Tasfia Zahin

tkz5115@psu.edu, ztasfia25@gmail.com
https://tasfiazahin.github.io/

Education

The Pennsylvania State University — Pennsylvania, USA
Ph.D. Candidate, Computer Science and Engineering — Aug 2021 - Present

- Advisor: Dr. Mingfu Shao
- Research area: My research interests are in Bioinformatics and Computational Biology. Specifically, I work with short- and long-read RNA-seq data to improve the accuracy and resolution of circular RNA assembly.

Bangladesh University of Engineering and Technology (BUET) — Dhaka, Bangladesh
BS.c. in Computer Science and Engineering — Feb 2015 - Apr 2019

- CGPA: 3.90/4.00

Work Experience

The Pennsylvania State University — Pennsylvania, USA
Graduate Research/Teaching Assistant — Aug 2021 - Present

Ahsanullah University of Science and Technology (AUST) — Dhaka, Bangladesh
On study leave, Department of Computer Science and Engineering — July 2019 - July 2021

Dhanmondi Tutorial — Dhaka, Bangladesh
Teacher — Jan 2019 - April 2019

Publications

1. **Tasfia Zahin**, Irtesam Mahmud Khan, Mingfu Shao. Accurate Reconstruction of Circular RNAs from Complex Rolling Circular Long Reads with CircPlex. *bioRxiv*, Nov 2025. https://doi.org/10.1101/2025.11.21.689841
2. Zhezheng Song*, **Tasfia Zahin***, Xiang Li, Mingfu Shao. Accurate Detection of Tandem Repeats from Error-Prone Sequences with EquiRep. *Genome Research*, December 2025 35: 2714-2721.
3. Zhezheng Song*, **Tasfia Zahin***, Xiang Li, Mingfu Shao. Accurate Detection of Tandem Repeats from Error-Prone Sequences with EquiRep. Proceedings of *29th International Conference on Computational Molecular Biology (RECOMB 2025). Lecture Notes in Computer Science*, vol 15647, pp. 390–394. Springer, Cham, 2025.
4. **Tasfia Zahin**, Qian Shi, Carl Zang, Mingfu Shao. Accurate Assembly of Circular RNAs with TERRACE. *Genome Research*, September 2024 34: 1365-1370.
5. **Tasfia Zahin**, Qian Shi, Carl Zang, Mingfu Shao. Accurate Assembly of Circular RNAs with TERRACE. Proceedings of *28th International Conference on Computational Molecular Biology (RECOMB 2024). Lecture Notes in Computer Science*, vol 14758, pp. 444–447. Springer, Cham, 2024.
6. Xiaofei Carl Zang, **Tasfia Zahin**, Iretsam Mahmud Khan, Qian Shi, Yi Xing, Mingfu Shao. Amaranth: Enhanced Single-Cell Transcript Assembly via Discriminative Modeling of UMI Reads and Internal Reads. *bioRxiv*, Nov 2025. https://doi.org/10.1101/2025.11.24.690228
7. Irtesam Mahmud Khan, Xiaofei Carl Zang, Ange Teng, **Tasfia Zahin**, Mingfu Shao. Boosting Transcript Assembly via Delineating Transcript Start and End Sites. *bioRxiv*, Oct 2025. https://doi.org/10.1101/2025.10.13.682211
8. **Tasfia Zahin***, Md Hasin Abrar*, Mizanur Rahman Jewel, Tahrina Tasnim, Md Shamsuzzoha Bayzid, Atif Rahman. An alignment-free method for phylogeny estimation using maximum likelihood. *BMC bioinformatics*, 2025 Mar 7;26(1):77.

Academic Services

- Sub-reviewer of *ISMB 2026*, *RECOMB 2026*, *RECOMB 2025*, *WABI 2025*, *RECOMB 2024*, *ISMB 2024*, *WABI 2024*, *WABI 2023*, *RECOMB 2022*, *ACM-BCB 2022*.
- Volunteer at the 2024 Workshop on Emerging Methods for Sequence Analysis (WEMSA 2024) organized by The Pennsylvania State University.

Conference Participation

- Research and poster presenter at RECOMB 2025, Seoul, South Korea.
- Research presenter at RECOMB 2024, Boston, Massachusetts, USA.
- Research presenter at the 2023 Workshop on Emerging Methods for Sequence Analysis (WEMSA 2023) organized by The Pennsylvania State University.
- Attendee of ISMB 2022, Madison, Wisconsin, USA.
- Attendee of RECOMB 2020 Virtual Conference.

Teaching Experiences

- Teaching assistant for CMPSC 465 Data Structures and Algorithms, Fall 2021, The Pennsylvania State University.
- Teaching assistant for CMPSC 465 Data Structures and Algorithms, Fall 2024, The Pennsylvania State University.
- Instructor for CSE 2186 Basic Programming Techniques, Fall 2020, Ahsanullah University of Science and Technology.
- Instructor for CSE 1287 and CSE 1288 Computer Programming, CSE 2146 Introduction to Computer Systems, Spring 2020, Ahsanullah University of Science and Technology.
- Instructor for CSE 3107 and CSE 3108 Microprocessors, Spring 2020, Ahsanullah University of Science and Technology.
- Instructor for CSE 3107 and CSE 3108 Microprocessors, CSE 2186 Basic Programming Techniques Fall 2019, Ahsanullah University of Science and Technology.
- Instructor for CSE 3107 and CSE 3108 Microprocessors, Spring 2019, Ahsanullah University of Science and Technology.

Awards and Honors

- Winner of Huawei Seeds for the Future, 2019, Travel Grant by Huawei Technologies.
- Dean's List Honor, 2015-2019, Bangladesh University of Engineering and Technology (BUET).
- Daily Star O and A Level Award of Excellence, 2012 and 2014, The Daily Star Newspaper, Bangladesh.

REFERENCE

Dr. Mingfu Shao
Associate Professor
Department of Computer Science and Engineering
The Pennsylvania State University
W205A Westgate Building
University Park, PA 16802
Email: mxs2589@psu.edu

Dr. Atif Hasan Rahman
Associate Professor
Department of Computer Science and Engineering
Bangladesh University of Engineering and Technology (BUET)
ECE Building, West Palashi, Dhaka-1000, Bangladesh
Email: atif@cse.buet.ac.bd