

Forough Arabshahi

Position

July 2018 - Present **Post-Doctoral Associate, Department of Machine Learning, School of Computer Science, Carnegie Mellon University, Pittsburgh, PA.**
Advisor: Dr. Tom Mitchell

Education

Spring 2018 **PhD in Electrical Engineering and Computer Science, University of California Irvine, Irvine, CA.**

GPA: 3.981/4.00

Thesis: *Learning Latent Hierarchical Structures via Probabilistic Models and Deep Learning*

Advisor: Dr. Animashree Anandkumar

Co-Advisor: Dr. Sameer Singh

Fall 2012 **M.Sc in Electrical Engineering, Communication Systems, School of Electrical Engineering, Amirkabir University of Technology, Tehran, Iran, .**

GPA: 18.49/20

Thesis: *Microwave Imaging of the Breast Tissue for Breast Cancer Detection*

Advisor: Dr. Hamid Sheikhzadeh-Nadjar

Summer 2010 **B.Sc in Electrical Engineering, Communications, School of Electrical and Computer Engineering, Shiraz University, Shiraz, Iran.**

GPA: 18.14/20

Thesis: *A MAC Layer Protocol for Underwater Wireless Acoustic Sensor Networks*

Advisor: Dr. Alireza Keshavarz-Haddad

Research Interests

- Neural Programming
- Deep Learning
- Probabilistic Learning
- Large Scale Machine Learning and Data Analysis
- Probabilistic Graphical Models

Publications

- **F. Arabshahi**, S. Singh, A. Anandkumar, “Towards Solving Differential Equations through Neural Programming”, *Published at the ICML workshop Neural Abstract Machines & Program Induction v2 (NAMPI), Stockholm, Sweden, 2018.*
- **F. Arabshahi**, S. Singh, A. Anandkumar, “Combining Symbolic Expressions and Black-box Function Evaluations for Training Neural Programs”, *Proceedings of the International Conference on Learning Representations (ICLR), 2018.*
- **F. Arabshahi**, S. Singh, A. Anandkumar, “Combining Symbolic Expressions and Black-box Function Evaluations in Neural Programs”, NIPS 2017 highlights, Learn How to Code a Paper with State of the Art Frameworks, NIPS 2017 MLtrain workshop.

- **F. Arabshahi**, A. Anandkumar, “Spectral Methods for Correlated Topic Models”, *Appeared in the Proceedings of the International Conference on Artificial Intelligence and Statistics (AISTATS), 2017*, PMLR 54:1439-1447.
- **F. Arabshahi**, R. Weiss, A. Anandkumar, “Beyond LDA: Spectral Methods for Topic Modeling Based on Exchangeable Partitions”, *NIPS workshop on Bayesian Nonparametrics: The Next Generation, 2015*.
- **F. Arabshahi**, F. Huang, A. Anandkumar, C. T. Butts, S. M. Fitzhugh, “Are you going to the party: depends, who else is coming? [Learning hidden group dynamics via conditional latent tree models]”, *Data Mining (ICDM), 2015 IEEE International Conference on, Atlantic City, NJ, 2015*.
- **F. Arabshahi**, F. Huang, A. Anandkumar, C. Butts, “Modeling and Predicting Dynamic Social Interactions Using Conditional Latent Random Fields”, *Statistical Inference for Network Models, NetSci Satellite Symposium 2014*.
- **F. Arabshahi**, S. Monajemi, H. Sheikhzadeh, K. Raahemifar, R. Faraji-Dana, “A Frequency Domain MVDR Beamformer for UWB Microwave Breast Cancer Imaging in Dispersive Mediums”, *13th IEEE International Symposium on Signal Processing and Information Technology (ISSPIT) 2013*.

Honors

- Spring 2018 **ICLR travel award**, *Recipient of \$500 for attending the International Conference on Learning Representations, Vancouver, CA.*
- Spring 2017 **Phi Beta Kappa Alumni International Scholarship**, *Recipient of \$2000 for continuing my graduate studies at University of California Irvine.*
- Fall 2015 **GHC scholarship**, *Grace Hopper Celebration of Women in Computing.*
- Fall 2015 **ICDM student award**, *IEEE International Conference on data mining student award, \$550.*
- Summer 2015 **UCI data science initiative summer fellowship**, *University of California Irvine, \$6,039 stipend, Acceptance rate: 15/115.*
- Fall 2014 **Bren School of ICS grace hopper grant**, *University of California Irvine.*
- Summer 2014 **Machine Learning summer school scholarship grant**, *Carnegie Mellon University.*
- Spring 2012 **Third rank, class of 2012**, *School of Electrical Engineering, Amirkabir University of Technology.*
- Fall 2010 **Exceptional talent student award**, *exempted from the Nationwide Graduate Entrance Examinations for graduate studies at Shiraz University.*

Internships

- Summer 2017 **Software Engineer Intern**, *Pepperdata Inc., Applying machine learning and data analysis tools to the time-series data available in Pepperdata.*
- Summer 2016 **Research Intern**, *Yahoo! Labs, Link industries: Advertisement clustering using spectral methods*, *Proposed a joint matrix and tensor factorization algorithm for clustering Yahoo’s advertisements for recommendation purposes.*

Teaching Experience

- Spring 2018 **“Spectral Methods: Latent Variable Models”**, *Invited lecture in Probabilistic Graphical Models, Department of Machine Learning, Carnegie Mellon University.*
- Fall 2013 **Computational methods in EECS (EECS 10)**, *Teaching Assistant, Department of Electrical Engineering and Computer Science, University of California Irvine.*
- Spring 2010 **Communications I**, *Teaching Assistant, School of Electrical and Computer Engineering, Shiraz University.*

Programming Languages

Python, C++, Java, MATLAB

References

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