Curriculum Vitae

Yasamin Tabatabaee

Contact Information

Department of Computer Science
University of Illinois at Urbana-Champaign
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Education

- Ph.D. in Computer Science, University of Illinois at Urbana-Champaign, 8/2021-Present
  Advisor: Prof. Tandy Warnow, GPA: 4.0/4.0
- M.S. in Computer Science, University of Illinois at Urbana-Champaign, 2023
  Advisor: Prof. Tandy Warnow, GPA: 4.0/4.0
- B.S. in Computer Engineering, Sharif University of Technology, Tehran, Iran, 2021
  GPA: 19.11/20.00 (3.98/4.0)

Publications

Note: * indicates equal contribution.

- T. Warnow, **Y. Tabatabaee** and S.N.Evans. (2024) Statistically Consistent Estimation of Rooted and Unrooted Level-1 Phylogenetic Networks from SNP data. Proceedings of RECOMB Comparative Genomics (RECOMB-CG) 2024.
- S. Arasti*, P. Tabaghi*, **Y. Tabatabaee** and S. Mirarab. (2024). Optimal Tree Metric Matching Enables Phylogenomic Branch Length Reconciliation. International Conference on Research in Computational Molecular Biology (RECOMB 2024). [preprint][code][data]
- **Y. Tabatabaee**, S. Roch and T. Warnow. (2023). QR-STAR: A polynomial-time statistically consistent method for rooting species trees under the coalescent. Journal of Computational Biology, Volume 30, Number 11 (Special issue for extended RECOMB 2023 papers). [paper][code][data]
- **Y. Tabatabaee**, C. Zhang, T. Warnow and S. Mirarab. (2023). Phylogenomic branch length estimation using quartets. Bioinformatics, Vol. 39, Issue Supplement 1, pages i185-i193, Special issue for Intelligent Systems for Molecular Biology and European Conference on Computational Biology (ISMB/ECCB) 2023 [paper][code][data]
- M. Park*, **Y. Tabatabaee***, V. Ramavarapu*, B. Liu, V. Pailodi, R. Ramachandran, D. Korobskiy, F. Ayres, G. Chacko, and T. Warnow. (2023) Identifying well connected communities in real-world and synthetic networks, International Conference on Complex Networks and Their Applications 2023 [paper][code] [data]
- **Y. Tabatabaee**, S. Roch and T. Warnow. (2023). Statistically consistent rooting of species trees under the multispecies coalescent model. International Conference on Research in Computational Molecular Biology (RECOMB 2023), pages 41-57 [paper][code][data]

- J. Willson, **Y. Tabatabaee**, B. Liu, and T. Warnow. (2023). DISCO+QR: rooting species trees in the presence of GDL and ILS. Bioinformatics Advances, Volume 3, Issue 1, vbad015, Special issue for ISCB-Latin America Conference on Bioinformatics (ISCB-LA) 2022 [paper][data]

- **Y. Tabatabaee**, K. Sarkar, and T. Warnow (2022). Quintet Rooting: rooting species trees under the multi-species coalescent model. Bioinformatics, Vol. 38, Supplement 1, pages i109-i117, Special issue for Intelligent Systems for Molecular Biology (ISMB) 2022 [paper][code][data]

- D. Lin, **Y. Tabatabaee**, Y. Pote and D. Jevdjic. (2022). Managing reliability skew in DNA storage. Proceedings of the 49th Annual International Symposium on Computer Architecture (ISCA 2022). pages 482–494. [paper]

Papers under review

- **Y. Tabatabaee**, C. Zhang, and S. Mirarab. (2024). CASTLES-Pro: Species tree branch length estimation despite incomplete lineage sorting, duplication, and loss [under review at European Conference on Computational Biology (ECCB) and Bioinformatics]

- M. Park*, **Y. Tabatabaee***, V. Ramavarapu*, B. Liu, V. Pailodi, R. Ramachandran, D. Korobskiy, F. Ayres, G. Chacko, and T. Warnow. (2024) Well-Connectedness and Community Detection [under review at PLOS Complex Networks]

Thesis

- **Y. Tabatabaee** (2023). Improving the accuracy of community detection methods using Connectivity Modifier. MS thesis. University of Illinois Urbana-Champaign [thesis][code][data]

Honors & Awards

- UIUC C.L. and Jane Liu Award, 3/2023

- *Travel Awards*: RECOMB 2023 Travel Fellowship, UIUC Graduate College Conference Presentation Award 2023, ISMB 2022 Virtual Fellowship

- Iranian National Elites Foundation (INEF) Fellowship, Tehran, Iran, 9/2016-9/2020

- Silver Medal in 33rd Iranian National Mathematical Olympiad, Tehran, Iran, 9/2015

- Bronze Medal in 2nd Iranian National Geometry Olympiad (IGO), Tehran, Iran, 9/2015

- Bronze Medal in 3rd European Girls' Mathematical Olympiad (EGMO), Antalya, Turkey, 4/2014

- Member of the National Organization for Development of Exceptional Talents (NODET), Tehran, Iran, 9/2009–9/2016

Research Experience

- Graduate Research Assistant, Department of Computer Science, University of Illinois at Urbana-Champaign, 8/2021-Present

- Research Intern, School of Computing, National University of Singapore, Singapore, 7/2019-9/2019

- Undergraduate Research Assistant, Sharif University of Technology, Bioinformatics Research Laboratory, Tehran, Iran, 6/2018-9/2018

Teaching Experience

- Teaching Assistant, University of Illinois at Urbana-Champaign
  * Fall 2022 and 2023, CS 581: Algorithmic Genomic Biology [webpage], Instructor: Prof. Warnow
- Teaching Assistant, Sharif University of Technology, Tehran, Iran
  * Fall 2020, CE 719: Deep Learning (graduate course) [webpage], Instructor: Prof. Beigy
  * Fall 2020, CE 717: Machine Learning, Instructor: Prof. Soleymani
  * Spring 2020, CE 254: Design of Algorithms (co-head TA), Instructor: Prof. Sharifi Zarchi
  * Fall 2019, CE 254: Linear Algebra, Instructor: Prof. Motahari
  * Spring 2018, CE 254: Data Structures & Algorithms, Instructor: Prof. Sharifi Zarchi
  * Spring 2018, CE 115: Discrete Structures, Instructor: Prof. Abam
- Mathematics Instructor, Farzanegan High School, Tehran, Iran, 9/2016-6/2017
  * Teaching Combinatorics and Geometry to students preparing for Iranian National Mathematical Olympiad

Talks

- "Phylogenomic branch length estimation using quartets"
  - 31st Conference on Intelligent Systems for Molecular Biology (ISMB), July 27, 2023. [talk][slides]
  - 19th UIUC Coordinated Science Laboratory Student Conference (CSLSC), February 16, 2024
- "Statistically consistent rooting of species trees under the multispecies coalescent model"
  - 27th Conference on Research in Computational Molecular Biology (RECOMB), April 17, 2023. [talk][slides]
- "Quintet Rooting: rooting species trees under the multi-species coalescent model"
  - 30th Conference on Intelligent Systems for Molecular Biology (ISMB), July 13, 2022. [talk][slides]
  - UIUC Computational Biology and Bioinformatics Seminar, September 9, 2022

Academic Services

- External reviewer for RECOMB 2024

Last updated: March 17, 2024