



Md Saidur Rahman

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Member, University Grants Commission of Bangladesh

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Short Biography

Dr. Md. Saidur Rahman, a professor (on deputation) of Bangladesh University of Engineering and Technology (BUET) and a fellow of Bangladesh Academy of Sciences, is currently serving as a member of University Grants Commission of Bangladesh. He is a renowned researcher in the field of graph algorithms and is regarded as an authority on graph drawing algorithms. He has more than 130 publications on algorithms and graph theory in internationally reputed journals and conferences. He has developed many efficient algorithms for finding drawings for planar graphs which have enormous applications in VLSI layout automation, software engineering, DNA recognition, etc. His graduate textbook "Planar Graph Drawing," written with renowned computer scientist Professor Takao Nishizeki, is considered as the most valuable pioneering work in planar graph drawings. He has co-edited five volumes of LNCS series of Springer and served as guest editors for several reputed journals including *Algorithmica* and *Theoretical Computer science*. Currently he is in the editorial board of several international Journals including the *Journal of Graph Algorithms and Applications* and *International Journal of Foundation of Computer Science*. His undergraduate textbook "Basic Graph Theory" which has been published by Springer has received around 62,000 downloads within six years. Professor Rahman is leading an enthusiastic research group in Graph Drawing and Information Visualization Laboratory of CSE Department, BUET. He has supervised four Ph. D. theses and 27 M. Sc. Engg. theses. He is a recipient of "BAS Gold Medal 2003" in the junior group, "UGC Award 2004" and the prestigious "Funai Information Technology Award for Young Researchers 2004." Prof. Rahman is a founder of the International Conference and Workshops on Algorithms and Computation (WALCOM) which has appeared as a very prestigious international venue of theoretical computer science over the years. Professor Rahman worked as a member of expert panels of various national and international bodies. Currently he is a member of Board of Accreditation for Engineering and Technical Education (BAETE), Bangladesh which is a full signatory of Washington Accord, and also a member of BAETE Evaluation Team (ET). In BUET administration, he showed excellent administrative capabilities as the Registrar, the Director of Institutional Quality Assurance Cell (IQAC) and Head of CSE Department of BUET. Recently he has been appointed as an ACM Distinguished Speaker.

Personal Information

Name: MD. SAIDUR RAHMAN
Father's Name: Md. Khaleque Hossain
Mother's Name: Mossa. Saheda Khatun
Date of Birth: 31 December 1966
Mailing Address: Department of Computer Science and Engineering (CSE)
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Present Address: 4/H BUET Residential Area, BUET, Shahbagh, Dhaka-1000
Permanent Address: 560, Santhia Bazar, Santhia, Santhia-6670, Pabna

Education

- 1999 **PhD**, *Information Sciences*, Graduate School of Information Sciences, Tohoku University, Japan
- 1996 **MS**, *Information Sciences*, Graduate School of Information Sciences, Tohoku University, Japan
- 1992 **M. Sc. Engg.**, *Computer Science and Engineering*, Department of Computer Science and Engineering, BUET, Bangladesh
- 1989 **B. Sc. Engg.**, *Electrical and Electronic Engineering*, Department of Electrical and Electronic Engineering, BUET, Bangladesh
- 1983 **H. S. C.**, *Dhaka College, Dhaka, Bangladesh*
- 1981 **S. S. C.**, *Santhia High School, Santhia, Pabna, Bangladesh*

Job Experience

- 2024, to Date **Member**, *University Grants Commission of Bangladesh, Dhaka - 1207, Bangladesh*
- 2006, to date **Professor**, *Dept. of Computer Science & Engineering (CSE), Bangladesh University of Engineering & Technology (BUET), Dhaka 1000, Bangladesh, Currently on deputation*
- 2005-2006 **Associate Professor**, *Dept. of Computer Science & Engineering (CSE), Bangladesh University of Engineering & Technology (BUET), Dhaka 1000, Bangladesh*
- 2003-2004 **Associate Professor**, *Dept. of System Information Sciences, Graduate School of Information Sciences, Tohoku University, Sendai 980-8579, Japan*
- 2001-2003 **Special Foreign Researcher (under JSPS Postdoctoral Fellowship)**, *Dept. of System Information Sciences, Graduate School of Information Sciences, Tohoku University, Sendai 980-8579, Japan*
- 1999-2005 **Assistant Professor**, *Dept. of Computer Science & Engineering (CSE), Bangladesh University of Engineering & Technology (BUET), Dhaka 1000, Bangladesh*
- 1991-1999 **Lecturer**, *Dept. of Computer Science & Engineering (CSE), Bangladesh University of Engineering & Technology (BUET), Dhaka 1000, Bangladesh*

1990-1991 **Assistant Engineer**, *Institute of Computer Science, Atomic Energy Research Establishment, Bangladesh Atomic Energy Commission, Savar, Dhaka, Bangladesh*

Visiting / Research Employment

- March 20-March 26, 2023, Visiting Professor, National Yang Ming Chiao Tung University (NYCU), Taiwan
- July 09 2018 to July 18, 2018, Visiting Professor, Tohoku University, Japan
- June 29, 2017 to July 5, 2017, Visiting Professor, Tohoku University, Japan
- Jan 6, 2017 to March 28, 2017, Visiting Scholar, Kwansei Gakuin University, Japan
- March 2014-Feb2015: Visiting Professor, MIST, Bangladesh
- Dec 15, 2013 to Feb 12, 2014, Visiting Scholar, Kyoto University, Japan
- Sep 14, 2010 to Sep 21, 2010, Visiting Researcher, University of Dortmund, Germany
- April 15, 2010 - April 23, 2010, Visiting Researcher, KAIST, Korea
- Feb 21, 2010-March 8, 2010, Visiting Researcher, Tohoku University, Japan
- Dec 10, 2007 – January 12, 2008, Visiting Researcher, Tohoku University, Japan
- Dec 23, 2004 – March 11, 2005, Visiting Researcher, Tohoku University, Japan
- 27 Nov 2001 - 31 March 2003: JSPS Research Fellow, GSIS, Tohoku University Japan

Administrative Responsibilities in BUET

2020-2023 **Director**, *Institutional Quality Assurance Cell (IQAC), BUET*
2017-2018 **Registrar**, *BUET*
2015-2021 **Head**, *Self-Assessment Committee of CSE, BUET*
2015-2021 **In-Charge**, *Bangladesh-Korea Information Access Center, CSE Dept. BUET*
2007-2009 **Head of the Department**, *CSE Dept. BUET*
2005-2007 **Assistant Provost**, *Ahsanullah Hall, BUET*
2001 **Assistant Provost**, *Suhrawardy Hall, BUET*

Membership of Learned Professional Societies, Institutions, etc.

- Fellow, Bangladesh Academy of Sciences.
- Fellow (F-7169), The Institution of Engineers, Bangladesh.
- Fellow (F-160), Bangladesh Computer Society.
- Senior Member (M-40294799), IEEE
- Member, ACM, SIGACT (ACM Membership No.: 1106174)

Professional Awards / Honours Received

Awards

- WALCOM 2018 Best Paper Award
- University Grants Commission Award 2004
- FUNAI Information Technology Award for Young Researchers 2004
- Bangladesh Academy of Sciences Gold Medal Award for Junior Scientists 2003.

Scholarship and Fellowship

- Received JSPS Postdoctoral Fellowship from November 2001 to March 2003. (Research Title: Graph Drawing Algorithms.)
- Received MONBUSHO Scholarship from April 1993 to March 1999.
- Received merit scholarships in all levels of education in Bangladesh.

Responsibilities in Academic, Research, Planning & Development Committees

In BUET

- Member Quality Assurance Committee, BUET, 2024-2026.
- Member Planning and Development Committee, BUET, 2018 to date
- Chairman CASR Research Monitoring Committee, 2016 to date
- Member Committee for Research and Innovation, BUET, 2020 to date
- Member Research and Innovation Centre for Science and Engineering (RISE) Research Committee, BUET, 2021 to date
- Member Paper Incentive Application Scrutiny Committee, BUET, 2021 to date
- Member Basic Research Grant Report Evaluation Committee, BUET, 2023 to date
- Member BUET Book Publishing Board, 2020 to 2023
- Chairman Committee for Improvement and Testing of the Software for Online Submission of CASR Thesis-Research Proposal, 2020
- Member Postgraduate Ordinance and Syllabus Review Committee for Chemical Engineering, 2021
- Member Committee for Advanced Studies and Research (CASR), 2009 to 2011
- Member Postgraduate Ordinance Review Committee, 2008
- Chairman Board of Post Graduate Studies, Board of Undergraduate Studies, Examination Committee, CSE Dept, BUET, 2007 to 2009
- Member Examination Committee, CSE Dept, BUET, 1999 to date
- Member Board of Post Graduate Studies, CSE Dept, BUET, 1999 to date
- Member Board of Undergraduate Studies, CSE Dept, BUET, 1991 to date

Outside BUET

- Member Served as a member of TEC of Microcredit Regulatory Authority in 2023-24.
- External Syllabus Committee of CSE program of Shahjalal University of Science and Technology, Sylhet since 2022
- Convener Project proposal evaluation committee for collaborative research grant of the Faculty of Engineering and Technology of the University of Dhaka in 2022.
- Member Committee for recruitment of IT Professionals in Microcredit Regulatory Authority since 2021.
- Member Recruitment Committee for CUET, 2018
- External Curriculum Committee of CSE department of East West University since 2009
- Member

- External member Syllabus committee for CSE program of Khulna University from 2007 to 2016.
- Member Committee of Courses for development/revision of Course Curriculum of CSE program of MIST in 2007.
- Member Syllabus Committee of Sylhet Engineering College in 2006.
- Member Proposal Evaluation Committee for recruiting IT Program Manager and Procurement Specialist of Bangladesh Bank in 2007.
- Member TEC of Ministry of Defense in 2007.
- Member TEC of Bangladesh Bank in 2007.
- Member Application Evaluation Committee (AEC) for recruitment of IT specialist in Bangladesh Water Supply Program Project of Public Health Department of Govt. of Bangladesh in 2005.
- Member Selection Committee for recruitments in “Development of Infrastructure for IT Applications” project of Bangladesh Computer Council (BCC) in 2004.

National Bodies/Institutions/Committees

- Member Board of Accreditation for Engineering and Technical Education (BAETE), Bangladesh, 2020 to date
- Member Board of Trustees, BUET Alumni Association, 2018-2022
- Member Trusty Board, Science and Technology Development Trust, Bangladesh National Museum of Science and Technology, Ministry of Science and Technology, Govt. of Bangladesh, 2017-2019
- Chairman Evaluation Committee of ICT fellowship and Innovation Fund, ICT Division, Ministry of Post, Telecommunication and Information Technology, Govt. of Bangladesh, 2017-2018
- Council Member Bangladesh Computer Council, 2007 to 2009
- Member ICT Taskforce, Government of Bangladesh, 2007 to 2009
- Chairman Information Technology Branch Committee for establishing national standards of IT goods, Bangladesh Standards and Testing Institution (BSTI), 2001.
- Member Higher Education Subcommittee formed by Ministry of Education in 2024 for Implementing Blended Learning Method in National Level.
- Convener Expert Sub-Committee formed by UGC for developing course-content on online teaching, learning and assessment for training of university teachers in 2022-2023.
- Member Subcommittee formed by UGC for preparing guideline of standard syllabus of CSE programs in private universities of Bangladesh during 2016-2017.
- Member Course curriculum development committee of Department of Youth Development of Government of the People's Republic of Bangladesh, developed training course curriculum of DYD 64 labs in 2017

Internal/External Quality Assurance Activities

Board Member	Board of Accreditation for Engineering and Technical Education (BAETE), Bangladesh (2020 to date)
Member	Quality Assurance Committee, BUET, 2024-2026.
Director	Institutional Quality Assurance Cell (IQAC), BUET (2020-2023)
ET Chair	B. Sc. in Computer Science and Engineering program of Ahsanullah University of Science and Technology (2023)
Head of Delegation	B. Sc. in CE and CSE Programs of Ahsanullah University of Science and Technology (2023).
ET Chair	B. Sc. in Computer Science and Engineering program of Independent University Bangladesh (IUB) (2023)
Head of Delegation	B. Sc. in CSE and EEE Programs of Independent University Bangladesh (IUB) (2023)
Head	Self-Assessment Committee, Department of Computer Science and Engineering, BUET (2015-2021)
Member	External Peer Review Team (EPRT), B. Sc. in Computer Science and Engineering program of Khulna University (2016)
ET member	B. Sc. in Computer Science and Engineering program of Brac University (2008)
Participant	Participated several ET training programs organized by BAETE.
Resource Person	Delivered talks on OBE curriculum in several universities in Bangladesh.
Resource Person	Worked as an instructor of ET training of BAETE.

Research Interest

Established a research group together with graduate and undergraduate students of the department of CSE and arranging a research presentation session every week. The fields of interest of this group are:

- Graph Algorithms
- Graph Drawing Algorithms
- VLSI Layout Algorithms
- Computational Geometry
- Generating Problems
- Internet Routing Protocols
- Bioinformatics
- Complex Network Analysis
- Contemporary Algorithms

Research Grants Received

1. Received RISE Internal Research Grant of Tk. 2,450,000/= for the project "Development of Efficient Graph Algorithms for Big Data Analytics and Visualization" in 2022.
2. Received a grant of Taka 8,80,000 from Ministry of Science and Information & Communication Technology, Government Bangladesh for the project Facility Upgradation for Sustainable Research

- on Graph Drawing and Information Visualization in fiscal year 2009-2010.
3. Received grant-in-aid for scientific research (Tokubetsu Kenkyuin Shorei-hi) from JSPS for doing research on graph drawing algorithms as follows:
 - 400,000 yen in 2001
 - 900,000 yen in 2002
 - Received a grant of 270,000 yen from Telecommunication Advancement Foundation in 2003.

Completed Research and Development Projects

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| 2022-2025 | Principle Investigator, RISE project “Development of Efficient Graph Algorithms for Big Data Analytics and Visualization” |
| 2012-1014 | Subproject Manager, HEQEP Subproject CP # 2082: Enhancement of Graduate Studies Facilities for the Department of CSE, BUET, UGC, Bangladesh. |
| 2010-2011 | Project Director, Minimum-area Drawings of Planar Graphs, CASR, BUET. |
| 2009-2010 | Project Director, Facility Upgradation for Sustainable Research on Graph Drawing and Information Visualization, Supported by Ministry of Science and Information & Communication Technology, Government Bangladesh. |
| 2008-2009 | Project Director, Layered Drawings of Planar Graphs, CASR, BUET. |

Supervision of Graduate Research Works:

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| Ph. D. | Md. Manzurul Hasan , <i>Relating Planar Graph Drawings to Planar Satisfiability Problems</i> , 2023, (Associate Professor, AIUB, Bangladesh) |
| Ph. D. | Shaheena Sultana , <i>Efficient Algorithms for Geometric Representation of Graphs</i> , 2018, (Professor, Notre Dame University, Bangladesh) |
| Ph. D. | Md. Iqbal Hossain , <i>Straight-line drawings of planar graphs with constraints</i> , 2015, (Director, Research Data Science, University of Arizona, USA) |
| Ph. D. | Md. Rezaul Karim , <i>Straight-line Grid Drawings of Planar Graphs with Sub-Quadratic Area</i> , 2008, (Professor, University of Dhaka, Bangladesh) |
| M.Sc. Engg | Bishal Basak Papan , <i>Characterization and Algorithm Design For Some Subclasses and Superclasses of Pairwise Compatibility Graphs</i> , 2003 |
| M.Sc. Engg | Md. Nurul Muttakin , <i>Overlapping Community Detection using Deep Graph Neural Networks</i> , 2022 |
| M.Sc. Engg | Sujoy Das , <i>Algorithms for Minimizing Systemic Risks in Complex Systems with Guided Network Topology</i> , 2022 |
| M.Sc. Engg | Shareef Ahmed , <i>Algorithms for r-Gathering and r-Gather clustering Problems</i> , 2019 |
| M.Sc. Engg | Md. Khaled Hussain , <i>Algorithms for Polyline Drawings of Plane 3-Trees</i> , 2019 |
| M.Sc. Engg | Md. Mizanur Rahman , <i>Algorithms for Constructing Multi-Labeled Phylogenetic Trees from Quartets with Fewer Leaf Duplications</i> , 2017 |
| M.Sc. Engg | Abu Reyan Ahmed , <i>Online Algorithms for Facility Assignment Problem</i> , 2016 |
| M.Sc. Engg | Mohammad Al-Mahmud , <i>Algorithms for Minimum Length Sliding Camera Problem</i> , 2016 |

- M.Sc. Engg. **Shafique Ahmed Faruque**, *Development of Graph Theoretic Models for Business Promotion on Social Networks*, 2013
- M.Sc. Engg. **Aftab Hussain**, *Software Restructuring using Hierarchical Clustering*, 2012
- M.Sc. Engg. **Md. Manzurul Hasan**, *Box-rectangular Drawings of Planar Graphs*, 2012
- M.Sc. Engg. **Shaheena Sultana**, *Algorithms for Bar 1-visibility Representations of Graphs*, 2011
- M.Sc. Engg. **Md. Emran Chowdhury**, *Point-set Embeddings of Planar Graphs with Fewer Bends*, 2011
- M.Sc. Engg. **Muhammad Jawaherul Alam**, *Minimum-Layer Drawings of Trees*, 2010
- M.Sc. Engg. **Md. Shamsuzzoha Bayzid**, *On Pairwise Compatibility Graphs*, 2010
- M.Sc. Engg. **Muhammad Abdullah Adnan**, *Minimum Segment Drawings of Outerplanar Graphs*, 2008
- M.Sc. Engg. **Abul Hasan Samee**, *Minimum Segment Drawings of Series-Parallel Graphs With the Maximum Degree Three*, 2008
- M.Sc. Engg. **Khaled Mahmud Shahriar**, *Bi-Chromatic Point Set Embeddings of Trees with Fewer Bends*, 2008
- M.Sc. Engg. **Md. Shahidul Islam**, *A Simple Linear Algorithm For No-Bend Orthogonal Drawings of Series-Parallel Graphs*, 2007
- M.Sc. Engg. **Abu Hasnat Mohammad Ashfak Habib**, *1-Bend Orthogonal Drawings of Triconnected Planar 4-Graphs*, 2007
- M.Sc. Engg. **TanveerAwal**, *Resource Partitioning of Planar Graphs*, 2007
- M.Sc. Engg. **Utpal Kumar Paul**, *On st-Orientations and st-numbering of planar graphs*, 2007
- M.Sc. Engg. **Md. Mostofa Ali Patwary**, *Hardness of Finding Minimum Face-Spanning Subgraphs of Plane Graphs*, 2006
- M.Sc. Engg. **Mohammad Tanvir Irfan**, *Computing Beta-Drawings of 2-Outerplane Graphs*, 2006
- M.Sc. Engg. **Mohammad Tanvir Parvez**, *Efficient Algorithms for Generating All Triangulations of Plane Graphs*, 2006
- M.Sc. Engg. **Shubhashis Ghosh**, *Rectangular Drawings of Planar Graphs*, 2001
- M.Sc. Engg. **Mahmuda Naznin**, *Orthogonal Drawings of Plane Graphs*, 2000

Professional Work at International Level

Editor

- Journal of Graph Algorithms and Applications
- International Journal of Foundation of Computer Science
- AKCE International Journal of Graphs and Combinatorics

Guest Editor

- Algorithmica
- International Journal of Foundation of Computer Science
- Journal of Graph Algorithms and Applications
- Journal of Combinatorial Optimization

- Theoretical Computer Science
- Discrete Mathematics, Algorithms and Applications

Expert\ Examiner Panels

- Served as an expert in the panel for evaluation of research proposals for the “Connect with Wallonia – Come 2 Wallonia” (C2W) Programme under European postdoctoral programme (Marie Skłodowska Curie COFUND action – Grant agreement No 10103438)
- Served as an external examiner of a PhD thesis of University of Perugia, Italy in 2021-2022.
- Served as an external examiner of a PhD thesis of Bharathiar University, Coimbatore, India. in 2022-2023.

Program Committee Member

1. 5th International Conference on Computer and Information Technology (ICCIT 2002), held in Dhaka, Bangladesh
2. 11th International Symposium on Graph Drawing (GD 2003), held in Perugia, Italy.
3. 13th International Symposium on Graph Drawing (GD 2005), held in Limerick, Ireland.
4. 17th Annual International Symposium on Algorithms and Computation (ISAAC 2006), held in Kolkata, India.
5. 1st Workshop on Algorithms and Computation (WALCOM 2007) held in Dhaka, Bangladesh – Program Co-chair
6. 15th International Symposium on Graph Drawing (GD 2007), held in Sydney, Australia.
7. 2nd Workshop on Algorithms and Computation (WALCOM 2008) held in Dhaka, Bangladesh – Program Co-chair
8. 3rd Workshop on Algorithms and Computation (WALCOM 2009) held in Kolkata, India.
9. 4th Workshop on Algorithms and Computation (WALCOM 2010) held in Dhaka, Bangladesh – Program Co-chair
10. 3rd Annual Meeting of Asian Association for Algorithms and Computation (AAAC 2010), held in Pohang, Korea.
11. 4th Annual Meeting of Asian Association for Algorithms and Computation (AAAC 2011), held in Hsinchu, Taiwan.
12. 22nd Annual International Symposium on Algorithms and Computation (ISAAC 2011), held in Yokohama, Japan.
13. 5th Annual Meeting of Asian Association for Algorithms and Computation (AAAC 2012), held in Shanghai, China.
14. 5th IEEE Pacific Visualization Symposium (PacificVis 2012), held in Songdo, Korea.
15. 6th Workshop on Algorithms and Computation (WALCOM 2012) held in Dhaka, Bangladesh – Program Co-chair
16. 7th Workshop on Algorithms and Computation (WALCOM 2013) held in Kharagpur, India
17. 9th Workshop on Algorithms and Computation (WALCOM 2015) held in Dhaka, Bangladesh
18. 10th Workshop on Algorithms and Computation (WALCOM 2016) held in Kathmandu, Nepal
19. 27th International Symposium on Algorithms and Computation (ISAAC 2016) to be held in Sydney, Australia.
20. 11th International Conference and Workshops on Algorithms and Computations (WALCOM 2017) held in Hsinchu, Taiwan – Program Co-chair
21. 11th International Frontiers of Algorithmics Workshop (FAW2017) to be held in Chengdu, China.

22. 12th International Conference and Workshops on Algorithms and Computations (WALCOM 2018) held in Dhaka, Bangladesh
23. 13th International Conference and Workshops on Algorithms and Computations (WALCOM 2019) held in Guwahati, India
24. 16th International Conference and Workshops on Algorithms and Computations (WALCOM 2022) held in Jember, Indonesia, Program Chair
25. 17th International Conference and Workshops on Algorithms and Computations (WALCOM 2023) held in Taiwan.
26. 18th International Conference and Workshops on Algorithms and Computations (WALCOM 2024) held in Japan.

Served as a Referee

Journal

ACM Transactions on Algorithms, Journal of Discrete Algorithms, Theoretical Computer Science, Discrete Mathematics, Algorithms and Applications, SIAM Journal on Computing, Algorithmica, Journal of Graph Algorithms and Applications, Discrete Mathematics, International Journal of Foundations of Computer Science, Computational Geometry: Theory and Applications, Information Processing Letters, IEICE Trans. Fundamentals, Journal of the Institution of Engineers, Bangladesh Conference

ICCIT 1998, GD 1999, WADS 2001, COCOON 2002, ISAAC 2002, COCOON 2003, COCOON 2004, GD 2004, ICCIT 2004, WG 2005, ISAAC 2005, IEEE PacificVis 2008, Graph Drawing 2008, Graph Drawing 2011, ISAAC 2011, SoCG 2011, MFCS 2012, ICECE 2012, SoCG 2012, SoCG 2013, FCT 2013, COCOON 2014, WG 2017, GD 2018, COCOON 2020, IWOCA 2024, MFCS 2024

Experience in Lab Development

- 2012-2014 Played leading role in establishing Graduate Complex of CSE department, BUET comprising a Graduate Room, a Graduate Seminar Room, a Graduate Class Room and a discussion lobby under HEQEP Subproject 2082 as the Subproject Manager.
- 2009-2010 Established Graph Drawing and Information Visualization Lab in CSE dept. BUET under the project "Facility Upgradation for Sustainable Research on Graph Drawing and Information Visualization" supported by Ministry of Science and Information & Communication Technology, Govt. of Bangladesh.
- 2007-2009 Played leading role in establishing Bangladesh-Korea Information Access Center in the Department of Computer Science and Engineering, BUET.
- 2007-2009 Played key role in establishing VLSI Design Automation Lab and Wireless Networking Lab, AI and Robotics Lab in the department of CSE.
- 2000-2001 Actively participated in the establishment of three new laboratories: Software Engineering Lab, Interfacing Lab, and Network Lab. Worked as lab-in-charge while establishing Network Lab.

References

- (1) Prof. Shin-ichi Nakano, Ph D
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Gunma University

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(2) Prof. M. Kaykobad, Ph D
Department of Computer Science and Engineering
Bangladesh University of Engineering and Technology (BUET)
Dhaka-1000, Bangladesh
Email: kaykobad@cse.buet.ac.bd

Publications

Text books

1. Md. Saidur Rahman, Basic Graph Theory, Undergraduate Topics in Computer Science, Springer, 2017 (Number of downloads until December 28, 2022: 62k, Citation count in Google Scholar on June 07, 2024: 180.)
2. Takao Nishizeki and Md. Saidur Rahman, Planar Graph Drawing, World Scientific, Singapore, 2004 (a textbook for advanced undergraduate and graduate level). (The book appeared in the bestseller list of World Scientific in August 2005. Citation count in Google Scholar on June 07, 2024: 368.)

Contributions in published books

1. Takao Nishizeki and Md. Saidur Rahman, Rectangular drawing algorithms, (Ed.) Roberto Tamassia, Handbook of Graph Drawing and Visualization, CRC Press, 2013.
2. Md. Saidur Rahman, Convex Graph Drawing, Encyclopedia of Algorithms, Springer, Article ID: 430438, Chapter ID: 652, 2015.
3. Md. Saidur Rahman and Takao Nishizeki, Graph drawing, Chapter 23 of Handbook of Graph Theory, Combinatorial Optimization, and Algorithms, CRC Press, 2015.

Edited Books

1. Petra Mutzel, Md. Saidur Rahman and Slamin (eds.), Proc. of WALCOM 2017, Lecture Notes in Computer Science, 13174, Springer 2022.
2. Sheung-Hung Poon, Md. Saidur Rahman and Hsu-Chun Yen (eds.), Proc. of WALCOM 2017, Lecture Notes in Computer Science, 10167, Springer 2017.
3. Md. Saidur Rahman and Shin-ichi Nakano (eds.), WALCOM: Algorithms and Computation, Proc. of WALCOM 2012, Lecture Notes in Computer Science, 7157, Springer, 2012.
4. Md. Saidur Rahman and Satoshi Fujita (eds.), WALCOM: Algorithms and Computation, Proc. of WALCOM 2010, Lecture Notes in Computer Science, 5942, Springer, 2010.
5. Shin-ichi Nakano, Md. Saidur Rahman (eds.), WALCOM: Algorithms and Computation, Proc. of WALCOM 2008, Lecture Notes in Computer Science, 4921, Springer, 2008.
6. M. Kaykobad and Md. Saidur Rahman (eds.), WALCOM 2007, Proceedings of Workshop on Algorithms and Computation, Bangladesh Academy of Sciences, 2007.

Journal Publications

1. Md. Manzurul Hasan, Debajyoti Mondal and Md. Saidur Rahman, Relating planar graph drawings to planar satisfiability problems. Inf. Process. Lett. 184: 106446, 2024. Clarivate Analytics (SCIE), DBLP
2. Md. Manzurul Hasan, Shaheena Sultana, and Md. Saidur Rahman, Sliding column model for

- t-unit bar visibility representations of graphs, *Discrete Mathematics, Algorithms and Applications*, 15(6): 2250137:1-2250137:14 2023. Clarivate Analytics (ESCI), DBLP
3. Bishal Basak Papon, Protik Bose Pranto and Md. Saidur Rahman, On 2-interval pairwise compatibility properties of two classes of grid graphs, *The Computer Journal*, 66(5): 1256-1267, 2023. Clarivate Analytics (SCIE), DBLP
 4. Sheikh Azizul Hakim, Bishal Basak Papan and Md. Saidur Rahman, New results on pairwise compatibility graphs, *Information Processing Letters*, 178, 2022. Clarivate Analytics (SCIE), DBLP
 5. Shareef Ahmed, Shin-ichi Nakano and Md. Saidur Rahman, r-Gatherings on a star and uncertain r-gatherings on a line, *Discrete Mathematics, Algorithms and Applications*, 15(5), 2150160:1-2150160:31, 2022. Clarivate Analytics (ESCI), DBLP
 6. Md. Manzurul Hasan, Debajyoti Mondal and Md. Saidur Rahman, Positive planar satisfiability problems under 3-connectivity constraints, *Theoretical computer Science*, 917, pp. 81-93, 2022. Clarivate Analytics (SCIE), DBLP
 7. Md. Saidur Rahman, S. Ahmed, A survey on pairwise compatibility graphs, *AKCE International Journal of Graphs and Combinatorics*, 2020. Clarivate Analytics (SCIE), DBLP
 8. Shaheena Sultana and Md. Saidur Rahman, shaped point set embeddings of high-degree plane graphs, *AKCE International Journal of Graphs and Combinatorics*, 17(1), pp. 256-164, 2020. Clarivate Analytics (SCIE), DBLP
 9. Abu Reyan Ahmed, Md. Saidur Rahman, Stephen G. Kobourov, Online facility assignment, *Theoretical Computer Science*, 806, pp. 455-467, 2020. Clarivate Analytics (SCIE), DBLP
 10. Katsuhisa Yamanaka, Md. Saidur Rahman, Shin-Ichi Nakano, Enumerating Floorplans with Columns, *IEICE Transactions on Fundamentals of Electronics, Communication and Computer Science*, 101-A(9), pp. 1392-1397, 2018. Clarivate Analytics (SCIE), DBLP
 11. Shaheena Sultana and Md. Saidur Rahman, Realizability of graphs as triangle cover contact graphs, *Theoretical Computer Science*, 720, pp. 24-35, 2018. Clarivate Analytics (SCIE), DBLP
 12. Shaheena Sultana, Md. Iqbal Hossain, Md. Saidur Rahman, Nazmun Nessa Moon, Tahsina Hashem, On triangle cover contact graphs, *Computational Geometry: Theory and Applications*, 69, pp. 31-38, 2018. Clarivate Analytics (SCIE), DBLP
 13. Iqbal Hossain, Sammi Abida Salma, Md. Saidur Rahman and Debajyoti Mondal, A necessary condition and a sufficient condition for pairwise compatibility graphs, *Journal of Graph Algorithms and Applications*, 21(3), pp. 341-352, 2017. DBLP
 14. Safique Ahmed Faruque, Mossa. Anisa Khatun and Md. Saidur Rahman, Modelling direct marketing campaign on social network, *International Journal of Business Information Systems*, 22(4), pp. 422-435, 2016. DBLP
 15. Md. Iqbal Hossain and Md. Saidur Rahman, Good spanning trees in graph drawing, *Theoretical Computer Science*, 607, pp. 149-165, 2015. Clarivate Analytics (SCIE), DBLP
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Presentations / Invited Talk / Keynote Talk

1. Md. Saidur Rahman, Graph Drawing Algorithms in VLSI Design Automation, ICCDC 2023, Haldia, West Bengal, India (Keynote talk)
2. Md. Saidur Rahman, Online Facility Assignment, ICCSPAM 2022, Tamil Nadu, India (Keynote Talk).
3. Md. Saidur Rahman, Graph Drawing, ICOMITEE 2021, Indonesia (Keynote Talk).
4. Md. Saidur Rahman, Drawing Planar Graphs, International Conference and Workshops on Algorithms and Computation, NUS, Singapore, 2020 (Invited Talk).
5. Md. Saidur Rahman, Graphs in Bioinformatics, ICCA 2020, Dhaka, 2020 (Keynote Talk).
6. Md. Saidur Rahman, On Connectivity and Realizability of Triangle Cover Contact Graphs, ICCGANT 2019, Jember, Indonesia, 2019 (Keynote Talk).
7. Md. Saidur Rahman, Pairwise Compatibility Graphs, Invited Talk, International Conference on Theoretical Computer Science and Discrete Mathematics, Chennai, India, 2018 (Invited Talk).
8. Md. Saidur Rahman, Pairwise Compatibility Graphs, Tohoku University, Japan, February, 2014 (Invited Talk).
9. Md. Saidur Rahman, Pairwise Compatibility Graphs, Kyoto University, Japan, January, 2014 (Invited Talk).
10. Md. Saidur Rahman, Pairwise Compatibility Graphs, University of Sydney, Australia, March, 2013 (Invited Talk).
11. Stephane Durocher, Debajyoti Mondal, and Md. Saidur Rahman, On Graphs That Are Not PCGs, Proceedings of WALCOM 2013, IIT, Kharagpur, India, February, 2013.
12. Debajyoti Mondal, Rahnuma Islam Nishat, Md. Saidur Rahman, and Sue Whitesides, Acyclic Coloring with Few Division Vertices, IWOCOA 2012, Tamil Nadu, India, July, 2012.
13. Md. Saidur Rahman, Pairwise Compatibility Graphs, ISI Kolkata, India, February, 2011.
14. Debajyoti Mondal, Jawaherul Alam and Md. Saidur Rahman. Minimum-layer drawings of trees, WALCOM 2011, IIT, Delhi, India, February, 2011. 15. Rahnuma Islam Nishat, Debajyoti Mondal and Md. Saidur Rahman, Point-Set Embeddings of Plane 3-Trees, Graph Drawing 2010, Konstanz, Germany, September, 2010.
15. Md. Saidur Rahman, Drawing planar graphs with small area, KAIST, Korea, May 2010 (Invited Talk).
16. Rahnuma Islam Nishat, Debajyoti Mondal and Md. Saidur Rahman, Point-Set Embeddings of

- Plane 3-Trees, 3rd Annual Meeting of the Asian Association for Algorithms and Computation, POSTECH, Korea, May, 2010.
17. Muhammad NurYanhaona, Md. Shamsuzzoha Bayzid and Md. Saidur Rahman, Not all graphs are pairwise compatibility graphs, 3rd Annual Meeting of the Asian Association for Algorithms and Computation, POSTECH, Korea, May, 2010.
 18. Mohammad Tanvir Parvez, Md. Saidur Rahman and Shin-Ichi Nakano, Generating All Triangulations of Plane Graphs, Workshop on Algorithms and Computation (WALCOM 2009), Kolkata, India, February, 2009.
 19. Md. Saidur Rahman, Doughnut graphs and their spanning subgraphs (invited talk), The International Workshop on Algorithms and Graphs (IWAAG 2007), Sendai, Japan, December 2007.
 20. Md. Saidur Rahman, Current research on planar graphs (invited talk), ICICT 2007, Dhaka, Bangladesh, March 2007.
 21. Md. Saidur Rahman, Kazuyuki Miura and Takao Nishizeki, Octagonal drawings of plane graphs with prescribed face areas, WG 2004, Bad Honnef, Germany, June 2004.
 22. Md. Saidur Rahman, Noritsugu Egi and Takao Nishizeki, No-bend Orthogonal drawings of subdivisions of planar triconnected cubic graphs, GD 2003, Perugia, Italy, September 2003.
 23. Md. Saidur Rahman, Kazuyuki Miura and Takao Nishizeki, A linear algorithm for prescribed-area octagonal drawings of plane graphs, FIT 2003, Sapporo, Japan, September 2003.
 24. Md. Saidur Rahman, Takao Nishizeki and Shubhashis Ghosh, A linear algorithm for rectangular drawings of planar graphs, FIT 2002, Tokyo Institute of Technology, Japan, September 2002.
 25. Md. Saidur Rahman, Takao Nishizeki and Shubhashis Ghosh, Rectangular drawings of planar graphs, Workshop on Computation, Institute of Electrical and Information Engineers, Tokyo Institute of Technology, Japan, August 2002.
 26. Nishizeki and Shubhashis Ghosh, Rectangular drawings of planar graphs, Graph Drawing 2002, Irvine, California, August 2002.
 27. Md. Saidur Rahman and Takao Nishizeki, Bend-minimum orthogonal drawings of plane 3-graphs, 27th Workshop on Graph-Theoretic Concepts in Computer Science (WG'02), Cesky Krumlov, Czech Republic, June 2002.
 28. Md. Saidur Rahman and Takao Nishizeki, Bend-optimal orthogonal drawings of plane 3-graphs, Workshop on Computation, Institute of Electrical and Information Engineers, Nihon University, Tokyo, Japan, March 2002.
 29. Md. Saidur Rahman, MahmudaNaznin and Takao Nishizeki, Orthogonal drawings of plane graphs without bends, Graph Drawing 2001, Vienna, September 2001.
 30. Md. Saidur Rahman, Rectangular drawings of plane 4-graphs, International Conference on Electrical and Computer Engineering (ICECE'2001), Dhaka, Bangladesh, January 2001.
 31. Md. Saidur Rahman, Rectangular drawings of plane graphs (talk), Dept. of Computer Science, Gunma University, Japan, December 2000.
 32. Md. Saidur Rahman, Rectangular Drawings of plane graphs (talk), Graduate School of Information Sciences, Tohoku University, Japan, November 2000.
 33. . Md. Saidur Rahman, Shin-ichi Nakano and Takao Nishizeki, Rectangular drawings of plane graphs without designated corners, 6th Annual International Conference on Computing and Combinatorics (COCOON 2000), Sydney, Australia, July 2000.
 34. Md. Saidur Rahman, Shin-ichi Nakano and Takao Nishizeki, Box-rectangular drawings of plane graphs, 25th Workshop on Graph-Theoretic Concepts in Computer Science (WG'99), Ascona, Switzerland, June 1999.

35. Md. Saidur Rahman, Shin-ichi Nakano and Takao Nishizeki, Box-rectangular drawings of plane graphs with designated four corners, 1st International Conference on Computer and Information Technology (ICCIT 1998), Dhaka, Bangladesh, December, 1998.
36. Md. Saidur Rahman, Shin-ichi Nakano and Takao Nishizeki, Box-rectangular drawings of plane graphs, Workshop on Computations (COMP 98-38), Institute of Electrical and Information Engineers, Sendai, Japan, October 1998.
37. Md. Saidur Rahman, Shin-ichi Nakano and Takao Nishizeki, Rectangular grid drawings of plane graphs, COCOON'96, Hong Kong, June 1996.
38. Md. Saidur Rahman, Shin-ichi Nakano and Takao Nishizeki, Rectangular grid drawings of plane graphs, Annual Conference of Institute of Electrical and Information Engineers, Japan, Tokyo, March 1996.
39. Md. Saidur Rahman, Shin-ichi Nakano and Takao Nishizeki, Rectangular grid drawings of plane graphs, 48th Workshop on Algorithms, Information Processing Society of Japan, Kobe, Japan, November 1995.

Consultancy Services

In addition to services provided to different organizations as Chairman and member in technical committees and so on, following are the major organizations involved with for long duration: BUET: Member, Bureau of Research Testing and Consultation (BRTC) (1999 – date). The responsibilities are:

- Testing of Computer Hardware and Software
- Design of Information Systems, Network Infrastructure, Computer Security Systems.
- Preparation and Evaluation of Tender Documents for purchasing computing equipment's of big Data Centers and monitoring their implementation.
- Recruiting IT personnel in Govt. and Private organizations.

Major consultancy works performed so far as BRTC member are

- Working a team member of the BUET Team for providing consultancy services for the upgradation of the DRS IT infrastructure of Bangladesh Krishi Bank since 2023.
- Working as a member of BUET consultant Team for Developing, Updating, Maintaining Database Application Software on Student Profile at the Secondary Higher Secondary Level of Education based on CRVS Project implemented by BANBEIS since 2019.
- Worked as a member of the team for Consultation on Software Development Information Technology Services for the XI Class Admission (2019-20) in the College/Equivalent Institutes in whole BD.
- Worked as a team leader of the consultant team for testing of DOER Agent Banking Software for Agrani Bank developed by Celloscope in 2019.
- Worked as member of the team for Consultation on Software Development Information Technology Services for the XI Class Admission (2017-18) in the College/Equivalent Institutes in whole BD.
- Worked as a team member for evaluating technical proposal for establishing Core Banking System of the Mutual Trust Bank in 2017.
- Worked as a team member for provide Consultation on Development of Four Interactive Digital Madrasah Textbooks (IDMT) of Grade VI Associated Services in 2016.
- Worked a team member for providing Expert Opinion on Technical Evaluation of ICT Related

Project of Bank Asia Ltd in 2016.

- Participate in Consultation on Written Test for Recruitment of Probationary Officer (Software, Hardware/Networking, ATM Cards Operation) of Dutch-Bangla Bank Ltd. In 2016.
- Worked as a member of the team for Evaluating Oracle Database in Support of Existing Core Banking System (CBS) of NRBC Bank in 2015.
- Team leader for evolution of technical proposal for recruitment of consultants in BanglaGovNet project conducted by Bangladesh Computer Council in 2010.
- Consultant, leader of a subcommittee of “Analysis, Design and Implementation of Backbone Connectivity, LAN, MAN, WAN and Related Service Setup at Bangladesh Secretariat” project in 2005-2006.
- Team Leader for recruitment test of Bangladesh Bank in 2005.
- Team Leader for Tender Evaluation of The Security Printing Corporation (Bangladesh) Ltd for Development, Supply, Installation and Commissioning of Customized Software in 2005.