Tabassum Mahmud

Iowa State University

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Google Scholar Profile

Research

Interests: Operating Systems, Storage Systems, HPC, AI in Systems.

Education

Iowa State University — Ames, IA, USA
Ph.D. in Computer Engineering — Aug 2019 – May 2025
Advisor: Mai Zheng
Dissertation: Building Reliable and Efficient File Systems

Chittagong University of Engineering and Technology — Chittagong, Bangladesh
B.Sc. in Electrical and Electronic Engineering — Mar 2013 – Dec 2017

Professional Experience

Research Assistant, Iowa State University, Ames, IA, USA — Aug 2019 – May 2025
Data Storage Lab

Teaching Assistant, Iowa State University, Ames, IA, USA — Jan 2024 – May 2024
CprE 5630: Advanced Data Storage

Teaching Assistant, Iowa State University, Ames, IA, USA — Jan 2023 – May 2023
CprE 3080: Operating Systems

Network Engineer, Fiber at Home, Dhaka, Bangladesh — Mar 2018 – Nov 2018

Publications

TOCS'25 — **Analyzing Configuration Dependencies of File Systems**
Tabassum Mahmud, Om Rameshwar Gatla, Duo Zhang, Carson Love, Ryan Bumann, Varun Girimaji and Mai Zheng.

HotStorage'24 — **Revisiting Erasure Codes: A Configuration Perspective.**
Runzhou Han, Chao Shi, **Tabassum Mahmud**, Zeren Yang, Vladislav Esaulov, Lipeng Wan, Yong Chen, Jim Wayda, Matthew Wolf, Mai Zheng.

FAST'23 — **CONFD: Analyzing Configuration Dependencies of File Systems for Fun and Profit.**
Tabassum Mahmud, Om Rameshwar Gatla, Duo Zhang, Carson Love, Ryan Bumann and Mai Zheng.

IPDPS'23 — **Drill: Log-based Anomaly Detection for Large-scale Storage Systems Using Source Code Analysis.**
Di Zhang, Chris Egersdoerfer, **Tabassum Mahmud**, Mai Zheng, Dong Dai.

NVMW'23 **Analyzing Configuration Dependencies of DAX File Systems.**
Tabassum Mahmud, Om Rameshwar Gatla, Duo Zhang, Carson Love, Ryan Bumann and Mai Zheng.

NAS'22 **On the Reproducibility of Bugs in File-System Aware Storage Applications.**
Duo Zhang, **Tabassum Mahmud**, Om Rameshwar Gatla, Runzhou Han, Yong Chen, and Mai Zheng.

HotStorage'22 **Understanding Configuration Dependencies of File Systems.** ***Best paper nominee***
Tabassum Mahmud, Duo Zhang, Om Rameshwar Gatla and Mai Zheng.

Accepted Poster and WiP

MSST'24 **Revisiting Computational Storage for Data Integrity and Security.**
Chao Shi, Anthony Manschula, **Tabassum Mahmud**, Zeren Yang, Yong Chen, Jim Wayda, Matthew Wolf, Byungwoo Bang, Mai Zheng

FAST'22 **Understanding Configuration Issues in Storage Systems.**
Tabassum Mahmud, Mai Zheng.

Awards and Achievements

- "Best Paper Nominee" at HotStorage'22
- USENIX diversity grant to attend FAST'20, FAST'22, FAST'23 conference.

Service

- **EuroSys'25** Shadow PC Committee
- **SOSP'23** Artifact Evaluation Committee member
- Selected as **Mentee** in USENIX **FAST'23** and **CCS'21** Mentorship Program
- **IPDPS'22** External-reviewer
- **REUNS'22** External-reviewer

Talks and Presentations

- "ConfD: Analyzing Configuration Dependencies of File Systems for Fun and Profit", presented at 21st USENIX Conference on File and Storage Technologies (FAST'23).
- "Analyzing configuration dependencies of dax file systems", presented at 14th Annual Non-Volatile Memories Workshop (NVMW'23).
- "Understanding configuration dependencies of file systems", presented at 14th ACM Workshop on Hot Topics in Storage and File Systems (HotStorage'22).
- "Understanding Configuration Issues in Storage Systems", presented at 18st USENIX Conference on File and Storage Technologies (FAST'20).
- Guest Lecture: Advanced Data Storage course at ECpE, Iowa State University (Spring'23).