

## M. Sohel Rahman, Ph.D.; Fellow, BAS; Senior Member, ACM & IEEE

[Download CV]

Professor

Department of Computer Science & Engineering

Bangladesh University of Engineering & Technology (BUET)

ECE Building, West Palasi, Dhaka-1205, Bangladesh

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<http://msrahman.buet.ac.bd/>

Nationality: Bangladesh

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### Brief Highlights

- Worked as Lecturer, Assistant Professor, Associate Professor, Professor and the **Head of the Department** of CSE at CSE, BUET; Currently a **Professor** at CSE, BUET; Worked as the Associate Director of System and Support wing of IICT (*responsible for the whole IT Setup of BUET*).
- Had been **Visiting Senior Research Fellow** and **Visiting Research Fellow** at **King's College London** for a total of 4 years; Has been a Visiting Researcher (under the London Mathematical Society Grants; commonwealth fellowship) there for a few times.
- Has taught as a Visiting Lecturer at **King's College London**.
- Has worked as a **Visiting Researcher** (UCI-BDI Fellowship) at **University College London**.
- Has been appointed as an **ACM Distinguished Speaker (2019-2021)**
- Has been appointed as a **Computer Society Distinguished Visitor (DV)** (2020-2022)
- Has been appointed as a **Regular Associate of the Abdus Salam International Centre for Theoretical Physics (ICTP)**, Trieste, Italy (2020-25)
- Recipient of **Commonwealth Scholarship, Commonwealth Fellowship** (twice), **UCL-BDI Fellowship, LMS Grant, ACU Titular Fellowship, Bangladesh Academy of Sciences Gold Medal** (Junior Group), **UGC Award**.
- Has been elected a **Fellow of Bangladesh Academy of Sciences** (elected in 2019).
- **Senior Member** of ACM & IEEE, Member of American Mathematical Society (AMS), Member of London Mathematical Society (LMS) and Founding Vice Chairman of BUET ACM Chapter (2014-15), Chairman, BUET ACM Chapter (2018-19).
- Academic Editor of **PLOS One**, Associate Editor of **BMC Research Notes** and Guest Editor of special issues in **Theoretical Computer Science, Journal of Discrete Algorithms, Journal of Graph Algorithms and Applications** and **Fundamenta Informaticae**.
- **EPSRC Peer Review Associate College member** since October 2016. Engineering and Physical Sciences Research Council (EPSRC) “is the main UK government agency for funding research and training in engineering and the physical sciences, investing more than 800 million a year in a broad range of subjects - from mathematics to materials science, and from information technology to structural engineering” ([www.epsrc.ac.uk/about/](http://www.epsrc.ac.uk/about/)).
- Involved in International scientific organizations like IFIP ([www.ifip.org](http://www.ifip.org)) as a member in the Technical Committee for Foundations of Computer Science (for the Working Group of String Algorithmics & Applications).
- Program Committee Member in several occasions of reputed conference series' like IWOCA, WALCOM, NSysS etc. Program Co-Chair of WALCOM 2015, 2018 and 2020.
- Convenor, Steering Committee, NSysS.

- Chairman of the Sectoral Committee (CSE) of Board of Accreditation for Engineering and Technical Education, Bangladesh and hence is responsible for endorsing all accreditations for CSE discipline of all universities of Bangladesh. Member of different committees working towards achieving full membership of Washington Accord (for Bangladesh).
- Member of many national committees taking various policy decisions. Recent examples include the Administrative Committee formed by the honorable High Court of Bangladesh to investigate and propose recommendations to prevent Question Leak in public examinations in Bangladesh; Various Technical Committees Electronic Voting Machine project; Various Technical Committees related to e-passport project; etc.
- Project Director/Manager of international and national research projects like INSPIRE project, HEQEP sub-project by UGC-World Bank, Innovation project by ICT Division, AI4Earth Project by Microsoft.
- Given ACM Distinguished Lectures at ICCA 2020 (January 10-12, 2020), IJCCI 2019 (October 25-26, 2019, Dhaka) and Sikkim University (June 27, 2019, Sikkim, India).
- Keynote Speaker at ICCA 2020 (10-12 January 2020, Dhaka); at IJCCI 2019 (October 25-26, 2019, Dhaka); at Green University (July 10, 2019, Dhaka); IJCCI 2018 (Dec 14-15, 2018, Dhaka); at ICCDC 2019 (March 14-15, 2019, India); ISMSI 2019 (March 23-24, 2019, Maldives); Presented Invited Talk at BPMI, 01 July 2020 (Virtual); at Start-up Bangladesh, 18 June 2020 (Virtual) at IEEE Computer Society Bangladesh Chapter International Lecture Series, 31 May 2020 (Virtual); at IIT Guwahati, India (March 4, 2019); at Robi Axiata Ltd. (Jan 17, 2019); at Indian Statistical Institute, Kolkata, India (July 9, 2018); at Augmedix Bangladesh, Dhaka; at Bangladesh Sheikh Mujib Medical University (BSMMU), Dhaka; at NUS School of Computing (SoC) Research Workshop 2017, Singapore.
- Author of **2 book chapters, 93 refereed journal papers and 96 refereed conference papers**. Has published in highly acclaimed journals like **Philosophical Transactions of the Royal Society**, the first and hence the longest running journal in the world exclusively devoted to science. Currently has an RG Score of 31.84. According to ResearchGate, this is higher than 90% of (more than 16 million) ResearchGate members (as of April 2020).
- Current notable ongoing research works include Agent Based Modeling of Mosquito borne diseases, Solving DNA Fragment Assembly, Protein Folding and related problems using Metaheuristic techniques, Classification problems in Proteomics, Biomedical Signal Processing, Solving hard and real life problems in different domains of science and engineering (e.g., Transportation, Groundwater resources, Bioinformatics, Mobile Computing Technology, Parallel Computing) applying computational search techniques and solving different theoretical and combinatorial problems in Computing and Applied Mathematics (e.g., Graph Theory, String Combinatorics).
- Involved in organizing ICPC Programming Contests and Informatics Olympiad events and in mentoring/coaching teams and individuals for such national/international events.
- Leader of the Bangladesh team in International Olympiad in Informatics (since 2017); in 2017 Bangladesh team won 4 Bronze medals; in 2018 Bangladesh team won 1 Silver and 1 Bronze medals; in 2019 Bangladesh team won 3 Bronze medals.
- Author of 21 reviews in Mathematical Review and 10 reviews in ACM Computing Reviews.
- Co-authored a textbook on ICT in Bangla for Higher Secondary level students and a textbook on System Analysis and Design in English for Undergraduate studies in Computer Science and Engineering.
- Author of several articles in the national dailies and news portals about contemporary issues mostly related to education and ICT.

- Conducted (as a member) and overseen (as the HoD) many national level consultancy services under the auspices of Bureau of Research Training and Consultation (BRTC), BUET.
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## Education

- **King's College, University of London** London, UK  
Ph.D., Computer Science, 2008
  - **Bangladesh University of Engineering & Technology** Dhaka, Bangladesh  
M.Sc. Engg., Computer Science and Engineering, 2004
  - **Bangladesh University of Engineering & Technology** Dhaka, Bangladesh  
B.Sc. Engg., Computer Science and Engineering, 2002
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## Work History

- **Professor** July 2012 - Present  
Department of Computer Science & Engineering
- Bangladesh University of Engineering & Technology (BUET)  
ECE Building, West Palasi  
Dhaka-1205, Bangladesh
- **Head of the Department** March 2016 - March 2018  
Department of Computer Science & Engineering
- Bangladesh University of Engineering & Technology (BUET)  
ECE Building, West Palasi  
Dhaka-1205, Bangladesh
- **Member (Honourary)** November 2014 - Present
- Centre for Combinatorics on Words & Applications (CCWA)  
Murdoch University, Perth, Australia
- **Visiting Senior Research Fellow (Honourary)** November 2014 - October 2015  
Department of Informatics
- King's College London  
Strand, London WC2R 2LS, UK
- **Visiting Researcher (UCL-BDI Fellowship)** June 2015 - August 2015  
Department of Geography &
- Big Data Institute  
University College London  
Gower Street, London WC1E 6BT
- **Visiting Researcher (LMS International Short Visit Grant)** April 2015 - May 2015  
Department of Informatics
- King's College London  
Strand, London WC2R 2LS, UK
- **Part-time Faculty** January 2015 - March 2015  
Department of Mathematics
- King's College London  
Strand, London WC2R 2LS, UK
- **Visiting Researcher (Commonwealth Academic Fellowship)** January 2015 - March 2015  
Department of Informatics
- King's College London  
Strand, London WC2R 2LS, UK

**Associate Director (Additional Charge)**

November 2012 - October 2014

System and Support Wing

Institute of Information and Communication Technology

- Bangladesh University of Engineering & Technology (BUET)  
ECE Building, West Palasi  
Dhaka-1205, Bangladesh

**Associate Professor**

June 2010 - July 2012

Department of Computer Science &amp; Engineering

- Bangladesh University of Engineering & Technology (BUET)  
ECE Building, West Palasi  
Dhaka-1205, Bangladesh

**Assistant Professor**

September 2004 - June 2010

Department of Computer Science &amp; Engineering

- Bangladesh University of Engineering & Technology (BUET)  
ECE Building, West Palasi  
Dhaka-1205, Bangladesh

**International Member (Honourary)**

August 2009 - Present

Center for Stringology &amp; Applications (CSA)

- Digital Ecosystem and Business Intelligence Institute (DEBII)  
Curtin University of Technology, Australia

**Visiting Research Fellow (Honourary)**

June 2008 - May 2011

Algorithm Design group

- Department of Computer Science  
King's College London  
Strand, London WC2R 2LS, UK

**Lecturer**

May 2002 - September 2004

Department of Computer Science &amp; Engineering

- Bangladesh University of Engineering & Technology (BUET)  
ECE Building, West Palasi  
Dhaka-1205, Bangladesh

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**Research Interest** String and sequence algorithms, Bioinformatics, Metaheuristics, Applied Machine Learning, Data Science, Big data, Hard computational interdisciplinary problems, Musicology, Design and analysis of Algorithms (Sequential, Parallel, Distributed), Theoretical Computer Science with applications, Networks, Multimedia Technology, Natural Computing.

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**Editorial Activities**

- Associate Editor, BMC Research Notes (<https://bmcresearchnotes.biomedcentral.com/>).
- Academic Editor, PLOS ONE (<http://www.plosone.org/>).
- Guest Editor, Theoretical Computer Science, Elsevier.
- Guest Editor, Journal of Discrete Algorithms, Elsevier.
- Guest Editor, Journal of Graph Algorithms and Applications (<http://www.jgaa.info/>).
- Guest Editor, Fundamenta Informaticae, Polish Mathematical Society.

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## Programme Committee Membership

- The 15th International Conference and Workshop on Algorithms and Computation (WALCOM 2020), Yangon, Myanmar, February/March 2021.
- The 7th International Conference on Networking Systems and Security (NSysS 2020), Dhaka, Bangladesh, December, 2020.
- The 31st International Workshop on Combinatorial Algorithms (IWOCA 2020), Bordeaux, France, 8-10 June 2020.
- The 14th International Conference and Workshop on Algorithms and Computation (WALCOM 2020), Singapore, March/April 2020 (**Co-Chair**).
- The 6th International Conference on Networking Systems and Security (NSysS 2019), Dhaka, Bangladesh, December, 2019.
- The 13th International Conference and Workshop on Algorithms and Computation (WALCOM 2019), India, February, 2019.
- The 5th International Conference on Networking Systems and Security (NSysS 2018), Dhaka, Bangladesh, December, 2018.
- The 29th International Workshop on Combinatorial Algorithms (IWOCA 2018), Singapore, July, 2018.
- The 12th International Conference and Workshop on Algorithms and Computation (WALCOM 2018), Dhaka, Bangladesh, February, 2018 (**Co-Chair**).
- The 4th International Conference on Networking Systems and Security (4th-NSysS 2017), Dhaka, Bangladesh, December, 2017.
- The 4th International Symposium on Big Data and Cloud Computing Challenges (ISBCC '17), Chennai, India, 2017.
- The 3rd International Conference on Networking Systems and Security (NSysS 2017), Dhaka, Bangladesh, January, 2017.
- The 10th International Workshop on Algorithms and Computation (WALCOM 2016), Kathmandu, Nepal, February, 2016.
- The Second International Symposium on Dependability in Sensor, Cloud, and Big Data Systems and Applications (DependSys2016), China, 2016.
- The 2nd International Conference on Networking Systems and Security (NSysS 2016), Dhaka, Bangladesh, 2016.
- The 3rd International Symposium on Big Data and Cloud Computing Challenges (ISBCC '16), Chennai, India, 2016.
- The 26th International Workshop on Combinatorial Algorithms (IWOCA 2015), Verona, Italy, October 2015.
- The 2nd International Symposium on Big Data and Cloud Computing Challenges (ISBCC '15), Chennai, India, 2015.
- The 9th Workshop on Algorithms and Computation (WALCOM 2015), Dhaka, Bangladesh, February, 2015 (**Co-Chair**).

- The 25th International Workshop on Combinatorial Algorithms (IWOCA 2014), Duluth, Minnesota, USA, October, 2014
- The 8th Workshop on Algorithms and Computation (WALCOM 2014), Madras, Chennai, India, February, 2014.
- The 24th International Workshop On Combinatorial Algorithms (IWOCA 2013), 10-12 July 2013, Rouen, France.
- The 7th Workshop on Algorithms and Computation (WALCOM 2013), Kharagpur, Kolkata, India, February, 2013.
- The 23rd International Workshop on Combinatorial Algorithms (IWOCA 2012) 19-21 July 2012 Anand Nagar, Krishnankoil, Tamil Nadu, India.
- The 2nd International Workshop on Biological Knowledge Discovery and Data Mining (BIOKDD '11), Toulouse, France, August 29 - September 2, 2011
- The 5th Workshop on Algorithms and Computation (WALCOM 2011), New Delhi, India, February 18-20, 2011
- The 21st International Workshop on Combinatorial Algorithms (IWOCA 2010) 26-28 July 2010 London, United Kingdom
- 2nd International Workshop on Biological Knowledge Discovery and Data mining - BIOKDD '10, Bilbao, Spain, 30 August-3 September 2010
- 2010 ACS/IEEE International Conference on Computer Systems and Applications HAMMAMET TUNISIA May 16-19th, 2010
- 2009 World Congress on Computer Science and Information Engineering (CSIE 2009), March 31 - April 2, 2009, Los Angeles/Anaheim, USA

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### **Awards and Honours** (after college)

- University College London Big Data Institute Visiting Grant for Short Visit (2015)
- London Mathematical Society (LMS) Scheme 5 Grant for Short Visit (2015)
- Commonwealth Academic Fellowship in the UK (2015).
- ACU Titular Fellowships 2012-Gordon and Jean Southam Fellowship) for a short Research Visit at the McMaster University, Canada.
- Commonwealth Academic Fellowship in the UK (2013).
- UGC Award, 2010 (administered by University Grants Commission, Bangladesh) for the paper: "Tanaem M. Moosa and M. Sohel Rahman. Indexing permutations for binary strings. Information Processing Letters, 110(18-19) (2010), pp 795-798."
- Bangladesh Academy of Sciences Gold Medal Award in Physical Sciences (Junior Group), 2008
- Commonwealth Scholarship for Ph.D. in the UK (2005-2008).
- Dean's Award in Bangladesh University of Engineering & Technology for academic results.
- University Merit Scholarships in Bangladesh University of Engineering & Technology for academic results.
- Board Scholarships from Board of Secondary and Higher Secondary Education, Dhaka, Bangladesh.

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## Professional Membership

- Vice-Chair, IEEE BD Computer Society Chapter (2020)
- Fellow, Bangladesh Academy of Sciences (elected in 2019)
- Treasurer, IEEE BD Computer Society Chapter (2019)
- Chairman, BUET ACM Chapter (2018-19)
- Fellow, Bangladesh Computer Society [Membership Number: F-00267]
- Senior Member, ACM [Membership Number: 8249724]
- Senior Member, IEEE [Membership Number: 93951627]
- Founding Vice Chairman, BUET ACM Chapter (2014-15)
- Member, American Mathematical Society (AMS) [AMS Membership Code: RHMHXG]
- Member, London Mathematical Society
- Member, Association Computability in Europe (CiE)
- Member, Association for Constraint Programming (ACP)

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## Professional Activities (Selected)

- IEEE Computer Society Distinguished Visitor (DV) (2020-2022)
- Regular Associate of the Abdus Salam International Centre for Theoretical Physics (ICTP), Trieste, Italy (2020-25)
- ACM Distinguished Speaker (2019-2021)
- Member, Administrative committee formed by the High Court to combat question leak in Public Examination.
- Member, Committee of Ministry of Education to combat question leak in Public Examination.
- Member, Technical committee for implementing Electronic Voting Machine.
- Member, Technical Committee for e-passport implementation in Bangladesh.
- Member of a high level committee of Government officials to visit and study e-passport implementing countries.
- Member of a number of technical committees at Bangladesh Computer Council and ICT Division.
- Member, ICT policy formation of Bangladesh Bank.
- Member (as Head, CSE, BUET), Steering committee of LICT project, ICT division
- Member of many national committees formed by different ministries and departments as the Head, CSE, BUET.
- Organizing Co-Chair, International Conference and Workshop on Algorithms and Computation (WALCOM 2018), Dhaka, Bangladesh, March, 2018.
- General Chair, the 4th International Conference on Networking Systems and Security (4th NSysS 2017), Dhaka, Bangladesh, 2017.

- Member, Bangladesh Informatics Olympiad Committee (BIOC).
- Leader of Bangladesh delegates at International Olympiad in Informatics.
- Steering Committee Member, ACM ICPC 2017 Dhaka Regional.
- Steering Committee Member, ACM ICPC 2016 Dhaka Regional.
- Chairman, Sectorial Committee (CSE), Board of Accreditation for Engineering and Technical Education (BAETE), Bangladesh.
- Convenor, Steering Committee, International Conference on Networking Systems and Security (NSysS).
- General Chair, the 3rd International Conference on Networking Systems and Security (NSysS 2017), Dhaka, Bangladesh, 2017.
- Organizing Committee Member, the 2nd International Conference on Networking Systems and Security (NSysS 2016), Dhaka, Bangladesh, 2016.
- Member, Working Group of String Algorithmics & Applications, Technical Committee for Foundations of Computer Science, International Federation for Information Processing (IFIP) since 2015.
- Organizing Committee Member, Workshop on Algorithms and Computation (WALCOM 2015), Dhaka, Bangladesh, February, 2015.
- Organizing Committee Member, Workshop on Algorithms and Computation (WALCOM 2012), Dhaka, Bangladesh, February, 2012.
- Organizing Committee Member, Workshop on Algorithms and Computation (WALCOM 2010), Dhaka, Bangladesh, February, 2010.
- Organizing Committee Member, Workshop on Algorithms and Computation (WALCOM 2008), Dhaka, Bangladesh, February, 2008.
- Organizing Committee Member, London Stringology Days and London Algorithmic Workshop (LSD+LAW 2008), London, February, 2008.
- Organizing Committee Member, London Stringology Days (LSD 2007), UK-Israeli Bilateral String Algorithms Workshop, London, March, 2007.
- Organizing Committee Member, Workshop on Algorithms and Computation (WALCOM 2007), Dhaka, Bangladesh, February, 2007.
- Session Chair, London Algorithmic Workshop (LAW 2007), London, February, 2007.
- Organizing Committee Member, London Algorithmic Workshop (LAW 2007), London, February, 2007.
- Organizing Committee Member, London Algorithmic Workshop and London Stringology Day (LSD + LAW 2006), London, February, 2006.
- Member, Activity and Operations, Organizing Team of ACM ICPC Asia Regional Contest, Dhaka Site, 2003.
- Member, Activity and Operations, Organizing Team of ACM ICPC Asia Regional Contest, Dhaka Site, 2002.

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## Post-Publications Reviews:

- Enlisted Reviewer at **Mathematical Review**
- Enlisted Reviewer at **ACM Computing Review**

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### Grants/Proposals Reviewer:

- **EPSRC** (Engineering and Physical Sciences Research Council) Peer Review Associate College member, UK (Since October 2016)
- Reviewer of different research proposals at University Grants Commission (UGC), Bangladesh.

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### Research and Development Projects

- “GWMap: Applying Machine Learning to map groundwater levels in Bangladesh”: AI4Earth Grant (Microsoft Azure Credit), funded and administered by Microsoft (ongoing).
- “Machine intelligence aided diagnosis of cervical cancer”: ICT Innovation Project, funded and administered by the ICT Division (ongoing).
- “Efficient in silico prediction of sgRNA activity in CRISPR/Cas9 system using machine learning methods”: CASR Project, funded and administered by CASR, BUET (Ongoing).
- “Advances in Algorithms for Next Generation Biological Sequences”: INSPIRE Project, funded and administered by the British Council Bangladesh (Completed).
- “Development of Mobile Computing Lab for Teaching, Learning and Research”: A sub-project of the Higher Education Quality Enhancement Project (HEQEP) administered by UGC and World Bank (Completed)
- “Degree Based Sufficient Conditions for Hamiltonian Paths and Cycles”: CASR Project, funded and administered by CASR, BUET (Completed).

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### Selected Talks and Presentations:

- Invited Lecture on Role of ICT at Foundation Training at Bangladesh Power Management Institute (BPMI), 01 July 2020, Dhaka, Bangladesh (Virtual).
- Invited Lecture at Start-up Bangladesh Special Training on Artificial Intelligence, 18 June 2020, Dhaka, Bangladesh (Virtual).
- Invited Lecture at IEEE Computer Society Bangladesh Chapter International Lecture Series, 31 May 2020, Dhaka, Bangladesh (Virtual).
- Keynote Speaker (ACM Distinguished Lecture) at International Conference on Computing Advancements (ICCA 2020), 10-12 January 2020, Dhaka, Bangladesh.
- Research Preparation and Outreach Speaker at the 6th International Conference on Networking, Systems and Security (6th NSysS 2019) December 17-19, 2019, Dhaka, Bangladesh.
- Keynote Speaker (ACM Distinguished Lecture) at International Joint Conference on Computational Intelligence (IJCCI 2019), October 25-26, 2019 Dhaka, Bangladesh.
- Invited Seminar on Research Paper Summarization at Daffodil International University, September 28, 2019 Dhaka, Bangladesh.

- ACM Distinguished Lecture at Prime University Bangladesh, September 12, 2019 Dhaka, Bangladesh.
- Keynote Speaker at the Inaugural Ceremony of IEEE Computer Society Student Branch Green University of Bangladesh, 10 July 2019, Dhaka, Bangladesh.
- ACM Distinguished Lecture at Sikkim University, June 27, 2019, Sikkim, India.
- Keynote Speaker at the 3rd International Conference on Intelligent Systems, Metaheuristics & Swarm Intelligence (ISMSI 2019) Male, March 23-24, 2019 Maldives.
- Keynote Speaker at the 2nd International Conference on Communication, Devices and Computing (ICCDC 2019), March 14-15, 2019, India.
- String Inference and (non)Lexicographic Ordering. Invited Seminar at Indian Institute of Technology (IIT), Guwahati, India, 04 March 2019.
- Applications of V-Order: Suffix arrays, the Burrows-Wheeler transform & the FM-index. Contributed presentation at the WALCOM 2019, Guwahati, India, February-March 2019.
- Insights and directions on machine learning research. Invited Seminar at Daffodil International University, 22 January 2019, Dhaka.
- Machine learning research topics in Telco domain. Invited Seminar at Robi learning Week 2019, 17 January 2019, Dhaka.
- Keynote Speaker at the International Joint Conference on Computational Intelligence (IJCCI 2018) 14-15 December 2018, Dhaka.
- Sequence based computational methods for protein attribute prediction. Invited Seminar at the Advanced Computing and Microelectronics Unit, Indian Statistical Institute, Kolkata, India, 09 July 2018.
- Ongoing Machine Learning Research Works at CSE, BUET. Invited Talk at the Machine Learning Meet Up, Augmedix Bangladesh, Dhaka, December 2017.
- Research Collaboration Opportunities between CSE, BUET and BSMMMU. Invited presentation at Bangladesh Sheikh Mujib Medical University (BSMMU), Dhaka, October 2017.
- Current Ongoing Researches at CSE, BUET. Invited presentation at NUS School of Computing (SoC) Research Workshop 2017, Singapore, February 2017.
- Advances in Algorithms for Next Generation Biological Sequences. Keynote presentation at Bioinformatics and Strngology (BioS '15), Dhaka, Bangladesh, November 2015.
- Approximation Algorithms for Three Dimensional Protein Folding. Contributed presentation at the WALCOM 2016, Kathmandu, Nepal, March 2016.
- Keynote presentation at the Seminar titled “Advances in Algorithms for Next Generation Biological Sequences”, Dhaka, Bangladesh, September 2014.
- A new model to solve the swap matching problem and efficient algorithms for short patterns. Contributed Presentation at the SOFSEM 2008, High Tatras, Slovak Republic, January 2008.
- Algorithms for two versions of LCS problem for indeterminate strings. Contributed Presentation at the International Workshop on Combinatorial Algorithms (IWOCA), 2007, Newcastle, Australia, November 2007.
- Optimal prefix and suffix queries on texts. Contributed Presentation at the conference on Analysis of Algorithms (AofA) 2007, Nice, France, July 2007.
- Indexing factors with gaps. Contributed Presentation at the SOFSEM 2007, Harrachov, Czech Republic, January 2007.

- Algorithms for computing variants of the longest common subsequence problem. Contributed Presentation at the International Symposium on Algorithms and Computation (ISAAC) 2006, Kolkata, India, December 2006.
- Finding patterns with variable length gaps or don't cares. Contributed Presentation at the International Computing and Combinatorics Conference (COCOON) 2006, Taipei, Taiwan August 2006.

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## Short Research Visits

- Indian Institute of Technology (IIT), Guwahati, India (Short research visit in February-March 2019).
- Advanced Computing and Microelectronics Unit, Indian Statistical Institute, Kolkata, India (Short research visit in July 2018).
- School of Computing, National University Singapore (Short research visit in February 2017)
- Department of Informatics, Kings College London (Short Research Visit January 2017)
- School of Computing, National University Singapore (Short research visit in November 2016)
- Algorithms Research Group, Department of C&S, McMaster University (as part of a ACU Titular Fellowship; November-December 2015)
- Department of Geography and Big Data Institute, University College London (as part of a UCL-BDI Fellowship from June to August 2015)
- Algorithms Research Group, Department of C&S, McMaster University (as part of a ACU Titular Fellowship; June-July 2015)
- Department of Informatics, Kings College London (as part of a London Mathematical Society (LMS) Scheme 5 Short International Visits from April to May 2015)
- Department of Informatics, Kings College London (as part of a Commonwealth Fellowship from January to March 2015)
- Department of Informatics, Kings College London (Short Academic Visit through INSPIRE project from October to December 2014)
- Department of Informatics, Kings College London (as part of a Commonwealth Fellowship from January to March 2013)
- University of Stellenbosch, South Africa (as part of the UK team at South African StringMasters)
- Institute of Informatics, Warsaw University (worked with Prof. W. Rytter, Dr. M. Kubica and T. Walén)
- Algorithms Research Group, Department of C&S, McMaster University (worked with Prof. W. F. Smyth)

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## Consultancy <sup>1</sup>

- Overseen the following consultancy projects as the Head of the department:
  - College Admission Projects 2016-2017 and 2017-2018.

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<sup>1</sup>Consultancy conducted under the auspices of the bureau of research training and consultation (BRTC), BUET as per the rules and regulations of BUET.

- IT Services for Exim Bank Limited.
- Vetting of Data Center migration process of Mercentile bank Limited.
- Jiban Bima corporation recruitment exam.
- Investigation of a case of Anti-corruption Commission.
- Bid evaluation for Core Banking System of Mutual Trust Bank Ltd.
- Vulnerability Assessment and Penetration Testing (VAPT) for Investment Corporation, Bangladesh (ICB).
- Recruitment Exam for Bangladesh Gas fields Company Limited.
- Security review of networking equipment of Uttara Bank.
- Hardware testing for the ICT division.
- Supply, Installation, Training and Maintenance of Multi-Language Training and Learning Software for a project of ICT Division.
- Testing and Monitoring Hajj Pre-Registration System.
- Designing SWIFT infrastructure and internal control policy of SWIFT system of Bangladesh Bank.
- Consultation Services for Implementation of ERP for Bangladesh e-Government ERP Project.
- Preparing Global Standard Own ICT Security Policy of Rupali bank.
- Vetting of AMC of Card Division for NCC Bank.
- Evaluation of Data Center Hardware Infrastructure at NCC Bank Ltd.
- Vetting of AFIS Expansion proposal from IRIS JV for Department of Immigration and Passport.
- Agrani bank security policy vetting.
- Consultancy Services to Bangladesh Postal Department.
- Testing of Language Training and Learning Software for a project of the ICT Division.
- New ATM System Review for Rupali Bank.
- Consultancy Services to NIDW Project of Bangladesh Election Commission.
- Online Application Submission and Processing Software for Dhaka North City Corporation Recruitment.
- Consultancy Services for Money Disbursement of Primary Education Scholarship Project for Rupali Bank.
- Testing and Certification of the Core Banking Software Developed by Infinity Technology International Ltd.
- Equipment testing for Sonali Bank Data Center.
- NRB Commercial Bank DC and DRS Audit.
- Handling College Admission 2016 and 2017 for the Ministry of Education.
- Testing and reporting the security and functionality of mobile financial service system of Rupali Bank.

- Consultancy service to analyze Rupali and Brac bank co-branded ATM operation.
- i-Book development for Bangladesh Technical Education Board and Bangladesh Madrasah Board.
- Testing and Auditing of Software Installed for MRP (Machine Readable Passport).
- Several scrutiny of Software for Bangladesh Customs.
- Several Recruitment Exams for different organizations.
- Selected recent projects where participated as a direct member:
  - Team Lead, Transaction Advisory for PPP Revenue Sharing in the Infosarker Project (Ongoing).
  - Member, Consultancy for IEIMS System Development for BANBEIS, Bangladesh.
  - Team Lead, Development of ECP for RAJUK (subcontract from RTI International) (Ongoing).
  - Team Lead, Software Development for BOESL (Ongoing).
  - Team Lead, College Admission Project 2019-2020, 2020-21 (ongoing).
  - Member, College Admission Project 2018-2019.
  - Member, Rajuk Purbachal and Uttara 3rd Phase Application Processing and plot allotment project.
  - Project Leader, 1020 Flat Allotment by Lottery of National Housing Authority project.
  - Project Leader, Certification of GPS based Automated Vehicle Tracking System.
  - Member, Tender Document Preparation for Machine Readable Passport project.
  - Member, RFP-TOR Vetting for BPO project.
  - Member, BUET Central Library Automation Project.
  - Member, CSE, BUET team for IPO Lottery Conduction.

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## **Publications**

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### **Edited Books**

1. M. Sohel Rahman, Wing-Kin Sung and Ryuhei UEHARA (ed.). WALCOM: Algorithms and Computation - 12th International Workshop, WALCOM 2018, Dhaka, Bangladesh, March 03-05, 2018. Proceedings. *Lecture Notes in Computer Science* 10755, Springer (2018).
2. M. Sohel Rahman, Etsuji Tomita (ed.). Special Issue on WALCOM 2015. *J. Graph Algorithms Appl.* 20(1): 1-2 (2016).
3. M. Sohel Rahman, Etsuji Tomita (ed.). Special Issue on WALCOM 2015. *J. Discrete Algorithms* 36: 1-2 (2016).

4. M. Sohel Rahman, Etsuji Tomita (ed.). WALCOM: Algorithms and Computation - 9th International Workshop, WALCOM 2015, Dhaka, Bangladesh, February 26-28, 2015. Proceedings. *Lecture Notes in Computer Science* 8973, Springer (2015).
  5. Joseph Wun-Tat Chan, Jackie Daykin and **M. Sohel Rahman** (ed.). A Special Issue to Celebrate the 60th birthday of Prof. Maxime Crochemore. *Texts in Algorithmics*, Volume 11, King's College, London.
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