

# Ehsan Hajiramezanali

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[Google Scholar Profile](#)

## EDUCATION

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Texas A&M University Ph.D. Candidate in Electrical Engineering	College Station, TX Aug. 2015 - Dec. 2020
Amirkabir University of Technology Ph.D. Candidate in Electrical Engineering	Tehran, Iran Sep. 2013 - Aug. 2015
Amirkabir University of Technology M.Sc. in Electrical Engineering	Tehran, Iran Sep. 2009 - Feb. 2012
K. N. Toosi University of Technology B.Sc. in Electrical Engineering	Tehran, Iran Sep. 2005 - Aug. 2009

## EXPERIENCE

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### Work Experience

- **AI Research Scientist, AstraZeneca**, Jan. 2021 - Present.
  - Researching on machine learning problems in computational biology and drug discovery.

### Research Experience

- **Graduate Research Assistant, Texas A&M University**, Aug. 2015 - Dec. 2020.
  - Researched on graph analytics and machine learning problems including graph representation learning, graph neural networks, deep learning, and Bayesian inference.
  - Researched on Bayesian machine learning and its applications in life sciences including gene expression analysis, temporal analysis of count data, multi-omics data integration, transfer learning, multi-domain learning for cancer subtype discovery, relational inference, optimal Bayesian classification of single-cell trajectories, and drug repositioning.
- **Graduate Research Assistant, Amirkabir University of Technology**, Aug. 2009 - July 2015
  - Researched on statistical signal processing and its applications including detection and estimation, stochastic differential equations, wavelet transformation, radar & sonar, and hidden Markov models.

### Teaching Experience

- **Teaching Assistant.** Texas A&M University, Aug. 2017 - May 2020.
  - Power Systems and Circuit Applications, Analog Electronics

## SELECTED PUBLICATIONS (Google Scholar Summary: H-index: 7, Citation: 154)

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★ = equal contribution with the first author

### Published/Accepted (chronological)

- [C7] **E. Hajiramezanali**, A. Hasanzadeh, N. Duffield, K. Narayanan, and X. Qian, “BayReL: Bayesian Relational Learning for Multi-omics Data Integration”, *Neural Information Processing Systems (NeurIPS 2020)*.
- [C6] A. Hasanzadeh★, **E. Hajiramezanali**★, S. Boluki, M. Zhou, N. Duffield, K. Narayanan, and X. Qian, “Bayesian Graph Neural Networks with Adaptive Connection Sampling”, *International Conference on Machine Learning (ICML 2020)*.
- [C5] **E. Hajiramezanali**, A. Hasanzadeh, N. Duffield, K. Narayanan, M. Zhou, and X. Qian, “Semi-Implicit Stochastic Recurrent Neural Networks”, *IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP 2020)*, Barcelona, Spain, May 2020. (*Oral Presentation*).
- [C4] **E. Hajiramezanali**, A. Hasanzadeh, N. Duffield, K. Narayanan, M. Zhou, and X. Qian, “Variational Graph Recurrent Neural Networks”, *Neural Information Processing Systems (NeurIPS 2019)*, Vancouver, Canada, Dec. 2019.

- [C3] A. Hasanzadeh\*, **E. Hajiramezanali\***, N. Duffield, K. Narayanan, M. Zhou, and X. Qian, “Semi-Implicit Graph Variational Auto-Encoders”, *Neural Information Processing Systems (NeurIPS 2019)*, Vancouver, Canada, Dec. 2019.
- [J2] **E. Hajiramezanali**, M. Imani, U. Braga-Neto, X. Qian, and E. Dougherty, “Scalable Optimal Bayesian Classification of Single-Cell Trajectories under Regulatory Model Uncertainty”, *BMC Genomics*, Volume 20, Number 6, June 2019.
- [C2] **E. Hajiramezanali**, S. Z. Dadaneh, A. Karbalayghareh, M. Zhou, and X. Qian, “Bayesian Multi-Domain Learning for Cancer Subtype Discovery from Next-Generation Sequencing Count Data”, *Neural Information Processing Systems (NeurIPS 2018)*, Montreal, Canada, Dec. 2018.
- [C1] **E. Hajiramezanali**, K. He, P. Figueiredo, S. Sze, X. Qian, “Impact of RNA-seq Read Alignment on Differential Alternative Splicing Detection,” *14th Annual MidSouth Conference on Computational Biology and Bioinformatics MCBIOS 2017*, AR, USA, March 2017.
- [J1] S. H. Fouladi, **E. Hajiramezanali**, H. Amindavar, J. A. Ritcey, and P. Arabshahi, “Denoising Based on Multivariate Stochastic Volatility Modeling of Multiwavelet Coefficients,” *IEEE Transactions on Signal Processing*, Volume 61, Number 22, November 2013.

## Under Review

- **E. Hajiramezanali**, S. Z. Dadaneh, P. Figueiredo, S. Sze, M. Zhou, and X. Qian, “Differential Expression Analysis of Dynamical Sequencing Count Data with a Gamma Markov Chain,” *Bioinformatics*, 2020.

## ACADEMIC HONORS

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- Recipient of the **Chevron Scholarship**, Texas A&M University. [2020]
- Finalist nominee for the **Best Student Paper Award**, 45th International Conference on Acoustics, Speech, and Signal Processing (ICASSP). [2020]
- Top 33% **highest-scoring reviewers**, ICML. [2020]
- Recipient of **US Residency under the Category of National Interest**. [2020]
- Finalist nominee for the **2020 Google AI Fellowship**, Texas A&M University. [2020]
- Finalist nominee for the **Outstanding Engineering Awards**, College of Engineering, Texas A&M University. [2019]
- Recipient of the **Outstanding Graduate Student Award**, Department of Electrical and Computer Engineering, Texas A&M University. [2019]
- Top 50% **highest-scoring reviewers**, NeurIPS. [2019]
- Recipient of the **Travel Grant Award** from Scientific Computing meets Machine Learning and Life Sciences. [2019]
- Recipient of the **NSF Travel Grant Award** from International Workshop on Computational Network Biology: Modeling, Analysis, and Control. [2018]
- Recipient of the **Travel Grant Award** from the 14th Annual MCBIOS Conference. [2017]
- **Ranked 71st** among nearly 40,000 participants in the Nation Wide Universities Entrance Exam for MSc. Degree among All Branches of Electrical Engineering, Iran. [2009]

## PROFESSIONAL ACTIVITIES

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### Reviewer

- **Conferences:** BHI 2017, NeurIPS 2019, AAAI 2019, EMBC 2019, NeurIPS 2020, ICML 2020, AAAI 2020, IEEE BigData 2020, ICLR 2021, ICML 2021
- **Journals:** IET Control, Theory & Applications, IET Radar, Sonar & Navigation, IEEE/ACM Transactions on Computational Biology and Bioinformatics, IEEE Intelligent Systems, PLOS ONE, IEEE Transactions on Signal Processing

### Open source contributions

- VGRNN, SIG-VAE, GDC, GMNB: [\[GitHub Repositories\]](#)