**LIST OF PUBLICATIONS**

*International Peer Reviewed Journals*

1. **Protein Folding in HP Model on Hexagonal Lattices with Diagonals**  
   Dipan Lal Shaw, A. S. M. Sohidull Islam, Masud Hasan and M. Sohel Rahman  
   *BMC Bioinformatics* 2014, 15 (Suppl 2):S7 [Online link]

2. **On Fixed Size Projection of Convex Polyhedra** [Online link]  
   Masud Hasan  

3. **Cutting Out Polygons with a Circular Saw**  
   Adrian Dumitrescu, Masud Hasan  

4. **Prefix transpositions on binary and ternary strings**  
   Amit Kumar Dutta, Masud Hasan and M. Sohel Rahman  

5. **The 1.375 Approximation Algorithm for Sorting by Transpositions Can Run in $O(n\log n)$ Time**  
   Jesun Sahariar Firoz, Masud Hasan, Ashik Zinnat Khan, and M. Sohel Rahman  
   *Journal of Computational Biology* 18(8), pp. 1007-1011, August 2011, Mary Ann Liebert, Inc. publishers, USA [Online link]

6. **Solving Minimum Hitting Set Problem and Generalized Exact Cover Problem with Light Based Devices**  
   Masud Hasan, Shabab Hossain, Md. Mahmudur Rahman, and M. Sohel Rahman  

7. **Efficient viewpoint selection for silhouettes of convex polyhedra**  
   Therese C. Biedl, Masud Hasan, and Alejandro Lopez-Ortiz  
   *Computational Geometry: Theory and Application* 44(8), pp. 399-408, 2011, Elsevier [Online link]

8. **Reconstructing convex polygons and polyhedra from edge and face counts in orthogonal projections**  
   Therese C. Biedl, Masud Hasan and Alejandro López-Ortiz  

9. **Computing nice projections of convex polyhedra**  
   Md. Ashraful Alam and Masud Hasan  

10. **An Optical Solution for the Subset Sum Problem**  
    Masud Hasan, Shabab Hossain, Md. Mahmudur Rahman, and M. Sohel Rahman  
11. **Cutting a Convex Polyhedron out of a Sphere**  
   Syed Ishtiaque Ahmed, Masud Hasan, and Md. Ariful Islam  

12. **Cache Oblivious Algorithms for RMQ and RMSQ Problems**  
   Masud Hasan, Tanaeem M. Moosa, and M. Sohel Rahman  

13. **Cutting a cornered convex polygon out of a circle**  
   Syed Ishtiaque Ahmed, Md. Ariful Islam, and Masud Hasan  
   *Journal of Computers* 5(1), pp. 4-11, 2010, Academy Publisher [Online link]

14. **Cutting a Convex Polygon Out of a Circle**  
   Syed Ishtiaque Ahmed, Masud Hasan and Md. Ariful Islam  

15. **An approximation algorithm for sorting by reversals and transpositions**  
   Atif Rahman, Swakkhar Shatabda, and Masud Hasan  

16. **Equiprojective polyhedra**  
   Masud Hasan and Anna Lubiw  

17. **A linear algorithm for compact box-drawing of trees**  
   Masud Hasan, Md. Súdúr Rahman, and Takao Nishizeki  

**Book chapters**

18. **Advances in genome rearrangement algorithms**  
   Masud Hasan and M. Sohel Rahman  

**International Peer Reviewed Conference Proceedings**

19. **On Collections of Polygons Cuttable with a Segment Saw**  
   Adrian Dumitrescu, Anirban Ghosh, Masud Hasan  

20. **Natural Watch**  
   Masud Hasan, Syed Mahmudul Hasan and Md. Mamun Kaiser Zisan  
   [Best Papers Award-2nd Runner Up]
21. **Protein Folding in HP Model on Hexagonal Lattices with Diagonals**  
Dipan Lal Shaw, A. S. M. Sohidull Islam, Masud Hasan and M. Sohel Rahman  

22. **Zonohedra, Zone Graphs, and Their Linear Area Straight Line Grid Drawing**  
Muhammad Abdullah Adnan, Ifat Afrin, masud Hasan, Tahmina Khanam, Mir Monjur Al-Mahmud  
In Proc. Workshop on Graph Drawing and Graph Algorithms (GDGA) January 26-27, 2013, Dhaka, Bangladesh [Online link]

23. **Extract and rank web communities**  
Asif Salekin, Jeniya Tabassum Binte Jafar, Masud Hasan  

24. **Design of Novel Quaternary Encoders and Decoders**  
Ifat Jahangir, Anindya Das and Masud Hasan  

25. **Cutting Out Polygons with a Circular Saw**  
Adrian Dumitrescu, Masud Hasan  

26. **Some Basic Ternary Operations Using Toffoli Gates along with the Cost of Implementation.**  
Ayan Biswas, Shuvro Chowdhury, Md. Mahmud Muntakim Khan, Masud Hasan, Asif Islam Khan  

27. **On the design and analysis of quaternary serial and parallel adders**  
Anindya Das, Ifat Jahangir, Masud Hasan, Shaheera Hossain  

28. **Kinetisation of view of 3D point set**  
M. A. Wahid, M. Kaykobad, and Masud Hasan  
In Proc. 13th International Conference on Computer and Information Technology (ICCIT), 2010, pp. 325-330, Dhaka, Bangladesh [Online link]

29. **Two dimensional Range Minimum/Maximum Query revisited**  
Maxime Crochemore, Maxime, Masud Hasan, Tanaeem M. Moosa, and M. Sohel Rahman  
In Proc. 13th International Conference on Computer and Information Technology (ICCIT), 2010, pp. 27-32, Dhaka, Bangladesh [Online link]

30. **Solving the minimum hitting set problem with a light-based device**  
Masud Hasan, Shabab Hossain, Md. Mahmudur Rahman, and M. Sohel Rahman  
31. (Non-)Equiprojectivity and (Non-)Biprojectivity of Simplicial Polyhedra
Masud Hasan
In Online Proc. 20th Annual Fall Workshop on Computational Geometry (FWCG 2010), Stony Brook, NY, USA, 29-30 October, 2010 [Online link]

32. Vindictive Voronoi games and stabbing Delaunay circles
Syed Ishtiaque Ahmed, Masud Hasan, and Awalin Sopan

33. Pancake flipping with two spatulas
Masud Hasan, Atif Rahman, M. Sohel Rahman, Mahfuza Sharmin and Rukhsana Yeasmin
Also previously accepted as a book chapter for Advances in Computational Biology, Springer, (acceptance rate 18%), not published due to registration failure, 2010

34. Cutting a Convex Polyhedron out of a Sphere
Syed Ishtiaque Ahmed, Masud Hasan, and Md. Ariful Islam
and
In Proc. 7th Japan Conference on Computational Geometry and Graphs (JCCGG’09), Kanazawa, Japan, November 11-13, 2009 [Online link]

35. An Optical Solution for the Subset Sum Problem
Masud Hasan, Shabab Hossain, Md. Mahmudur Rahman, and M. Sohel Rahman

36. The 1.375 Approximation Algorithm for Sorting by Transpositions Can Run in $O(n \log n)$ Time
Jesun Sahariar Firoz, Masud Hasan, Ashik Zinnat Khan, and M. Sohel Rahman

37. On Finding a Better Position of a Convex Polygon inside a Circle to Minimize the Cutting Cost
Syed Ishtiaque Ahmed, Md. Mansurul Alam Bhuiyan, Masud Hasan, and Ishita Kamal Khan

38. On the Longest Vulnerable Path inside a Sensor Network from Boundary Regions
Chowdhury Sayeed Hyder, Ashikur Rahman and Masud Hasan
In Proc. 5th IEEE GCC Conference & Exhibition, Mar. 17-19, 2009, Kuwait City, Kuwait [Online link]

39. Maximum neighbor Voronoi games
Md. Muhibur Rasheed, Masud Hasan and M. Sohel Rahman
40. **Integer Linear Programming in Designing Universal Arrays with Multiplexed Applications**  
Atif Rahman, Mahmuda Naznin, and Masud Hasan  

41. **Synthesis of GF(3) based ternary reversible/quantum logic circuits without ancillary qutrits**  
Md. Mahmud Muntakim Khan, Ayan Kumar Biswas, Shuvro Chowdhury, Masud Hasan and Asif Khan  

42. **IMIPS: An improved pipelined processor architecture with reduced branch penalty and single memory for instruction and data**  
Md. Raqibul Hasan, M. Sohel Rahman, Masud Hasan and Md. Mahmudul Hasan  

43. **Cutting a cornered convex polygon out of a circle**  
Syed Isthiaque Ahmed, Md. Ariful Islam and Masud Hasan  
In Proc. 11th International Conference on Computer and Information Technology (ICCIT 2008), Khulna, Bangladesh, December 25-27, 2008, pp. 1-6, IEEE CS [Online link]

44. **Smallest and some new equiprojective polyhedra**  
Masud Hasan, Mohammad Monoar Hossain, Sabrina Nusrat and Alejandro Lopez-Ortiz  

45. **Fast preemptive task scheduling algorithm for homogeneous and heterogeneous distributed memory systems**  
Maruf Ahmed, Sharif M. H. Chowdhury and Masud Hasan  

46. **An approximation algorithm for bounded degree closest phylogenetic second root problem**  
Swakkhar Shatabda, Atif Rahman and Masud Hasan  

47. **List heuristic scheduling algorithms for distributed memory systems with improved time complexity**  
Maruf Ahmed, Sharif M. H. Chowdhury and Masud Hasan  

48. **Computing nice projections of convex polyhedra**  
Md. Ashraful Alam and Masud Hasan  
49. Quantum realization of some quaternary circuits
   Mahmud Khan, Ayan Biswas, Shuvro Chowdhury, Kazi Mohsin, Mehbuba Tanzid, Masud Hasan and Asif I. Khan

50. Reconstructing convex polygons and polyhedra from edge and face counts in orthogonal projections
   Therese C. Biedl, Masud Hasan and Alejandro López-Ortiz

51. An approximation algorithm for sorting by reversals and transpositions
   Atif Rahman, Swakkhar Shatabda and Masud Hasan

52. Quantum realization of some ternary circuits using Muthukrishnan-Stroud gates
   Asif I. Khan, Nadia Nusrat, Samira M. Khan, Masud Hasan and Mozammel H. A. Khan

53. Some new equiprojective polyhedra
   Nabila Rahman, Saad Alataful Quader and Masud Hasan
   In Proc. 9th International Conference on Computer and Information Technology (ICCIT 2006), Dhaka, 21-23rd December 2006, pp. 34-38 [Online link]

54. Novel realization of some ternary circuits for quantum computing
   Asif Khan, Nadia Nusrat, Samira Manabi Khan and Masud Hasan
   In Proc. IEEE TENCON, November 14-17, 2006, Hong Kong [Online link]

55. Novel realization of quantum ternary mux and demux
   Asif Khan, Nadia Nusrat, Samira Manabi Khan and Masud Hasan

56. e-Government Procurement of Developing Countries
   Abu Sayed Md. Latiful Haque, Muhammad Tanvir Parvez, Masud Hasan, Gahangir Hossain, and Muhammad Aminur Rahman Shah

57. e-Government Procurement of Bangladesh
   Abu Sayed Md. Latiful Haque, Muhammad Tanvir Parvez, Masud Hasan, Gahangir Hossain, and Muhammad Aminur Rahman Shah

58. Efficient viewpoint selection for silhouettes of convex polyhedra
   Therese C. Biedl, Masud Hasan and Alejandro Lopez-Ortiz
59. **Equiprojective polyhedra**  
Masud Hasan and Anna Lubiw  
In Proc. 15th Canadian Conference on Computational Geometry (CCCG 2003), Halifax, Canada, August 11-13, 2003, pp. 47-50 [Online link]

60. **Searching for the center of a circle**  
Therese C. Biedl, Masud Hasan, Joe Horton, Alejandro Lopez-Ortiz and Tomas Vinar  
In Proc. 14th Canadian Conference on Computational Geometry (CCCG 2002), Lethbridge, Canada, August 11-13, 2002, pp. 137-14 [Online link (.ps)]

61. **A linear algorithm for compact box-drawing of trees**  
Masud Hasan, Md. Saidur Rahman and Takao Nishizeki  

62. **A linear algorithm for finding visibility graphs of trees**  
Masud Hasan, and Md. Saidur Rahman  
In Proc. 2nd International Conference on Computer and Information Technology (ICCIT 1999), December 3-5, 1999, Bangladesh, pp. 204-207

63. **An efficient line drawing algorithm**  
Masud Hasan and Md. Abul Kashem  
In Proc. 2nd International Conference on Computer and Information Technology (ICCIT 1999), pp. 204-207, 3-5 December, 1999, Bangladesh

64. **Dynamic programming based 2-dimensional warping algorithm for Bangla character recognition**  
Md. Meftauddin, Masud Hasan and Muhammad Masroor Ali  

65. **Dynamic programming based 2-dimensional warping algorithm for hand-written Bangla character recognition**  
Masud Hasan, Md. Meftauddin and Muhammad Masroor Ali  

*Book Published by VDM Verlag, Germany [Not a reputed publisher]*

66. **Selected Topics of Computational Geometry: Polygons, Circles and Spheres**  
Syed Ishtiaque Ahmed, Md. Ariful Islam, Masud Hasan  
VDM Verlag, Germany, 2009. ISBN:978-3-639-19020-5 [Available at Amazon.com]

*Manuscript/Articles to be submitted*

67. **An \(O(n^2)\) Algorithm for Computing Longest Common Cyclic Subsequence**  
Shihabur Rahman Chowdhury, Masud Hasan, Sumaiya Iqbal, and M. Sohel Rahman  
Manuscript, 12 pages

68. **Characterizing graphs of zonohedra**  
Mohammad Abdullah Adnan and Masud Hasan  
Manuscript, 13 pages
69. **Computing optimal projections of 2D and 3D objects**  
S. M. Shahrir Nirjon, Masud Hasan and Alejandro Lopez-Ortiz  
Manuscript, 12 pages

70. **An external memory algorithm for the range minima/maxima query problem**  
Masud Hasan, Mahmudul Islam, Tanaeem M. Moosa and M. Sohel Rahman  
Manuscript, 10 pages

71. **Synthesis of Ternary Reversible/Quantum Logic Circuits Without Ancillary Bits**  
Md. Mahmud Muntakim Khan, Ayan Biswasa, Shuvro Chowdhury, Masud Hasan, Asif Khan  
Manuscript, 15 pages

72. **Quantum networks for booths and modified booths algorithm for binary multiplication**  
Mahmudul Hasan, Raqibul Hasan, Masud Hasan and Asif Islam Khan  
Manuscript, 6 pages

73. **Realization of single qudit ternary and quaternary comparators on top of Muthukrishnan-Stroud gates**  
Nadia Nusrat, Md. Mahmud Muntakim Khan, Masud Hasan and Asif Islam Khan  
Manuscript, 4 pages

74. **Some circuits for qutrit based quantum computation**  
Md. Mahmud Muntakim Khan, Asif Islam Khan, Nadia Nusrat, Samira Khan and Masud Hasan  
Manuscript, 3 pages

75. **Equiprojective Non-Convex Polyhedra**  
Masud Hasan  
Manuscript, 8 pages

_in progress_

76. **Design of novel quaternary sequential circuits (Extension of a published paper)**  
Ifat Jahangir, Anindya Das and Masud Hasan

77. **Extended Order Notations**  
Masud Hasan and Alejandro Lopez-Ortiz

78. **On the design and analysis of quaternary serial and parallel adders (Extension of a published paper)**  
Ifat Jahangir, Anindya Das and Masud Hasan

79. **Approximability of Greedy Shortest Superstring**  
Masud Hasan, Tahmid-un-Nabi, and Ayon Sen

80. **Matchings in Web Search**  
Jenia Tabassum Binte-Jafar, Masud Hasan, and Asif Salekin

81. **Maximum overlap of two convex polygons under rotation**  
Masud Hasan and Shahrrear Iqbal

82. **Searching for the center of a sphere and an ellipsoid**  
Syed Ishtiaque Ahmed, Masud Hasan
83. **Heuristics for vertex cover**  
Maruf Ahmed and Masud Hasan

84. **On Some Variants of Matching Problems**  
Masud Hasan, Alejandro Lopez-Ortiz, and S. M. Shahriar Nirjon

85. **Move and Cut (Extension of a published paper)**  
Syed Ishtiaque Ahmed, Masud Hasan, and Shebuti Rayhana

86. **Structured Search in Small Web Domain**  
Masud Hasan, Mohiuddin Abdul Quader, and Sajjadur Rahman

**Theses written**

87. PhD Thesis  
**Reconstruction and Visualization of Polyhedra Using Projections**  
Masud Hasan  
School of Computer Science, University of Waterloo, September 2005 [Online link]

88. MSc Thesis  
**Efficient Parallel Algorithms for Series-Parallel Graphs**  
Masud Hasan  
Department of Computer Science and Engineering, Bangladesh University of Engineering and Technology, 2001

89. BSc Thesis  
**Dynamic Programming Based 2-Dimensional Warping Algorithm for Bangla Character Recognition**  
Masud Hasan and Md. Meftauddin  
Department of Computer Science and Engineering, Bangladesh University of Engineering and Technology, 1998

**Publication list also available as:**

- DBLP Entries [Online link]
- Google Scholar [Online link]

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**TALKS GIVEN**

**Invited Talks Given**

1. **Some Approximation Algorithms for Genome Sorting**  
Indiana University-Purdue University at Indianapolis (IUPUI), Indianapolis, IN, USA,  
December 03, 2010

2. **Sorting Genomes: From Biological Problem to Computer Science Solution**  
Asian University, Dhaka, Bangladesh, 31st July, 2008

3. **Future Computing and the Steiner Tree Problem**  
In Workshop on Graph Drawing and Graph Algorithms (GDGA) January 26-27, 2013, Dhaka, Bangladesh [Online link]
Conference Talks Given

4. **(Non-)Equiprojectivity and (Non-)Biprojectivity of Simplicial Polyhedra**  
   Masud Hasan  
   20th Annual Fall Workshop on Computational Geometry (FWCG 2010), Stony Brook, NY, USA, 29-30 October, 2010

5. **Vindictive Voronoi games and stabbing Delaunay circles**  
   Syed Ishtiaque Ahmed, Masud Hasan, and Awalin Sopan  
   7th International Symposium on Voronoi Diagram in Science and Engineering (ISVD 2010), Quebec City, Canada, June 28-30, 2010

6. **Equiprojective Polyhedra: Recent Results and Future Directions**  
   Masud Hasan  
   Fields Discrete Math Days 2010, 14-15 June, 2010, Carleton University, Ottawa, Canada

7. **Maximum neighbor Voronoi games**  
   Md. Muhibur Rasheed, Masud Hasan and M. Sohel Rahman  

8. **Reconstructing convex polygons and polyhedra from edge and face counts in orthogonal projections**  
   Therese C. Biedl, Masud Hasan and Alejandro López-Ortiz  

9. **Novel realization of some ternary circuits for quantum computing**  
   Asif Khan, Nadia Nusrat, Samira Manabi Khan and Masud Hasan  
   IEEE TENCON 2006, November 14-17, 2006, Hong Kong

10. **Equiprojective polyhedra**  
    Masud Hasan and Anna Lubiw  
    The Coxeter Legacy, Fields Institute, University of Toronto, Ontario, Canada, May 12-16, 2004

11. **Equiprojective polyhedra**  
    Masud Hasan and Anna Lubiw  
    15th Canadian Conference on Computational Geometry (CCCG 2003), Halifax, Nova Scotia, Canada, pp. 47-50, August 11-13, 2003

12. **Searching for the center of a circle**  
    Therese C. Biedl, Masud Hasan, Joe Horton, Alejandro Lopez-Ortiz and Tomas Vinar  
    14th Canadian Conference on Computational Geometry (CCCG 2002), Lethbridge, Alberta, Canada, pp. 137-141, August 11-13, 2003

13. **A linear algorithm for compact box-drawing of trees**  
    Masud Hasan, Md. Saidur Rahman and Takao Nishizeki  
    14th Canadian Conference on Computational Geometry (CCCG 2002), Lethbridge, Alberta, Canada, pp. 154-157, August 12-14, 2002

14. **A linear algorithm for finding visibility graphs of trees**  
    Masud Hasan, and Md. Saidur Rahman  
    International Conference on Electrical and Computer Engineering (ICECE 2001), pp. 287-
289, January 5-6, 2001, Dhaka, Bangladesh

15. An efficient line drawing algorithm
Masud Hasan and Md. Abul Kashem
2nd International Conference on Computer and Information Technology (ICCIT 1999), pp. 204-207, December 3-5, 1999, Bangladesh

Seminar Talks Given

16. Neighbourship Voronoi Games
School of Computer Science, University of Waterloo, Canada, July 14, 2010

17. Efficient viewpoint selection for silhouettes of convex polyhedra.
Algorithm and Complexity School of Computer Science, University of Waterloo, Canada, September 2004

18. Equiprojective polyhedra,
School of Computer Science, University of Waterloo, Canada, July 2003

19. Searching for the center of a circle,
School of Computer Science, University of Waterloo, Canada, September 2002

Others Talks Given

20. Several talks at different higher studies seminars for students at BUET, during 2005-2013