Mehrdad Farajtabar

PERSONAL INFORMATION

Data Analysis and Simulation Lab
School of Computational Science and Engineering
College of Computing
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RESEARCH INTERESTS

- Data Mining, Big Data Analysis, Machine Learning
- Social Network Analysis, Networks Science, Health Analytics
- Stochastic Processes, Multivariate Point Processes, Survival Analysis
- Computer Vision, Reinforcement Learning, Deep Learning

EXPERIENCES

- Research Intern
  - DeepMind, Mountain View
  - September 2017- December 2017
  - More Robust Off-policy Policy Evaluation in Bandit and RL
  - Mentors: Mohammad Ghavamzadeh, Yinlam Chow
- Research Intern
  - Microsoft Research, Redmond, Washington
  - March 2016-August 2016
  - Analyzing and Predicting Health Status of Microsoft Band Users
  - Mentors: Ryen White, Emre Kiciman, Health Intelligence Team
- Research Intern
  - Max-Planck Institute for Software Systems, Kaiserslautern, Germany
  - June 2015-August 2015
  - Information and Innovation Diffusion in Social Networks
  - Mentor: Manuel Gomez Rodriguez
- Software Engineering Intern
  - Google Inc., Mountain View, California
  - May 2014-August 2014
  - Accuracy of Local Listing Classification Algorithms
- Graduate Research Assistant
  - August 2013-Now
  - Georgia Institute of Technology, Atlanta, Georgia
  - Data Mining Applications to Network Analysis

EDUCATION

PhD in Computational Science and Engineering, College of Computing, Georgia Institute of Technology, Atlanta, GA (August 2013-May 2018)
Advisors: Prof. Hongyuan Zha and Prof. Le Song

- **Current GPA: 3.72/4**,

MSc in Computational Science and Engineering, College of Computing, Georgia Institute of Technology, Atlanta, GA (August 2013-May 2016)

- **GPA: 3.72/4**

MSc in Artificial Intelligence, Department of Computer Engineering, Sharif University of Technology, Tehran, Iran (September 2009-January 2012)

- **GPA: 18.87/20**, 36/32 units

- **Thesis Title:** "Semi-supervised Learning and its Application to Image Categorization", 19.8/20, under Prof. Rabiee

BSc in Software Engineering, Department of Computer Engineering,
Sharif University of Technology (September 2005-June 2009)

- **GPA: 18.50/20**, 144/140 units). (Ranked 3rd among all 120 computer engineering students, including Hardware, Software and IT).

CONFERENCE PUBLICATIONS

1. **More Robust Doubly Robust Off-policy Evaluation.** M. Farajtabar, Y. Chow, M. Ghavamzadeh. International conference on Machine Learning (**ICML**), 2018
2. **Discrete Interventions in Hawkes Processes with Applications in Invasive Species Management.** A. Gupta, M. Farajtabar, B. Dilkina and H. Zha. International Joint Conference on Artificial Intelligence, (**IJCAI-ECAI**), 2018
3. **Learning Conditional Generative Models for Temporal Point Processes** S. Xiao, H. Xu, J. Yan, M. Farajtabar, X. Yang, L. Song, H. Zha. AAAI Conference on Artificial Intelligence, (**AAAI**), 2018
4. **Wasserstein Learning of Deep Generative Point Process Models**. S. Xiao*, M. Farajtabar*, X. Ye, J. Yan, L. Song, H. Zha. Neural Information Processing Systems **(NIPS)**, 2017, Long Beach, CA, USA. * denotes equal contribution!
5. **Fake News Mitigation via Point Processes Based Intervention**. M. Farajtabar, J. Yang, X. Ye, R. Trivedi, E. Khalil, S. Li, H. Xu, L. Song, H. Zha. International conference on Machine Learning (**ICML**), 2017, Sydney, Australia.
6. **Recurrent poisson factorization for temporal recommendation.** S. A. Hosseini, K. Alizadeh, A. Khodadadi, A. Arabzadeh, M. Farajtabar, H. Zha, H. R. Rabiee. International Conference on Knowledge Discovery and Data Mining (**KDD**), 2017, Halifax, Canada.
7. **Distilling Information Reliability and Source Trustworthiness from Digital Traces**, B. Tabibian, I. Valera, M. Farajtabar, L. Song, B. Scholkopf, and M. Gomez-Rodriguez, Submitted to World Wide Web Conference (**WWW**), 2017
8. **Correlated Cascades: Compete or Cooperate**. A. Zarezade, A. Khodadadi, M. Farajtabar, H. R. Rabiee, L. Song, and H. Zha. AAAI Conference on Artificial Intelligence (**AAAI**), 2017.
9. **Multi-stage Campaigning in Social Networks**. M. Farajtabar, X. Ye, S. Harati, L. Song, H. Zha. Neural Information Processing Systems **(NIPS)**, 2016, Barcelona, Spain.
10. **Smart Broadcasting: Do You Want to Be Seen?** M. Karimi, E. Tavakoli, M. Farajtabar, L. Song, M. Gomez-Rodriguez. International Conference on Knowledge Discovery and Data Mining **(KDD)**, 2016, San Francisco, USA
11. **Learning Granger Causality for Hawkes Processes**. H. Xu, M. Farajtabar and Hongyuan Zha. International conference on Machine Learning **(ICML)**, 2016, New York, USA.
12. **COEVOLVE: A Joint Point Process Model for Information Diffusion and Network Co-evolution**. M. Farajtabar, M. Gomez-Rodriguez, Y. Wang, S. Li, H. Zha, L. Song. Neural Information Processing Systems **(NIPS)**, 2015, Montreal, Quebec, Canada.
    Oral presentation, 15 out of 1838 submissions!
13. **Dirichlet-Hawkes Processes with Applications to Clustering Continuous-Time Document Streams**. N. Du, M. Farajtabar, A. Ahmed, A. J. Smola, L. Song. International conference on Knowledge discovery and data mining (**KDD**), 2015, Sydney, Australia.

14. **Learning Latent Variable Models by Improving Spectral Solutions with Exterior Point Methods**. A. Shaban, M. Farajtabar, B. Xie, L. Song, B. Boots. The Conference on Uncertainty in Artificial Intelligence (**UAI**), 2015, Amsterdam, Netherlands.

15. **Back to the Past: Source Identification in Diffusion Networks from Partially Observed Cascades**. M. Farajtabar, M. Gomez-Rodriguez, N. Du, M. Zamani, H. Zha, L. Song. International Conference on Artificial Intelligence and Statistics (**AISTATS**), 2015, San Diego, CA, USA.

    Oral presentation, 27 out of 442 submissions !

16. **NetCodec: Community Detection from Individual Activities**. T. Q. Long, M. Farajtabar, L. Song, H. Zha. SIAM Conference on Data Mining **(SDM)**, 2015, Vancouver, British-Columbia, Canada.

17. **Shaping Social Activity by Incentivizing Users**. M. Farajtabar, N. Du, M. Gomez-Rodriguez, I. Valera, H. Zha, L. Song. Neural Information Processing Systems **(NIPS)**, 2014, Montreal, Quebec, Canada.

18. **The Network You Keep: Analyzing Persons of Interest Through Network Decomposition.** S. Shokat-Fadaee, M. Farajtabar, R. Sundaram, J. A. Aslam. EEE/ACM International Conference on Advances in Social Networks Analysis and Mining **(ASONAM)**, 2014, Beijing, China.

    Best Student Paper Award!

19. **From Local Similarity to Global Coding; An Application to Image Classification.** A. Shaban, H. R. Rabiee, M. Farajtabar, M. Ghazvininejad. Computer Vision and Pattern Recognition **(CVPR)**, 2013, Portland, Oregon, USA.

20. **Online Object Representation Learning and it's Application to Object Tracking**. A. Shaban, H. R. Rabiee, M. Farajtabar, M. Fadaee. AAAI Spring Symposium on Lifelong Machine Learning **(AAAI)**, 2013, Stanford, CA, USA.

21. **Manifold Coarse Graining for Online Semi-supervised Learning**. M. Farajtabar, A. Shaban, H. R. Rabiee, M. H. Rohban . The European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases **(ECML PKDD)**, 2011, Athens, Greece.

22. **The Inefficiency of Equilibria in a Network Creation Game with Packet Forwarding**. M. Fazli, K. Khodamoradi, M. Farajtabar, M. Ghazvininejad, M. Ghodsi. International Conference on Current Trends in Theory and Practice of Computer Science **(SOFSEM)**, 2009, Czech Republic.

WORKSHOP

1. **Co-evolutionary Dynamics of Information Diffusion and Network Structure**. M. Farajtabar, M. Gomez-Rodriguez, Y. Wang, S. Li, H. Zha, L. Song. WWW Workshop on Activity and Events in Networks: Models, Methods & Applications, 2015, Florence, Italy.

2. **Learning Latent Variable Models by Improving Spectral Solutions with Exterior Point Methods**. A. Shaban, M. Farajtabar, B. Xie, L. Song, B. Boots. **NIPS** Workshop on Non-convex Optimization for Machine Learning: Theory and Practice

3. **Efficient Iterative Semi-supervised Classification on Manifold**. M. Farajtabar, H. R. Rabiee, A. Shaban, A. Soltani-Farani. Workshop on Optimization Based Methods for Emerging Data Mining Problems, in conjunction with International Conference on Data Mining **(ICDM)** , 2011, Vancouver, British-Columbia, Canada.

SUBMITTED AND PREPRINT

1. **Sick of Cramped News Feed? Prioritizing Events in Social Media using Multi-dimensional Point Process.** M. Farajtabar, S. Yousefi, L. Tran, L. Song, and H. Zha. In arXiv preprint, arXiv:1511.04145.

2. **Joint Modeling of Event Sequence and Time Series with Attentional Twin Recurrent Neural Networks** S. Xiao, J. Yan, M. Farajtabar, L. Song, X. Yang, H. Zha. arXiv preprint arXiv:1703.08524

JOURNAL

1. **COEVOLVE: A Joint Point Process Model for Information Diffusion and Network Co-evolution**. M. Farajtabar, M. Gomez-Rodriguez, Y. Wang, S. Li, H. Zha, L. Song. The Web Conference, Journal Track, 2018
2. **Rich User Modeling for Sleep and Exercise Quality; Exploration, Analysis, and Prediction**, M. Farajtabar, E. Kiciman, G. Nathan, R.W. Wight, International Journal of Data Science and Analytics, 2018
3. **On The Network You Keep: Analyzing Persons of Interest using Cliqster** S. Shokat-Fadaee, M. Farajtabar, R. Sundaram, J. A. Aslam, N. Passas. Social Network Analysis and Mining, Nov. 2015, DOI: 10.1007/s13278-015-0302-0
4. **Detecting Weak Changes in Dynamic Events over Networks.**, S. Li, Y. Xie, M. Farajtabar M, A. Verma, L. Song arXiv preprint arXiv:1603.08981. 2016 Mar 29. IEEE Transactions on Signal and Information Processing over Networks, 2016
5. **COEVOLVE: A Joint Point Process Model for Information Diffusion and Network Co-evolution**. M. Farajtabar, M. Gomez-Rodriguez, Y. Wang, S. Li, H. Zha, L. Song. Journal of Machine Learning Research, (**JMLR**), 2017

HONORS AND AWARDS

- ◇ Awarded **Student Travel Scholarship**, NIPS 2017, KDD 2016, ICML 2015.
- ◇ Awarded **Visiting Scholarship**, Max Planck Institute for Software Systems, June 2015-August 2015.
- ◇ **Best Student Paper Award**, IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining, 2014
- ◇ Offered **Fellowship** of Ecole Polytechnique Federale de Lausanne (EPFL) for Phd Program, 2013
- ◇ Offered **Fellowship of Exceptional Talents** of Sharif University of Technology for Phd Program, 2011 and 2012
- ◇ **1^{st} Rank (Gold Medal)**, National Scientific Olympiad in Computer Engineering, Summer 2009, Tehran
- ◇ **3^{rd} Rank** , National Graduate Entrance Exam in Computer Engineering, Artificial Intelligence field, Tehran, Iran, Spring 2009
- ◇ **4^{th} Rank**, National Graduate Entrance Exam in Computer Engineering, Artificial Intelligence field, Tehran, Iran, Spring 2008
- ◇ Awarded **Fellowship of Exceptional Talents** of Sharif University of Technology for M.Sc. Program, 2009-2011
- ◇ **3^{rd} Rank**, in cumulative GPA among over 120 BSc students of the department, Class of 2005, Sharif university of technology, 2009
- ◇ **55^{th} Rank**, Nationwide University Entrance Exam in Engineering and Applied Mathematics, Summer 2005, Among over 200,000 High School Students of 2nd Region.
- ◇ **Silver Medal**, 14^{th} Iranian National Olympiad in Informatics for High School Students, Summer 2004
- ◇ **Silver Medal**, 13^{th} Iranian National Olympiad in Informatics for High School Students, Summer 2003

TEACHING EXPERIENCES

Teaching:

- Engineering Probability and Statistics (B.Sc. Course), Sharif University of Technology, Spring 2012.
- Combinatorics and Fundamentals of Olympiad in Informatics (Shahid Soltani High School): 2004-2006
- Mathematics and Algorithms (Young Scholars Club): Summer 2009, Summer 2010

Teaching Assistant:

- Web Search and Text Mining (Georgia Tech), Spring 2018 (Dr. Zha)
- Computational Science and Engineering Algorithms (Georgia Tech), Fall 2014 (Dr. Dilkina)
- Discrete Mathematics (Sharif university of technology): Spring 2007 (Dr. Mahini), Spring 2008 (Dr. Sharifi), Spring 2010 (Dr. Izadi)
- Design and Analysis of Algorithms (Sharif university of technology): Spring 2010 (Dr. Mahini)
- Stochastic Processes (Sharif university of technology): Fall 2010 (Dr. Rabiee)

WORKING EXPERIENCES:

- R&D Engineer, Web Search and Blog Retrieval group, Bayan Technology, February 2013, July 2013
- Software Engineering Intern, Google Inc., May 2014-August 2014.
- Research Intern, Max-Plank Institute, June 2015-August 2015.
- Research Intern, Microsoft Research, May 2016-August 2016.

SERVICES:

Program Committee/ Reviewer for

- NIPS 2015, 2016, 2017, 2018
- ICML 2017, 2018
- WWW 2018
- AAAI 2017
- WSDM 2015
- ASONAM 2015, 2016
- IJCAI 2015
- UAI 2015, 2016
- AISTATS 2015, 2016, 2017
- The Computer Journal
- IEEE Transactions on Knowledge and Data Engineering

SKILLS

- Programming Languages: C/C++/C#, Python, Pascal, Java, MATLAB
- Operating Systems: Linux, Mac OS X, Windows
- Big Data: MPI, Hadoop
- Language: Persian and English, Familiar with Arabic

WEBSITE

- Homepage: `http://www.cc.gatech.edu/~mfarajta/`