

# CURRICULUM VITAE

YASAMIN TABATABAEE

## CONTACT INFORMATION

Siebel School of Computing and Data 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), top 5% of class

## PUBLICATIONS

Note: \* indicates equal contribution.

12. T. Warnow, **Y. Tabatabaee** and S.N.Evans. (2025). Advances in Estimating Level-1 Phylogenetic Networks from Unrooted SNPs. *Journal of Computational Biology*. [[paper](#)]
11. **Y. Tabatabaee**, E. Wedell, M. Park and T. Warnow. (2024). FastEnsemble: A new scalable ensemble clustering method. Accepted to International Conference on Complex Networks and Their Applications 2024 [[preprint](#)][[code](#)][[data](#)]
10. 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. *PLOS Complex Systems* [[paper](#)][[code](#)][[data](#)]
9. 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*. [[paper](#)]
8. S. Arasti\*, P. Tabaghi\*, **Y. Tabatabaee** and S. Mirarab. (2024). Optimal Tree Metric Matching Enables Phylogenomic Branch Length Estimation. *International Conference on Research in Computational Molecular Biology (RECOMB 2024)*. [[paper](#)][[code](#)][[data](#)] Acceptance rate: 16.5%
7. **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](#)]

6. **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](#)] Acceptance rate: 17.9%
5. 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](#)]
4. **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](#)] Acceptance rate: 19.6%
3. 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](#)]
2. **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](#)] Acceptance rate: 19.8%
1. 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](#)] Acceptance rate: 16.8%

## Papers under review

- **Y. Tabatabaee**, C. Zhang, S. Arasti and S. Mirarab. (2025). Species tree branch length estimation despite incomplete lineage sorting, duplication, and loss. Under review at *Molecular Biology and Evolution*. [[preprint](#)][[code](#)][[data](#)]
- **Y. Tabatabaee**, S. Claramunt, and S. Mirarab. (2025). Coalescent-based branch length estimation improves dating of species trees. Under review at *Molecular Biology and Evolution*. [[preprint](#)][[code and data](#)]
- S. Arasti, P. Tabaghi, **Y. Tabatabaee** and S. Mirarab. (2025). Branch length transforms using optimal tree metric matching. Under review at *Systematic Biology* (extended version of RECOMB 2024 paper). [[preprint](#)][[code](#)][[data](#)]
- **Y. Tabatabaee**, E. Wedell, M. Park and T. Warnow. (2025). Scalable ensemble clustering on large networks. Under review at *PLOS Complex Systems* (extended version of CNA 2024 paper) [[preprint](#)][[code](#)][[data](#)]

## Thesis

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

## RESEARCH EXPERIENCE

- Visiting Research Scholar, Department of Electrical and Computer Engineering, University of California San Diego, 5/2024-8/2024, Supervisor: Prof. Siavash Mirarab
- Graduate Research Assistant, Department of Computer Science, University of Illinois at Urbana-Champaign, 8/2021-Present, Supervisor: Prof. Tandy Warnow
- 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) [[course material](#)], Instructor: Prof. Beigy
  - \* Fall 2020, CE 717: Machine Learning, Instructor: Prof. Soleymani
  - \* Spring 2020, CE 354: Design of Algorithms (co-head TA) [[course material](#)], Instructor: Prof. Sharifi Zarchi
  - \* Fall 2019, CE 282: Linear Algebra, Instructor: Prof. Motahari
  - \* Spring 2018, CE 254: Data Structures & Algorithms, [[course material](#)] Instructor: Prof. Sharifi Zarchi
  - \* Spring 2018, CE 115: Discrete Structures, Instructor: Prof. Abam
  - \* Fall 2017, CE 153: Fundamentals of Programming, Instructor: Prof. Rivadeh
- **Mathematics Instructor**, Farzanegan High School, Tehran, Iran, 9/2016-6/2017
  - \* Teaching Combinatorics and Geometry to students preparing for Iranian National Mathematical Olympiad

## TALKS

- **Novel computational methods for discordance-aware phylogenomic analysis**
  - \* University of California Los Angeles, Department of Computer Science and Computational Medicine, Sankararaman lab meeting, December 2024
  - \* Princeton University, Department of Computer Science, Raphael lab meeting, November 2024
  - \* University of California San Diego, Department of Electrical and Computer Engineering, Mirarab lab meeting, July 2024
- **Phylogenomic branch length estimation using quartets**
  - \* 31st Conference on Intelligent Systems for Molecular Biology (ISMB), July 2023. [[talk](#)][[slides](#)]
  - \* 19th UIUC Coordinated Science Laboratory Student Conference (CSLSC), February 2024
- **Statistically consistent rooting of species trees under the multispecies coalescent model**
  - \* 27th Conference on Research in Computational Molecular Biology (RECOMB), April 2023. [[talk](#)][[slides](#)]
- **Quintet Rooting: rooting species trees under the multi-species coalescent model**
  - \* 30th Conference on Intelligent Systems for Molecular Biology (ISMB), July 2022. [[talk](#)][[slides](#)]
  - \* UIUC Computational Biology and Bioinformatics Seminar, September 2022

## HONORS, AWARDS & FELLOWSHIPS

- Dissertation Completion Fellowship, Graduate College, UIUC, 8/2024-8/2025
- Mavis Future Faculty Fellowship, Grainger College of Engineering, UIUC, 8/2024-8/2025
- Firdawsi Science Award, Graduate College, UIUC, 1/2025
- C.L. and Jane Liu Award, Department of Computer Science, UIUC, 3/2023
- *Travel Awards*: RECOMB 2023 Travel Fellowship, UIUC Graduate College Conference Presentation Award 2023, ISMB 2022 Virtual Fellowship
- 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

## ACADEMIC SERVICES

- **Conference reviewing:** RECOMB 2024
- **Journal reviewing:** Bioinformatics Advances 2024

## REFERENCES

- Tandy Warnow (PhD advisor)  
Grainger Distinguished Chair in Engineering  
Siebel School of Computing and Data Science  
University of Illinois at Urbana-Champaign  
<https://tandy.cs.illinois.edu/>  
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- Siavash Mirarab  
Associate Professor  
Department of Electrical and Computer Engineering  
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- Sebastien Roch  
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Last updated: Feb 26, 2025