

Misagh Kordi

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Research Interests

Algorithms and Complexity Theory, Approximation, Randomized and Fixed Parameter Algorithms.

Machine Learning, Random Forest, SVM, CNN, LSTM, Active Learning, Genetic Algorithm .

Education

6/2019-2022 **Postdoctoral Researcher.**

Department of Computer Science and Engineering
University of California, Los Angeles, California, USA

Mentors: Dr. Eran Halperin and Sriram Sankararaman

2014-2019 **Ph.D. in Computer Science and Engineering.**

Department of Computer Science and Engineering
University of Connecticut, Storrs, Connecticut, USA

Advisor: Dr. Mukul S. Bansal

Dissertation Title: Inferring Microbial Gene Family Evolution Using Duplication-Transfer-Loss Reconciliation: Algorithms and Complexity.

2010-2013 **M.Sc in Algorithms and Computation.**

Department of Computer Science and Engineering
University of Tehran, Tehran, Iran

Dissertation Title: Randomized Approximation Algorithm For Matroid Secretary Problem.

Publications

- 2019 **Misagh Kordi**, S. Kundu, and M. S. Bansal, “On Inferring Additive and Replacing Horizontal Gene Transfers Through Phylogenetic Reconciliation”, ACM Conference on Bioinformatics, Computational Biology, and Health Informatics (ACM-BCB) 2019; to appear.
- 2018 M. S. Bansal, M. Kellis, **M. Kordi**, and S. Kundu, “RANGER-DTL 2.0: Rigorous Reconstruction of Gene-Family Evolution by Duplication, Transfer, and Loss”, *Bioinformatics: in press*, DOI: 10.1093/bioinformatics/bty31
- 2017 **Misagh Kordi**, Mukul S. Bansal, “Exact Algorithms for Duplication-Transfer-Loss Reconciliation with Non-Binary Gene Trees”, *IEEE/ACM Transactions on Computational Biology and Bioinformatics: in press*, DOI: 10.1109/TCBB.2017.2710342
- 2017 **Misagh Kordi**, Mukul S. Bansal, “On the Complexity of Duplication-Transfer-Loss Reconciliation with Non-Binary Gene Trees”, *IEEE/ACM Transactions on Computational Biology and Bioinformatics*, DOI: 10.1109/TCBB.2015.2511761
- 2016 **Misagh Kordi** and Mukul S. Bansal, “Exact Algorithms for Duplication-Transfer-Loss Reconciliation with Non-Binary Gene Trees”, *Seventh ACM Conference on Bioinformatics, Computational Biology, and Health Informatics, ACM-BCB 2016*, DOI: 10.1145/2975167.2975198
- 2015 **Misagh Kordi** and Mukul S. Bansal, “On the Complexity of Duplication-Transfer-Loss Reconciliation with Non-Binary Gene Trees”, *Eleventh International Symposium on Bioinformatics Research and Applications, ISBRA 2015, LNCS 9096: 187-198*, DOI: 10.1007/978-3-319-19048-8_16

In **Misagh Kordi** and M. S. Bansal, “Handling Gene Tree Uncertainty in Duplication-Preparation Transfer-Loss Reconciliation: Algorithms and Applications”

Awards and Honors

- Predoctoral Honorable Mention award for outstanding scholarly accomplishments and promise of continued research achievement, 2017, Department of Computer Science and Engineering, University of Connecticut
- Predoctoral Honorable Mention award for outstanding scholarly accomplishments and promise of continued research achievement, 2016, Department of Computer Science and Engineering, University of Connecticut
- Semifinalist in Iranian National Olympiad in 2 majors: Informatics, Mathematics, 2003
- Semifinalist in Iranian National Olympiad in two majors: Informatics, Mathematics, 2002

Software Development

Implement fixed parameter, exact, and heuristic algorithms for the DTL reconciliation of Non-binary gene trees, which is now part of the widely used RANGER-DTL software package.

Teaching Experience

Spring 2019 Lab Instructor for Python, CSE 1010.
Fall 2017 Teaching Assistant for Algorithms (graduate level), CSE 5500.
Spring 2016 Teaching Assistant for Data Structures and Introduction to Algorithms, CSE 2100.
Fall 2015 Teaching Assistant for Theory of Computation, CSE 3502.
Spring 2015 Teaching Assistant for Data Structures and Introduction to Algorithms, CSE 2100.
Fall 2014 Teaching Assistant for Introduction to Discrete Systems, CSE 2500.

Technical Skills

Proficient in *C++*, Java, Python.

References

Dr. Mukul S. Bansal

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Dr.Ahmad Jbara

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Dr. Dina Goldin

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