

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
<i>Graduate Research/Teaching Assistant</i>	Aug 2021 - Present
Ahsanullah University of Science and Technology (AUST)	Dhaka, Bangladesh
<i>On study leave, Department of Computer Science and Engineering</i>	July 2019 - July 2021
Dhanmondi Tutorial	Dhaka, Bangladesh
Teacher	Jan 2019 - April 2019

PUBLICATIONS

1. **Tasnia 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*, **Tasnia 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*, **Tasnia 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. **Tasnia Zahin**, Qian Shi, Carl Zang, Mingfu Shao. Accurate Assembly of Circular RNAs with TERRACE. *Genome Research*, September 2024 34: 1365-1370.
 5. **Tasnia 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, **Tasnia Zahin**, Irtesam 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, **Tasnia 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. **Tasnia Zahin***, Md Hasin Abrar*, Mizanur Rahman Jewel, Tahrina Tasnim, Md Shamuzzoha 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
PARTICIPA-
TION**

- 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, Pennsylvania, USA.
- 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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Dr. Atif Hasan Rahman

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