

Resume of Dr. Md. Ainul Islam

Academic Qualifications

Degree	University/ Board	Year	Class & Position
Ph.D. in Mathematics (Operations Research)	University of Roorkee	1989	
M.A. in Mathematics	University of Dhaka	1972	1 st Class 3 rd
B.A. (Hons.) in Math.	University of Dhaka	1971	1 st Class 3 rd
H.S.C.	Comilla Board	1968	2 nd Division
S.S.C.	Comilla Board	1966	1 st Division

Teaching experience

Department of Mathematics, Faculty of Science, University of Dhaka

Honorary Professor since 16-9-2018 to onwards

Professor on 13-Sep-93 (Selection Grade on 14-Jan-2007) to 29-06-2018

Associate Professor

07-Jul-89 to 12-Sep-93

Assistant Professor

10-May-80 to 06-Jul-89

Lecturer

05-Feb-75 to 09-May-80

Courses Taught: Algebra, Trigonometry, Calculus, Geometry, Linear Algebra, Abstract Algebra, Business Mathematics, Discrete Mathematics, Differential Equations, Linear Programming, Real Analysis, Complex Analysis, Operations Research & Group Theory.

Research Articles

Ph.D Thesis: Efficiency and Duality in Multiobjective Mathematical Programming

1. Md. Abdur Rahman, Md. Ainul Islam and Md. Muklesur Rahman, "A note on matrix representation of finite groups", Dhaka University Studies, B, XXVII (1) (1981), 7-11.
2. T. R. Gulati and M. A. Islam, "A note on the Weak Arrow- Hurwicz- Uzawa constraint qualification", OPSEARCH (India) 24 (1987), 249-252.
3. T. R. Gulati and M. A. Islam, "Proper efficiency in a linear fractional vector maximum problem with generalized convex constraints", European Journal of Research 36 (1988), 339-345.
4. T. R. Gulati and M. A. Islam, "Proper efficiency in linear vector maximum problems with nonlinear constraints", Journal of Australian Mathematical Society (series A) 46(1989), 229-235.
5. T. R. Gulati and M. A. Islam, "Efficiency in linear vector maximum problems with nonlinear

- constraints”, Optimization (Germany) 20 (1989) 4, 477-482.
6. T. R. Gulati and M. A. Islam, “Efficiency and proper efficiency in differentiable multi objective programming”, ‘GANIT’ (Journal of Bangladesh Mathematical Society) 9, (1989), 55-62.
 7. T. R. Gulati and M. A. Islam, “Efficiency and proper efficiency in nonlinear vector maximum problems”, European Journal of Operation Research 44 (1990), 373-382.
 8. T. R. Gulati and M. A. Islam, “Sufficiency and duality in multi-objective programming involving generalized F-convex functions”, J. of Math. Anal. , U.S.A. 183 (1994), 181-195.
 9. T.R. Gulati and M. A. Islam “Efficiency and duality in a non linear fractional vector maximum problem” OPSEARCH (India) 32(1995) 130-142.
 10. Md. Ainul Islam, “Comparison of techniques for pseudolinear programming”, Dhaka University Studies, B, 41(2); (1993), 221-227.
 11. Md. Ainul Islam, “Sufficiency and duality in nondifferentiable multi-objective programming”, Pure and Applied Matematika Sciences, India, XXXIX (1994), 31-39.
 12. Md. Ainul Islam, “Generalized linear fractional programming problems”, The Bangladesh journal of Scientific Research 12(1) (1994), 101-108.
 13. Md. Ainul Islam, “Efficiency and duality in vector optimization problems with invexity”, The Dhaka University Journal of Science 42(1) (1994), 97-105.
 14. Md. Ainul Islam, “A unified sufficiency theorem in nonlinear programming”, ‘GANIT’ (The Journal of Bangladesh Mathematics Society), 14 (1994), 13-16.
 15. Md. Ainul Islam, “Complementary slackness conditions in multi-objective linear programming”, ‘GANIT’ (The Journal of Bangladesh Mathematical Society), 14 (1994), 75-78.
 16. M. A. Islam and Gopi Nath, “Investigation on a certain algorithm for linear fractional programming problems”, The Bangladesh Journal of Scientific Research 14(1), (1996), 1-11.
 17. Md. Ainul Islam, “A modified approach to simplex method”, The Bangladesh Journal of Scientific Research 13(2), (1995), 149-154.
 18. M. A. Islam, “Multi-objective goal programming”, Proceeding of 10th Bangladesh Mathematics Conference, November 25-27, 1995, pp, 29-40.
 19. M. Ainul Islam and M. Mustafizur Rahman, “A note on finding an initial basic efficient solution for multi-objective linear programming problem”, GANIT (The Journal of Bangladesh Mathematical Society) 17 (1997), 11-23.
 20. M. Ainul Islam and Mohammed Forhad Uddin, “Equivalence, difference & failure of algorithms for solving linear programming problems”, GANIT ((The Journal of Bangladesh Mathematical Society) 20 (2000) 71-85.
 21. M. Babul Hasan, A. F. M. Khodadat Khan and M. Ainul Islam, “Basic solution of linear system through computer algebra”, GANIT (Journal of Bangladesh Mathematical Society), 21 (2001) 39-45.
 22. M. Ainul Islam and M. Babul Hasan, “Identification of demerits of more than one basic variable replacement in simplex method”, Dhaka University Journal of Science, 50 (2) (2002), 217-227.
 23. M. Babul Hasan, A.S.M. Ferdous and M. Ainul Islam, “Linear programming model for a large-scale problem and its solution”, Dhaka University Journal of Science, 52(3) (2004), 369-378.
 24. M. Forhad Uddin, M.A. Ahad and M. Ainul Islam, “Modified approach of Swarup’s method”, GANIT (The Journal of Bangladesh Mathematical Society),

24(2004), 89-98.

25. M. Ainul Islam and M. Babul Hasan, "Generalization of simplex method for solving quadratic fractional programming problems", Dhaka University Journal of Science, 53(1) (2005), 111-118.
26. Aparna Das, Monjur Morshed and M. Ainul Islam, "Computer orientation of a method for solving linear fractional programming problems with an application" GANIT (the Journal of Bangladesh Mathematical Society), 7(2007), 67-85.
27. Sohna Jahan and M. Ainul Islam, "Equivalence of duals in linear fractional programming" ", Dhaka University Journal of Science, 58(1): (2010), 73-78.
28. Sohna Jahan and M. Ainul Islam, "A complementary slackness theorem for linear fractional programming" ", International Journal of Basic and Applied Science, IJBEAS-IJENS 10(2), (2010), 39-44.
29. Sanwar Uddin Ahmad, M. Babul Hasan, M. Ainul Islam, "Algorithm to Perform a Complete RHS Parametric Analysis for LPP with Bounded Variables", Dhaka University Journal of Science, 60(2): (2012), 217- 222.
30. Md. Rajib Arefin, Touhid Hossain, M. Ainul Islam, "Additive Algorithm for Solving 0-1 Integer Linear Fractional Programming Problem", Dhaka University Journal of Science, 61(2): (2013), 173-178.
31. Md. Hasib Uddin Molla and M. Ainul Islam, "A Modified filtering technique for efficient extreme points and application of MOLP in Agriculture sector in Bangladesh", Dhaka University Journal of Science, 64(2): (2016), 147-152.
32. Farhana Ahmed Simi and M. Ainul Islam, "Computer oriented interior point algorithm for solving linear programming problem with application", Dhaka University Journal of Science, 65(1): (2017), 41-47.
33. Farhana Akond Pramy and M. Ainul Islam, "Determining Efficient Solutions of Multi-Objective Linear Fractional Programming Problems and Applications", Open Journal of Optimization, 6: (2017), 164-175.

Reviewer of Journals

1. Mathematical Reviews, U.S.A.
2. Journal of Mathematical Analysis and Application, U.S.A.
3. 'GANIT' Journal of Bangladesh Mathematical Society .
4. The Bangladesh Journal of Scientific Research.
5. Dhaka University Journal of Science.
6. Science Journal of Jahangir Nagar University
7. Science Journal of Chittagong University

Conferences & Workshops Attended

1. The Second Annual Conference of Ramanujan Mathematical Society at Anna University, Madras, India on 5-7 June, 1987.
2. The Regional Workshop on the Application of Optimization Sciences and Operational Research at Islamic University, Bahawalpur, Pakistan (15-21 December, 1989).
3. All Bi-annual Mathematics Conference organized by Bangladesh Mathematical Society since 1984.

Supervised Dissertations

1. Investigation on a certain algorithm for linear fractional programming problems, 1992.
2. Extension and comparative study on some algorithms for solving linear fractional programming problems, 1994.
3. A comparative study and modification of some algorithms for solving multi-objective linear programming problem, 1995.
4. A modification and Comparative study of some algorithms for solving linear fractional programming problems, 1996.
5. Model building of large-scale problems in linear programming with computer oriented solutions, 1997.
6. Identification of demerits of more than one basic variable replacement in simplex method, 1998.
7. Generalization of Simplex method for solving quadratic fractional programming problem, 2000.
8. Modified approach of Swarup's method for solving linear fractional programming problem, 2001.
9. Computer oriented solution of linear fractional programming problem, 2002
10. Computer orientation for solving multiparametric linear programming and parameteric linear fractional programming problems, 2003.
11. A complete procedure for solving multiobjective linear programming problems, 2003.
12. A study on extreme point linear fractional programming problems, 2003.
13. A comparative study on bilevel linear programming, 2004.
14. A comparative study on duality in linear fractional programming problem and extensions, 2005.
15. Computer oriented for solcing paracetric linear fractional programming problems, 2007.
16. An extension of additive algorithm for solving 0-1 Integer Linear Fractional programming problem and it's implementation on set covering problems, 2008.
17. An alternative approach for solving extreme point linear and linear fractional programming problems, 2008.
18. Sensitivity analysis on the piecewise linear fractional programming and extensions, 2009
19. A dual simplex algorithm for piecewise linear fractional programming problems, 2009
20. A study on traveling salesman problem, 2011
21. A solution procedure of multi objective linear programming problem and its applications, 2012
22. Solution procedure of multi objective linear fractional programming problem and application, 2014.
23. Computer oriented interior point method for solving linear fractional Programming problems, 2015.

24. Determination of Efficient solutions of Multiobjective linear fractional Programming problem and its applications, 2016.

**** Among above supervised students 12 become teacher of
Dhaka University and BUET.**

Organizations where Associated

1. Member of Bangladesh Association of Advancement of Science.
2. Life member of Bangladesh Mathematical Society.

Administrative Experience

1. Chairman, Department of Mathematics, University of Dhaka, July 2000-June 2003.
2. Secretary of the Executive Committee of Bangladesh Mathematical Society for the session: January 1994-December 1995.
3. Editor of GANIT, the Journal of Bangladesh Mathematical Society for session 1998-2005 & 2013-2015.
4. President of the executive committee of Bangladesh Mathematical society for the session: January 2006-December 2007.
5. Member of curriculum committee of different public Universities of Bangladesh.
6. Member of selection committee of different public Universities of Bangladesh.
7. President, Dhaka University Club, for the session: July 2008 – June 2009
8. Government representative in syndicate of University of Asia Pacific, since 2009.
9. Member of the Governing Board of BANSDOC, since 2009.
10. Provost, Dr. Muhammad Shahidullah Hall, from 21-06-2015 to 29-06-2018.

Participation in Liberation War

Gazette Number 6668, Date 03 October 2011

Certificate on the 'Ma' 172856, Date 16 October 2011

Personal Information

Father's name : Late Mr. Md. Akbar Ali
Date & place of birth : 1 January, 1951, Comilla, Bangladesh.
Nationality : Bangladeshi, Marital status : Married
Mailing address : Department of Mathematics, University of Dhaka, Dhaka-1000,
Bangladesh.
Professional address : Professor, Department of Mathematics, University of Dhaka,
Dhaka-1000, Bangladesh.