronary artery diseases diagnosis using a clinically-interpretable fuzzy rule-based system." *J Res Med Sci* 20(3): 214-223 [IF=1.9].
19. Marateb, H. R., M. Mansourian, P. Adibi and D. Farina (2014). "Manipulating measurement scales in medical statistical analysis and data mining: A review of methodologies." *J Res Med Sci* 19(1): 47-56 [IF=1.9].
20. Marateb, H. R., M. Mansourian, E. Faghihimani, M. Amini and D. Farina (2014). "A hybrid intelligent system for diagnosing microalbuminuria in type 2 diabetes patients without having to measure urinary albumin." *Comput Biol Med* 45: 34-42 [IF=4.6].
21. Marateb, H. R.\* and K. C. McGill (2009). "Resolving superimposed MUAPs using particle swarm optimization." *IEEE Trans Biomed Eng* 56(3): 916-919 [IF=4.5].
22. Marateb, H. R., M. R. Mohebian, S. H. Javanmard, A. A. Tavallaei, M. H. Tajadini, M. Heidari-Beni, M. A. Mañanas, M. E. Motlagh, R. Heshmat, M. Mansourian and R. Kelishadi (2018). "Prediction of dyslipidemia using gene mutations, family history of diseases and anthropometric indicators in children and adolescents: The CASPIAN-III study." *Comput Struct Biotechnol J* 16: 121-130 [IF=7.3].
23. Sarrafzadegan, N., R. Hassannejad, H. R. Marateb, M. Talaei, M. Sadeghi, H. R. Roohafza, F. Masoudkabar, S. Oveisgharan, M. Mansourian, M. R. Mohebian and M. A. Mañanas (2017). "PARS risk charts: A 10-year study of risk assessment for cardiovascular diseases in Eastern Mediterranean Region." *PLoS One* 12(12): e0189389 [IF= 3.2].

#### The complete list of papers:

<https://publons.com/author/1440056/hamid-reza-marateb#profile>

#### Book, book chapters, Encyclopedia chapters

Marateb HR, McGill KC. Electromyographic (EMG) Decomposition. Wiley Encyclopedia of Electrical and Electronics Engineering, 201 (DOI: 10.1002/047134608X.W8296).

Marateb HR, Migliorelli C, Bachiller A, Azimi T, Nezhad FZ, Mansourian M, et al. Epileptic seizure prediction and onset zone localization using intracranial and scalp electroencephalographic and magnetoencephalographic signals. *Modelling and Analysis of Active Biopotential Signals in Healthcare*, Volume 1: IOP Publishing; 2020. p. 4-1-4-20 (DOI: 10.1088/978-0-7503-3279-8ch4).

Marateb HR, Jordanic M, Rojas-Martínez M, Alonso JF, Serna LY, Shirzadi M, et al. Reliable and accurate information extraction from surface electromyographic signals. *Modelling and Analysis of Active Biopotential Signals in Healthcare, Volume 1: IOP Publishing*; 2020. p. 7-1-7-18 (DOI: 10.1088/978-0-7503-3279-8ch7).

Marjan Mansourian, Hamid Reza Marateb, Maja von Cube, Sadaf Khademi, Mislav Jordanic, Miguel Ángel Mañanas, Harald Binder, Martin Wolkewitz. *Reliable Diagnosis and Prognosis of COVID-19. Computer-aided Design and Diagnosis Methods for Biomedical Applications*. CRC Press; 2021. <https://doi.org/10.1201/9781003121152>.

Marjan Mansourian, Hamid Reza Marateb, Mohammad Reza Mohebbian, Miguel Ángel Mañanas and Harald Binder, “Rigorous performance assessment of computer-aided medical diagnosis and prognosis systems: A biostatistical perspective on data mining”, in “*Modelling and Analysis of Active Bio-potential Signals in Healthcare-Volume 2*”, Published (Aug, 6, 2020) IOP Publishing UK [Book chapter 17].

Hamid Reza Marateb, Mohammad Reza Mohebbian, Farzad Ziaie Nezhad, Marjan Nosouhi, Zahra Nasr Esfahani, Farzaneh Fazilati, Fatemeh Yusefi, Golnaz Amiri, Negar Malekifar, Mohsen Rastegari, Mislav Jordanic, Joan Francesc Alonso, Marjan Mansourian, Khan A. Wahid, Miguel Ángel Mañanas, “Prosthesis control using undersampled surface electromyographic signals”, in “*Analysis of medical modalities for improved diagnosis in modern healthcare*”, Published (Oct, 17, 2020) CRC Press [Book chapter 5].

#### D. Courses taught in the University

YEAR	COURSE TITLE	MAJOR
2011	Information extraction from EMG signals	BME, Ph.D.
2012	Introduction to Biomedical Engineering	BME, B.S
2012-	Electric Circuits I	BME, B.S
2012	Prosthesis Control	R, M.Sc.
2013-	Biostatistics	BME, B.S
2013-	Electronics I	BME, B.S
2012-	Microcontroller	BME, B.S
2013-	Scientific Writing	BME, B.S
2014-	Electromyography	BME, B.S
2014-	Biomedical Signal Processing	BME, B.S
2015-	System Identification	BME, M.Sc., Ph.D.
2016-	Pattern Recognition	BME, M.Sc., Ph.D.
2016-	Non-linear Optimization	BME, M.Sc., Ph.D.
2015	Research Methods and Ethics	BME, M.Sc.
2016-	Biostatistics	SE, M.Sc.
2018-	Medical Data Mining	BME, B.S
2018-	Medical Device Regulations	BME, B.S
2020	Biomedical Signal Processing	BME, M.Sc.

BME: Biomedical Engineering; R: Rehabilitation; SE: Sport Engineering.

#### E. Selected graduate students' projects

Name and surname	Project, Year, Status [Finished/Current]	MAJOR, UNIVERSITY
Z. Ghanei	Functional Electrical Stimulation (FES) for Spinal Cord Injury (SCI) rehabilitation, 2011 (F)	BME, B.S, UI
Z. Navardi	Density-based cortical spike sorting, 2011 (F)	BME, B.S, UI
Z. Jafari	Expert-based modeling of muscle force based on surface EMG signal, 2012 (F)	BME, M.Sc. , UI
E. Baigi	Identification of emotional status based on EEG signals, 2012 (F)	BME, M.Sc. , UI
H. Marzbani	Design and implementation of a neuro-feedback system, 2012 (F)	BME, B.S, UI
M. Sisakhti	Identification of muscle innervation zone using fuzzy systems, 2013 (F)	BME, B.S, UI
H. Nemat	Identification of microalbuminuria based on blood factors, 2013 (F)	BME, B.S, UI

Name and surname	Project, Year, Status [Finished/Current]	MAJOR, UNIVERSITY
F. Razavi	Movement identification based on EEG signals for SCI, 2013 (F)	BME, B.S, UI
S. Jorjandi	Identification of different movement based on surface EMG signals, 2013 (F)	BME, B.S, UI
M. Farahbakhsh	A diagnosis system for detection of Low-Birth-Weight (LBW) infants, 2014 (F)	BME, B.S, UI
M. Farahi	A diagnosis system for detection of obesity based on nutritional Socioeconomic status, 2014 (F)	BME, B.S, UI
M. Mohebian	Recurrence prediction in breast cancer patients using fuzzy systems, 2015 (F)	BME, B.S, UI
A. Tavallaei	Prediction of Dyslipidemia in children and adolescents based on genetic factors using data mining techniques, 2015 (F)	BME, B.S, UI
Z. Ebrahimi	Feature extraction and classification of sEMG signal for prosthesis control, 2015 (F)	BME, B.S, UI
S. Karimimehr	Neural Decoding using pattern recognition techniques, 2015 (F)	BME, M.Sc. , UI
P. Ghaderi	Pre-processing and classification of sEMG signals for hand movement classification	BME, M.Sc. , UI
S. Sadegh pour	EMG-force modeling, 2018 (F) [Co-supervisor]	BME, M.Sc. , TP
M. Hafezolforghani	Prediction of Gait instability, 2016 (F)	BME, M.Sc. , UI
M. Mohebian	HDsEMG decomposition using guided source separation, 2017 (F)	BME, M.Sc. , UI
S.Y. Moradi	Perversion of Cardio-Metabolic Syndrome using modifiable risk factors in children and adolescents using medical data mining, 2019 (F)	BME, B.S, UI
M. Shirzadi	Resolving superimposed MUAPs, 2019 (F)	BME, M.Sc. , UI
N.S. Mousavi	Optimal estimation of motor unit firing patterns, 2019 (F)	BME, M.Sc. , UI
Z. Yazdani	Prediction of cardiovascular disease using data mining methods: A 15-year Isfahan Cohort Study, 2021 (F)	BME, B.S, UI
M. Asadi, Z. Salehi	The prognosis of COVID-19 patients (Mortality, ICU admission, and Mechanical Ventilation) using data mining techniques, 2021 (F)	BME, B.S, UI
M. Safaei	Identification of the significant factors to control the patients' hypertension using data mining methods: The Isfahan Cohort Study, 2021 (F)	BME, B.S, UI
N. Abdollahi	COVID-19 diagnosis using blood biomarkers without the PCR results: The Khorshid COVID-19 Cohort, 2021 (F)	BME, B.S, UI
A. Khoshkhabar	Identification of the best cut-off for the combinatory anthropometric measures in Iranian population for Cardiovascular diseases prevention, 2021 (C)	BME, B.S, UI
M. Kharazihai Isfahani	Dynamic Wavelet-Based Modeling Method for Blood Glucose Concentration Prediction and nonlinear system approximation, 2020 (F), [Advisor]	CE, Ph.D., IUT
M. Mohammadi	Real-time hospital capacity management and dynamic risk assessment for infectious disease, 2020 (C)	BME, Ph.D., UI
M. Shirzadi	Muscle information extraction using intra-muscular and surface EMG signals, 2020 (C) [ Second supervisor]	BME, Ph.D., UPC
M. Mohebbian	ECG signal processing using deep learning methods, 2021 (F), [Advisor]	EE, Ph.D., US

BME: Biomedical Engineering, EE: Electrical Engineering, CE: Control Engineering, UI: University of Isfahan, IUT: Isfahan University of Technology, UPC: Universitat Politècnica de Catalunya, US: University of Saskatchewan, TP: Tehran Polytechnics.

#### My Graduated Students who continued their study abroad for PhD:

Name and surname	Link	MAJOR, UNIVERSITY
Saeed Karimimehr	<a href="https://as.nyu.edu/content/nyu-as/as/departments/cns/people/Trainees.html">https://as.nyu.edu/content/nyu-as/as/departments/cns/people/Trainees.html</a>	Neuroscience, NYU
Parviz Ghaderi	<a href="https://people.epfl.ch/parviz.ghaderi">https://people.epfl.ch/parviz.ghaderi</a>	Neuroscience, EPFL
Mohammadreza Mohebbian	<a href="https://researchers.usask.ca/khan-wahid/graduate-students.php#CurrentStudents">https://researchers.usask.ca/khan-wahid/graduate-students.php#CurrentStudents</a>	Medical Data Mining, University of Saskatchewan
Mehdi Shirzadi	<a href="https://directori.upc.edu/directori/dadesPersona.jsp?id=1257771">https://directori.upc.edu/directori/dadesPersona.jsp?id=1257771</a>	Biomedical Engineering, Polytechnic University of Catalonia. BarcelonaTech (UPC)
Safoura Sadegh Pour	<a href="https://biomech.nau.edu/people/">https://biomech.nau.edu/people/</a>	Biomechanics, Northern Arizona University

#### F. Additional Information: Distinguished Researcher

Item	Value	Web address
ORCID	0000-0003-4408-2397	<a href="http://orcid.org/0000-0003-4408-2397">http://orcid.org/0000-0003-4408-2397</a>
Researcher ID	G-5556-2013	<a href="http://www.researcherid.com/rid/G-5556-2013">http://www.researcherid.com/rid/G-5556-2013</a>

Scopus Author ID	35759194200	<a href="http://www.scopus.com/authid/detail.url?authorId=35759194200">http://www.scopus.com/authid/detail.url?authorId=35759194200</a>
Google Scholar	Hamid Reza Marateb	<a href="http://scholar.google.com/citations?user=e9IuAXwAAAAJ&amp;hl=en">http://scholar.google.com/citations?user=e9IuAXwAAAAJ&amp;hl=en</a>
ResearchGate	Hamid Reza Marateb	<a href="https://www.researchgate.net/profile/Hamid_Marateb">https://www.researchgate.net/profile/Hamid_Marateb</a>
Publons	Hamid Reza Marateb	<a href="https://publons.com/author/1440056/hamid-reza-marateb#profile">https://publons.com/author/1440056/hamid-reza-marateb#profile</a>

### G. Software Skills:

**MATLAB, R:** Advanced  
**Microsoft Office:** Advanced  
**Altium Designer:** Advanced  
**AVR C Programming:** Advanced

### H. Language Skills:

**English:** Fluent in writing, speaking, listening  
**Italian:** Intermediate in speaking, listening

### I. References:

**Prof. Dario Farina**, Faculty of Engineering, Department of Bioengineering, Chair in Neurorehabilitation Engineering, Imperial College London, UK [**former PhD supervisor, and current collaborator**]

Homepage: <https://www.imperial.ac.uk/people/d.farina>

e-mail: [d.farina@imperial.ac.uk](mailto:d.farina@imperial.ac.uk)

Scopus Profile: <https://www.scopus.com/authid/detail.uri?authorId=7004908025>

**Prof. Ales Holobar**, Head of the System Software Laboratory, Deputy head of the Institute of Computer Science, University of Maribor, Slovenia [**collaborator**]

Homepage: [https://lspo.feri.um.si/osebje/ales\\_holobar-en.php](https://lspo.feri.um.si/osebje/ales_holobar-en.php)

e-mail: [ales.holobar@um.si](mailto:ales.holobar@um.si)

Scopus Profile: <https://www.scopus.com/authid/detail.uri?authorId=6603265157>

**Prof. Martin Wolkewitz**, Institute of Medical Biometry and Statistics (IMBI), Head of the Methods in Clinical Epidemiology (MICLEP) Research Group, University of Freiburg, Germany [**collaborator**]

Homepage: <https://www.uniklinik-freiburg.de/imbi-en/employees.html?imbiuser=wolke> , <https://www.uniklinik-freiburg.de/imbi-en/miclep.html>

e-mail: [wolke@imbi.uni-freiburg.de](mailto:wolke@imbi.uni-freiburg.de)

Scopus Profile: <https://www.scopus.com/authid/detail.uri?authorId=34574027300>

**Dr. Miquel Angel Mañanas**, Department of Automatic Control (ESAI), Biomedical Engineering Research Centre (CREB), Head of the BIOSignal Analysis for Rehabilitation and Therapy Research Group (BIOART), Universitat Politècnica de Catalunya · BarcelonaTech (UPC), Spain [**collaborator**]

Homepage: <https://bioart.upc.edu/en/staff/miguel-angel-mananas>

e-mail: [miguel.angel.mananas@upc.edu](mailto:miguel.angel.mananas@upc.edu)

Scopus Profile: <https://www.scopus.com/authid/detail.uri?authorId=6602192659>

**Dr. Kouhyar Tavakolian**, Director, Biomedical Engineering Program, College of Engineering & Mines, University of North Dakota, USA [**collaborator**]

Homepage: <https://und.edu/directory/kouhyar.tavakolian>

e-mail: [kouhyar.tavakolian@UND.edu](mailto:kouhyar.tavakolian@UND.edu)

Scopus Profile: <https://www.scopus.com/authid/detail.uri?authorId=6505837295>