

TASFIA ZAHIN

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<https://tasfiazahin.github.io/>

EDUCATION

	The Pennsylvania State University <i>Ph.D. Candidate, Computer Science and Engineering</i>	Pennsylvania, USA Aug 2021 - Present
	<ul style="list-style-type: none">• 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 <i>BS.c. in Computer Science and Engineering</i>	Feb 2015 - Apr 2019
	<ul style="list-style-type: none">• CGPA: 3.90/4.00	

WORK EXPERIENCE

	The Pennsylvania State University <i>Graduate Research/Teaching Assistant</i>	Pennsylvania, USA 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 Teacher	Dhaka, Bangladesh
		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. In *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. In *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**, 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, **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 Sham-suzzoha 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.
- 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

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Dr. Atif Hasan Rahman

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