

TASFIA ZAHIN

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EDUCATION

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

WORK EXPERIENCE

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

PUBLICATIONS

1. Tasfia Zahin, Irtesam Mahmud Khan, Mingfu Shao. Accurate Reconstruction of Circular RNAs from Complex Rolling Circular Long Reads with CircPlex. *bioRxiv*, 2025. *Under review at ISMB 2026*.
2. 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 Research in Computational Molecular Biology (RECOMB 2025)*. *Genome Research*, 2024.
3. Tasfia Zahin, Qian Shi, Carl Zang, Mingfu Shao. Accurate Assembly of Circular RNAs with TERRACE. *Proceedings of 28th International Conference on Research in Computational Molecular Biology (RECOMB 2024)*. *Genome Research*, 2024.
4. 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*, 2025. *Under review at ISMB 2026*.
5. Irtesam Mahmud Khan, Xiaofei Carl Zang, Ange Teng, Tasfia Zahin, Mingfu Shao. Boosting Transcript Assembly via Delineating Transcript Start and End Sites. *bioRxiv*, 2025. *Under review at Genome Biology*.
6. Tasfia 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.

TECHNICAL SKILLS

Languages: C++, C, Python, Java, MATLAB, Assembly (Intel 8086)
Scripting Languages: L^AT_EX, Bash
Genome Browser: Integrative Genome Browser (IGV)
Deep Learning Libraries: Keras, Pytorch
Database Language: SQL, PL/SQL
Hardware: Proteus, Atmel Studio, Arduino

ACADEMIC EXPERIENCES

- Teaching assistant for CMPSC 465, Fall 2021, The Pennsylvania State University.
- Teaching assistant for CMPSC 465, Fall 2024, The Pennsylvania State University.
- Research and poster presenter at RECOMB 2025.
- Research presenter at RECOMB 2024.
- 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.
- Research presenter at the 2023 Workshop on Emerging Methods for Sequence Analysis (WEMSA 2023) organized by The Pennsylvania State University.
- Attendee of ISMB 2022 Conference at Madison, Wisconsin.
- Attendee of RECOMB 2020 Virtual Conference.
- Member of BUET CS Bioinformatics group, a platform for sharing ideas and related research topics.

OTHER EXPERIENCES

- Member of IT support sub-committee, The 23rd International Conference on Computer and Information Technology (ICCIT) 2020, hosted by Ahsanullah University of Science and Technology (AUST).
- Member of executive committee, Ahsanullah University of Science and Technology (AUST) Robotics Club.
- Mentor of Bangladeshi Women in Computer Science and Engineering (BWCSE) Mentor-mentee program, Bangladesh University of Engineering and Technology (BUET).
- Member of Bangladeshi Women in Computer Science and Engineering (BWCSE), Bangladesh University of Engineering and Technology (BUET).
- Delegate of Bangladesh Youth Leadership Summit 2016.
- Adjudicator of BRAC Inter-University Debate Competition 2016.
- Member of Bangladesh University of Engineering and Technology (BUET) Debating Club.
- Media and Publication Secretary of English Medium Buetian's Association (EMBA), Bangladesh University of Engineering and Technology (BUET).

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

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Dr. Atif Hasan Rahman

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