Tasfia Zahin

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

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

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