

Rifat Shahriyar

Associate Professor

Department of Computer Science and Engineering

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Research Interests

My research interests are memory management specially garbage collection, programming language, high performance computing, and software engineering.

Employment

- **Bangladesh University of Engineering and Technology** Dhaka, Bangladesh
Associate Professor, Department of Computer Science and Engineering Oct 2017 - Date
- **Bangladesh University of Engineering and Technology** Dhaka, Bangladesh
Assistant Professor, Department of Computer Science and Engineering May 2010 - Oct 2017
- **Bangladesh University of Engineering and Technology** Dhaka, Bangladesh
Lecturer, Department of Computer Science and Engineering June 2007 - May 2010

Education

- **Australian National University** Canberra, Australia
Ph.D. in Computer Science September 2010 - April 2015
 - Thesis: High Performance Reference Counting and Conservative Garbage Collection
 - Supervisors: Prof. Steve Blackburn and Prof. Kathryn McKinley
- **Bangladesh University of Engineering and Technology** Dhaka, Bangladesh
M.Sc. in Computer Science and Engineering October 2007 - December 2009
 - Thesis: A Distributed Optimized Resource Reservation Scheme for Grid Computing
 - Supervisor: Prof. Md. Mostofa Akbar
- **Bangladesh University of Engineering and Technology** Dhaka, Bangladesh
B.Sc. in Computer Science and Engineering April 2002 - May 2007
 - Thesis: Controlling Remote Systems using Mobile Telephony
 - Supervisor: Prof. Md. Mostofa Akbar

Publications

- A. Bosu, A. Iqbal, **R. Shahriyar**, and P. Chakraborty, “Understanding the Motivations, Challenges and Needs of Blockchain Software Developers: A Survey”, to appear in Empirical Software Engineering Journal, Springer, 2019.

- P. Chakraborty, **R. Shahriyar**, and A. Iqbal, “**Empirical Analysis of the Growth and Challenges of New Programming Languages**”, to appear in Proceedings of the 2019 IEEE 43rd Annual Computer Software and Applications Conference, COMPSAC 2019, Milwaukee, Wisconsin, USA, 2019.
- M. R. U. Islam, M. S. Islam, Z. Ahmed, A. Iqbal, and **R. Shahriyar**, “**Automatic Detection of NoSQL Injection Using Supervised Learning**”, to appear in Proceedings of the 2019 IEEE 43rd Annual Computer Software and Applications Conference, COMPSAC 2019, Milwaukee, Wisconsin, USA, 2019.
- S. A. Hassan, D. Das, A. Iqbal, A. Bosu, **R. Shahriyar**, and T. Ahmed, “**SOQDE: A Supervised Learning based Question Difficulty Estimation Model for Stack Overflow**”, in Proceedings of the 25th Asia-Pacific Software Engineering Conference, APSEC 2018, Nara, Japan, 2018.
- P. Chakraborty, **R. Shahriyar**, A. Iqbal, and A. Bosu, “**Understanding the Software Development Practices of Blockchain Projects: A Survey**”, in Proceedings of the 12th International Symposium on Empirical Software Engineering and Measurement, ESEM 2018, Oulu, Finland, 2018.
- Z. Mehrab, R. B. Yousuf, I. A. Tahmid, and **R. Shahriyar**, “**Mining Developer Questions about Major Web Frameworks**”, in Proceedings of the 14th International Conference on Web Information Systems and Technologies, WEBIST 2018, Seville, Spain, 2018.
- N. S. Sattar, T. Aqila, and **R. Shahriyar**, “**Towards concurrent data structure development with Relaxed Synchronization**”, in Proceedings of the 9th International Conference on Electrical and Computer Engineering, ICECE 2016, Dhaka, Bangladesh, 2016.
- B. Islam, F. Hossain, and **R. Shahriyar**, “**High Performance Approximate Computing by Adaptive Relaxed Synchronization**”, in Proceedings of 18th IEEE International Conference on High Performance Computing and Communications, HPCC 2016, Sydney, Australia, 2016.
- M. Tasnim, **R. Shahriyar**, N. Nahar, and H. Mahmud, “**Intelligent Depression Detection and Support System: Statistical Analysis, Psychological Review and Design Implication**”, in Proceedings of IEEE 18th International Conference on e-Health Networking, Applications and Services, Healthcom 2016, Munich, Germany, September 14-16, 2016.
- A. Sultana, M. Naznin, and **R. Shahriyar**, “**Conflicting Goal Constrained Architecture of a Heterogeneous Mobile Sensor Network**”, in Proceedings of the 2nd International Conference on Networking Systems and Security, NSysS 2016, Dhaka, Bangladesh, 2016.
- M. R. Haque, M. Naznin, and **R. Shahriyar**, “**Distributed Low Overhead ID in a Wireless Sensor Network**”, in Proceedings of the 17th International Conference on Distributed Computing and Networking, ICDCN 2016, Singapore, 2016.
- **R. Shahriyar**, S. M. Blackburn, and K. S. McKinley, “**Fast Conservative Garbage collection**”, ACM SIGPLAN Notices, vol. 49, iss. 10, p. 121-139, 2014.
- **R. Shahriyar**, S. M. Blackburn, and K. S. McKinley, “**Fast Conservative Garbage collection**”, in Proceedings of the 25th ACM SIGPLAN conference on Object Oriented Programming Systems, Languages and Applications, OOPSLA '14, Portland, USA, 2014.
- **R. Shahriyar**, S. M. Blackburn, X. Yang, and K. S. McKinley, “**Taking Off the Gloves with Reference Counting Immix**”, ACM SIGPLAN Notices, vol. 48, iss. 10, p. 93-110, 2013.

- **R. Shahriyar**, S. M. Blackburn, X. Yang, and K. S. McKinley, “**Taking Off the Gloves with Reference Counting Immix**”, in Proceedings of the 24th ACM SIGPLAN conference on Object Oriented Programming Systems, Languages and Applications, OOPSLA '13, Indianapolis, USA, 2013.
- **R. Shahriyar**, S. M. Blackburn, and D. Frampton, “**Down for the Count? Getting Reference Counting Back in the Ring**”, in Proceedings of the Eleventh ACM SIGPLAN International Symposium on Memory Management, ISMM '12, Beijing, China, June 15-16, 2012.
- **R. Shahriyar**, M. M. Akbar, M. S. Rahman, M. F. Bari, and S. Shahriyar, “**CORS - A Cost Optimized Resource Reservation Scheme for Grid**”, in Proceedings of the International Conference on Parallel and Distributed Processing Techniques and Applications, PDPTA '11, Las Vegas, Nevada, USA, July 18-21, 2011.
- **R. Shahriyar**, M. F. Bari, G. Kundu, S. I. Ahamed, and M. M. Akbar, “**Intelligent Mobile Health Monitoring System (IMHMS)**”, International Journal of Control and Automation (IJCA), vol. 2, iss. 3, 2009.
- **R. Shahriyar**, M. F. Bari, G. Kundu, S. I. Ahamed, and M. M. Akbar, “**Intelligent Mobile Health Monitoring System (IMHMS)**”, in Proceedings of Second International ICST Conference on Electronic Healthcare for the 21st century, eHealth 2009, Istanbul, Turkey, September 23-15, 2009.
- S. Sultana, R. Karim, **R. Shahriyar**, M. M. Akbar, and S. I. Ahamed, “**Ubiquitous Secretary: A Ubiquitous Computing Application based on Web Services Architecture**”, International Journal of Multimedia and Ubiquitous Engineering (IJMUE), vol. 4, iss. 4, 2009.
- M. F. Bari, M. S. Rahman, and **R. Shahriyar**, “**Finding all covers of an indeterminate string in $O(n)$ time on average**”, in Proceedings of the Prague Stringology Conference, PSC 2009, Prague, Czech Republic, August 31 - September 2, 2009.
- **R. Shahriyar**, E. Hoque, I. Naim, S. Sohan, M. M. Akbar, and M. Khan, “**Controlling Remote Systems using Mobile Telephony**”, International Journal of Smart Home (IJSH), vol. 2, iss. 3, 2008.
- **R. Shahriyar**, E. Hoque, I. Naim, S. Sohan and M. M. Akbar, “**Controlling Remote Systems using Mobile Telephony**”, in Proceedings of the 1st International Conference on MOBILE Wireless MiddleWARE, Operating Systems, and Applications, Mobilware 2008, Innsbruck, Austria, February 13 - 15, 2008.

Awards and Honours

- ACM SIGPLAN PAC Grant to attend ASPLOS 2015
- ACM SIGPLAN PAC Grant to attend OOPSLA 2013
- ANU Vice-Chancellor's HDR Travel Grant to attend ISMM and PLDI 2012
- ANU University Research Scholarship (2010 - 2014)
- ANU Research Supplementary Scholarship (2010 - 2014)
- Endeavour International Postgraduate Research Scholarship from University of Melbourne (2010 - 2014, Not Aailed)

- University of Melbourne International Research Scholarship (2010 - 2014, Not Aailed)
- University Merit Scholarships in Bangladesh University of Engineering and Technology for academic results
- Dean's Award in Bangladesh University of Engineering and Technology for academic results
- Board Scholarships from Board of Secondary and Higher Secondary Education, Dhaka, Bangladesh

Teaching Experiences

- Structured Programming Language (Reference Language: C)
- Object Oriented Programming Language (Reference Language: C++ and Java)
- Data Structures
- Database
- Computer Architecture
- Operating Systems
- Programming Languages and Systems (Graduate Course)

Community Services

- **Program Committee Member**
 - ISMM 2015