

ABDULLAH AL RAQIBUL ISLAM

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RESEARCH INTEREST

My research centers on the design of data storage applications and systems, leveraging the unique characteristics of underlying storage technologies. My Ph.D. research focuses on building a high-performance dynamic graph processing framework tailored for emerging storage technologies, such as non-volatile memory. In addition to my core research focus, I am also engaged in research on sparse computation, specifically in the areas of Sparse General Matrix-Matrix Multiplication (SpGEMM) and Approximate Nearest Neighbors (ANN).

EDUCATION

PhD in Computer Science , University of North Carolina at Charlotte	Expected 2024
BSc in Computer Science & Engineering , University of Dhaka, Bangladesh	2009-2012

EMPLOYMENT HISTORY

Research Assistant Data Intelligence Research (DIR) Lab (Mentor: Prof. Dong Dai) University of North Carolina at Charlotte	2019-Present
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Graduate Student Assistant Lawrence Berkeley National Laboratory (LBNL) (Mentor: Aydin Buluç)	Summer 2024
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Graduate Student Assistant Lawrence Berkeley National Laboratory (LBNL) (Mentor: Aydin Buluç , Helen Xu)	Summer 2023
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Mentee - CS Research Mentorship Program (CSRMP) Google Research (Mentor: Marisa Ferrara Boston)	Fall 2022
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Computing Graduate Student Intern Lawrence Livermore National Laboratory (LLNL) (Mentor: Roger Pearce , Keita Iwabuchi)	Summer 2022
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Software Engineering

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| • Principal Software Engineer, TigerIT Bangladesh Ltd. | 2019-2019 |
| • Software Engineer, TigerIT Bangladesh Ltd. | 2014-2019 |
| • Junior Software Engineer, Therap (BD) Ltd. | 2013-2014 |

Adjunct Faculty

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| • Adjunct Faculty, Independent University, Bangladesh | 2015-2016 |
| • Programming Session Instructor, BRAC University, Bangladesh | 2014-2015 |
| • Programming Session Instructor, University of Liberal Arts Bangladesh | 2013-2015 |

PUBLICATIONS

- AAR Islam**, D Dai. “*DGAP: Efficient Dynamic Graph Analysis on Persistent Memory.*” SC’23.
- S Kamat, **AAR Islam**, M Zheng, D Dai. “*FaultyRank: A Graph-based Parallel File System Checker.*” IPDPS’23.
- K Youssef, **AAR Islam**, K Iwabuchi, W Feng, R Pearce. “*Optimizing Performance and Storage of Memory-Mapped Persistent Data Structures.*” HPEC’22. [[Outstanding Student Paper Award](#)]
- AAR Islam**, C York, D Dai. “*A Performance Study of Optane Persistent Memory: From Storage Data Structures' Perspective.*” CCF THPC, Springer, Volume 4, 2022.
- AAR Islam**, D Dai, D Cheng. “*VCSR: Mutable CSR Graph Format Using Vertex-Centric Packed Memory Array.*” CCGrid’22.
- AAR Islam**, D Dai, A Narayanan, C York. “*A Performance Study of Optane Persistent Memory: From Indexing Data Structures' Perspective.*” MSST’20.

7. **AAR Islam**, D Dai. “*Understand the overheads of storage data structures on persistent memory.*” (brief announcement) [PPoPP’20](#).

HONORS AND AWARDS

- SC23 TCHPC Travel Award, International Conference for High Performance Computing, Networking, Storage, and Analysis (SC), 2023
- Merit Scholarship \$1500, UNC Charlotte, 2023
- [SciAuth Student Fellowship](#) \$1000, Fall 2022
- [Outstanding Student Paper Award](#), 27th Annual IEEE High Performance Extreme Computing (HPEC), 2022

SERVICE & OUTREACH

- **Mentor:** Undergraduate Research Initiative (URI), UNC Charlotte, Spring’23
- **Program Committee:** SANDY’24 (ICPP’24 Workshop), GrAPL’24 (IPDPS’24 Workshop).
- **Artifact Evaluation Committee:** OSDI’24, ATC’24, SC’24, ICPP’24, PPoPP’24, SOSP’23, OSDI’23, ATC’23, EuroSys’23, OSDI’22, ATC’22.
- **External/Sub Reviewer:** SPAA’24, CCGrid’24, ICPP’23, IPDPS’23, ICPP’22, BigData’22, IPDPS’22, CCGrid’22, ISPA’21, IPDPS’20, ICPP’20.
- **Student Volunteer:** SC’23, ISSRE’22, SC’21.

COMPETITIVE PROGRAMMING & PROBLEM SOLVING (SELECTED)

- **Contest Participation**
 - Lucid Programming Competition, 2021. Individual participation (Place: 5th in [UNC Chapel Hill Leaderboard](#))
 - ACM ICPC Regionals, 2011 (Asia, Dhaka Site). Team participation (Team: DU Army Ants Reloaded), Place: 9th
 - BUET Inter University Programming Contest, 2011. Team: DU Flies On The Wall, Place: 9th
- **Problem Setter & Judge**
 - [SUB Inter University Programming Contest, 2017](#), State University of Bangladesh
 - [Cybernavts’16 National Programming Contest, 2016](#), North South University
 - [Bangladesh Informatics Olympiad, 2016](#), National Round
 - IUT 6th-9th ICT Fest Programming Contest, 2014-2017, Islamic University of Technology