

# AREF EINIZADE

Engineering for Health Interdisciplinary Center (E4H), Télécom SudParis, Institut Polytechnique de Paris, France  
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## RESEARCH and EDUCATION POSITIONS

<b>Assistant Professor</b>	Feb 2026 - Now
Télécom SudParis, Institut Polytechnique de Paris, France	
Topic: <i>Graph Machine Learning, Generative Models, Graph Signal Processing, Biomedical Applications.</i>	
<b>Postdoctoral Researcher</b>	Nov 2023 - Jan 2026
Télécom Paris, Institut Polytechnique de Paris, France	
Topic: <i>Learning Multi-domain Graphs from Data via Graph Machine Learning.</i>	
Supervisors: <a href="#">Jhony H. Giraldo</a> , and <a href="#">Fragkiskos D. Malliaros</a>	
<b>Doctor of Philosophy in Electrical Engineering (Avg. Grade = 18.57/20)</b>	Oct 2018 - Feb 2023
Sharif University of Technology (SUT), Tehran, Iran	
Thesis: <i>Subspace Identification and Graph Learning of Graph Signals: Application in Brain Signal Processing.</i>	
<b>Master of Science in Electrical Engineering (Hons) (Avg. Grade = 18.41/20)</b>	Oct 2016 - Sep 2018
Sharif University of Technology (SUT), Tehran, Iran	
Thesis: <i>Iterative Pseudo Sparse Partial Least Square and its Higher-Order variant: Application to inference from high-dimensional biosignals.</i>	
<b>Bachelor of Science in Electrical Engineering-Digital Systems</b>	Oct 2011 - Sep 2015
Shahid Beheshti University (SBU), Tehran, Iran	

## RESEARCH INTERESTS

Graph Machine Learning, Graph Signal Processing, Graph Neural Network, Large Language Models, Applications.

## PUBLICATIONS

- **Einizade, A.**, Dorina Thanou, Malliaros, F. D., Giraldo, J. H. (2025). “Continuous Simplicial Neural Networks” The Thirty-ninth Annual Conference on Neural Information Processing Systems (NeurIPS).  
- **Einizade, A.**, Malliaros, F. D., Giraldo, J. H. (2025). “Second-Order Tensorial Partial Differential Equations on Graphs” Submitted to ICASSP.  
- Xie, Sh., **Einizade, A.** and Giraldo, J. H. (2025). “Subgraph Gaussian Embedding Contrast for Self-Supervised Graph Representation Learning” Joint European Conference on Machine Learning and Knowledge Discovery in Databases (ECML-PKDD).  
- **Einizade, A.**, Malliaros, F. D., Giraldo, J. H. (2024). “Continuous Product Graph Neural Networks” The Thirty-eighth Annual Conference on Neural Information Processing Systems (NeurIPS).  
- **Einizade, A.**, Malliaros, F. D., Giraldo, J. H. (2025). “Spatiotemporal Forecasting Meets Efficiency: Causal Graph Process Neural Networks”, arXiv preprint. *Under Review at IEEE TNNLS.* 
- Giraldo, J. H., **Einizade, A.**, Todorovic, A., Castro-Correa, J. A., Badiey, M., Bouwmans, T., Malliaros, F. D. (2024). “Higher-Order GNNs Meet Efficiency: Sparse Sobolev Graph Neural Networks”, IEEE Transactions on Signal and Information Processing over Networks.  
- **Einizade, A.**, Giraldo, J. H., Malliaros, F. D., Sardouie, S. H. (2024). “Estimation of a causal directed acyclic graph process using non-gaussianity”, Digital Signal Processing. 

- **Einizade, A.**, Sardouie, S. H. (2023). “*Learning Product Graphs from Spectral Templates*”, IEEE Transactions on Signal and Information Processing over Networks. doi 
- **Einizade, A.**, Nasiri, S., Sardouie, S. H., Clifford, G. D. (2023). “*ProductGraphSleepNet: Sleep staging using product spatio-temporal graph learning with attentive temporal aggregation*”, Neural Networks. doi 
- **Einizade, A.**, Sardouie, S. H. (2023). “*Iterative Pseudo-Sparse Partial Least Square and its Higher-Order variant: Application to inference from high-dimensional biosignals*”, IEEE Transactions on Cognitive and Developmental Systems. doi
- **Einizade, A.**, Sardouie, S. H. (2023). “*Joint Graph Learning and Blind Separation of Smooth Graph Signals Using Minimization of Mutual Information and Laplacian Quadratic Forms*”, IEEE Transactions on Signal and Information Processing over Networks, 9, 35-47. doi
- **Einizade, A.**, Nasiri, S., Mozafari, M., Sardouie, S. H., Clifford, G. D. (2023). “*Explainable automated seizure detection using attentive deep multi-view networks*”, Biomedical Signal Processing and Control. doi 
- Alizade, M. H., **Einizade, A.**, Giraldo J. (2023). Kernel-based Joint Multiple Graph Learning and Clustering of Graph Signals. arXiv preprint. Under Review in IEEE Signal Processing Letters. pdf
- **Einizade, A.**, Sardouie, S. H. (2022). “*Robust blind separation of smooth graph signals using minimization of graph regularized mutual information*”, Digital Signal Processing, 132, 103792. doi
- **Einizade, A.**, Mozafari, M., Jalilpour, S., Bagheri, S., Sardouie, S. H. (2022). “*Neural decoding of imagined speech from EEG signals using the fusion of graph signal processing and graph learning techniques*”, Neuroscience Informatics, 2(3), 100091. doi
- **Einizade, A.**, Sardouie, S. H. (2022). “*A unified approach for simultaneous graph learning and blind separation of graph signal sources*”, IEEE Transactions on Signal and Information Processing over Networks, 8, 543-555. doi
- **Einizade, A.**, Sardouie, S. H., Shamsollahi, M. B. (2021). “*Simultaneous graph learning and blind separation of graph signal sources*”, IEEE Signal Processing Letters, 28, 1495-1499. doi
- Mijani, A. M., **Einizade, A.**, Shamsollahi, M. B., Beyglou, B. T. (2020). “*Cross-subject and cross-paradigm learning using convolutional neural network for P300 event-related potential detection*”, J Neurol Neurosci, 11(5), 329. doi
- **Einizade, A.**, Mozafari, M., Sardouie, S. H., Nasiri, S., Clifford, G. (2020). “*A deep learning-based method for automatic detection of epileptic seizure in a dataset with both generalized and focal seizure types*”, In 2020 IEEE Signal Processing in Medicine and Biology Symposium (SPMB). IEEE. doi pdf
- **Einizade, A.**, Mozafari, M., Rezaei-Dastjerdehei, M., Aghdaei, E., Mijani, A. M., Sardouie, S. H. (2020). “*Detecting ADHD children based on EEG signals using Graph Signal Processing techniques*”, In 2020 27th National and 5th International Iranian Conference on Biomedical Engineering (ICBME). IEEE. doi
- **Einizade, A.**, Sardouie, S. H. (2020). “*Sparsification of the PLS Regression Algorithm using L2-Norm of Weighted Coefficients: Application in Emotion Recognition*”, Iranian Journal of Biomedical Engineering. doi

## Teaching/Research/Job Experience

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- Co-supervision of several PhD, master's, and interns at Télécom Paris. Nov 2023 - Now
- Attended the jury group of the defense sessions of four MSc internship projects. Aug 2024 - Now
- Teacher Assistant (TA) in several courses at Télécom Paris such as Source separation, Non-negative Matrix Factorization, Intro to ML, Statistical Learning, Graph Machine Learning labs. June 2024 - Now
- Teacher Assistant (TA) in selected courses: Deep Learning, Computer Vision, Tensor Decompositions in Signal Processing, EEG Signal Processing, Medical Image Processing, Medical Image Systems, Biomedical Signal and Image Processing Lab: ~ 150 hours. Oct 2017 - Sep 2022
- Co-Supervision of several B.Sc. and M.Sc. students at EE department of SUT. Sep 2022 - Nov 2023

- EEG signal processing presentation at Sharif Neuroscience Symposium. Jan 2020 - Feb 2020
- Teaching fundamentals in Math and Physics for university entrance students. Oct 2014 - Oct 2015

## AWARDS AND HONORS

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- Winning 2025-2026 ANR projects DeSNAP (ANR-24-CE23-1895-01) postdoctoral fellowship grant
- Winning 2023-2025 [HI! PARIS](#) postdoctoral fellowship with a value of 120,800 euros, France.
- Winning 2023 [Digital Futures](#) postdoc fellowship (non-taken) of KTH University, value: 42K euros/year, Sweden.
- Best Ph.D. Student, EE Department, Sharif University of Technology.
- Top %1 in Graduate (and Ph.D.) national entrance exam.
- Ranked 1st in Master of Science, Bioelectric Major, EE Department, Sharif University of Technology.

## INVITED REVIEWER

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IEEE Transactions on Neural Networks and Learning Systems, IEEE Transactions on Cybernetics, Neural Networks Elsevier, Scientific Reports, IEEE Signal Processing Letters, IEEE Transactions on Affective Computing.

## COMPUTER SKILLS

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### Programming Languages

Python, MATLAB, C/C++ (Minor).

### Relevant Libraries

Keras, Tensorflow, PyTorch, OpenCV, L<sup>A</sup>T<sub>E</sub>X.

## LANGUAGES

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English: Professional Proficiency.

French: In the learning process, in the A2 level.

Farsi: Native Language.

## REFERENCES

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1. Dr. [Jhony H. Giraldo](#), Assistant Professor at Télécom Paris, Institut Polytechnique de Paris  
*Email:* jhony.giraldo@telecom-paris.fr
2. Dr. [Fragkiskos D. Malliaros](#), Associate Professor (HDR) at CentraleSupélec, Paris-Saclay University  
*Email:* fragkiskos.malliaros@centralesupelec.fr
3. Dr. [Sepideh Hajipour](#), Assistant professor at Sharif University of Technology, Iran  
*Email:* hajipour@sharif.edu