Mina Jamshidi Idaji

Curriculum Vitae

Education

12/2017–present	**PhD**, Neurology Dept., Max Planck Institute for Human Cognitive and Brain Science, Leipzig, Germany, Dr. Vadim Nikulin, Prof. Dr. Arno Villringer
	Machine Learning Group, Technical University Berlin, Berlin, Germany, Prof. Dr. Klaus-Robert Müller
PhD Thesis	Multivariate Methods for Quantification of Nonlinear Interactions in Human Brain
09/2014–08/2016	**M.Sc., Biomedical Engineering (Bioelectric)**, EE Dept., Sharif University of Technology (SUT), Tehran, Iran
	M.Sc. GPA: **18.65/20 (German scoring: 1,5)** (29 credits), University GPA:16.2/20, Dept. GPA: 16.35/20
Master Thesis	Detection of Event Related Potential Using Tensor Decomposition
M.Sc. Supervisor	Dr. M.B. Shamsollahi
09/2009–09/2014	**B.Sc., Electrical Engineering (Minor: Pure Mathmetics)**, Isfahan University of Technology (IUT), Isfahan, Iran
Bachelor Thesis	A Survey of Graph-based Image Segmentation Methods
B.Sc. Supervisor	Dr. Saeid Sadri and Dr. Raheleh Kafieh
	B.Sc. GPA: **18.55/20 (German scoring: 1,4)** (185 credits), University GPA:14.54/20, ECE Dept. GPA: 15.26/20, EE students GPA:16.32/20
09/2005–08/2009	**High school**, Farzanegan-e-Amin Highschool, NODET (National Organization for Development of Exceptional Talents), Isfahan, Iran

Research Interests

Signal/Image Processing (with biomedical and neuroscience applications), Network Science, Machine Learning, Brain-Computer Interface, and Applied Mathematics in signal processing (Statistical Methods, Optimization Theory, Multilinear Algebra, and Graph Theory)

Publications

- **M. Jamshidi Idaji**, K.R. Müller, G. Nolte, B. Maess, A. Villringer, V.V. Nikulin, "Nonlinear Interaction Decomposition (NID): A Method for Separation of Cross-frequency Coupled Sources in Human Brain," bioRxiv , 2019. DOI: 10.1101/680397
- **M. Jamshidi Idaji**, M.B. Shamsollahi, S. Hajipour Sardoui, "Higher Order Spectral Regression Discriminant Analysis (HOSRDA): A Tensor Feature Reduction Method for ERP Detection," Pattern Recognition 70 (2017) 152-162. DOI: 10.1016/j.patcog.2017.05.004
- **M. Jamshidi Idaji**, H. Rabbani, Z. Amini, R. Kafieh, A. Ommani, V. Lakshminarayanan, "Automatic Detection of the Optic Disc of the Retina: A Fast Method," J Med Sign Sence 2016; 6:57-63

Mina Jamshidi Idaji, Max Planck Institute for Human Cognitive and Brain Science, Stephan Str. 1A, Neurology Department, Leipzig, Germany
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Research and Work Experience

12/2017-present **Doctoral Researcher**, MPI for Human Cognitive and Brain Sciences

02/2017–06/2017 **Research assistant**, Biomedical Signal and Image Processing Laboratory (BiSIPL), under Supervision of Dr. S. Hajipour and Prof. M.B. Shamsollahi

→ Research area: Source localization and denoising of epileptic EEG data with a graphic user interface (GUI).

09/2014–08/2016 **Research assistant**, Biomedical Signal and Image Processing Laboratory (BiSIPL), EE Dept., Sharif University of Technology, Tehran, Iran

→ Research area: *Higher order* and *vector-based* Event Related Potential (ERP) analysis, higher order feature reduction techniques; unsupervised P300 speller

Summer 2013 **Research trainee**, Medical Image and Signal Processing Research Center (MISP), Isfahan University of Medical Sciences, Isfahan, Iran

→ Research area: Optic Disc segmentation in retinal images.

Computer Skills

Programming Python, MATLAB, C/C++

Type Setting LaTeX , Microsoft Office

O.S. OSX, Linux, Windows

Honors and Awards

03/2016 Receiving IMPRS NeuroCom funding for persueing the PhD

09/2015-09/2016 Mowafaghian Research Fellowship for Graduate Students, Djavad Mowafaghian Research Center of Intelligent Neuro-Rehabilitation Technologies, Sharif University of Technology (SUT), Tehran, Iran

→ The scholarship is annually awarded to 5 distinguished graduate research projects at SUT in neuro-rehabilitation related fields. The duration of the scholarship is 1 year and it provides financial support for the project as well as living costs.

08/2014 Honorary admission to master's program at Sharif University of Technology (SUT) as an Exceptional Talent (without need to take part in nationwide entrance exam)

→ Each year, SUT grants honorary admission of graduate level programs to a very limited number of students with distinguished academic performance.

Class of 2013 Ranked 6^{th} among 100 EE undergraduate students and 3^{rd} in communication group, Isfahan University of Technology, Isfahan, Iran

07/2009 Ranked 491^{th} in the Nationwide Mathematics and Physics University Entrance Exam (among more than 270,000 contestants in the country) and accepted for studying two majors in bachelor studies

08/2012 DAAD Scholarship for one month German summer course in Germany, Berlin

Teaching Experience

- **Teaching Assistant** at Sharif University of Technology, EE Dept.

Fall2016 Tensor Decomposition and Matrix Factorization with Application to Signal Processing - Instructed by: Dr. S. Hajipour

Fall2015,Fall2016 Digital Signal Processing - Instructed by: Prof. Dr. M.B. Shamsollahi

- **Teaching Assistant** at Isfahan University of Technology, ECE Dept.

Fall2013,Spr2014 Wireless Communication - Instructed by: Dr. M.J. Omidi

Fall 2013 Communication Circuits - Instructed by: Prof. Dr. S. Sadri

Fall 2012 Signals and Systems - Instructed by: Dr. B. Nazari

Languages

English TOEFL iBT® score (Sep. 23, 2016): **106**(R=28, L=28, S=23, W=27)
GRE® General Test score (Nov. 3, 2016): **319**(Verbal=152, Quant.=167, W=3.5)

German DSH3 (Aug. 21, 2011)

Persian Native

Interests and Activities

Volunteer Works (teaching pupils in poor regions), Painting, Music Playing (Piano and Santour), World Literature

Academic References

References can be provided upon request

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