

CURRICULUM VITAE OF DR. MD. ASADUZZAMAN

Mailing Address:

Dr. Md. Asaduzzaman

Associate Professor

Department of Mathematics

Islamic University (IU), Kushtia-7003, Bangladesh.

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Academic Qualifications:

28th March, 2020: Doctor of Philosophy (PhD)

Completed 3-years Doctor of Philosophy degree in Mathematics from the Department of Mathematics, Faculty of Science, Islamic University (IU), Kushtia-7003, Bangladesh under the supervision of Professor Dr. Md. Zulfikar Ali, Department of Mathematics, University of Rajshahi, Rajshahi-6205, Bangladesh and **Awarded**. Medium instruction of study was English.

Thesis Title: “Determination of the Solvability of Non-linear Differential Equations by Applying Fixed Point Theorems”

13th January, 2012: Master of Philosophy (M. Phil.)

Completed 2-years Master of Philosophy degree in Mathematics from the Department of Mathematics, University of Rajshahi (RU), Faculty of Science, Rajshahi-6205, Bangladesh under the supervision of Dr. M. Zulfikar Ali, Professor, Department of Mathematics, University of Rajshahi, Rajshahi-6205, Bangladesh and **Awarded**. Medium instruction of study was English.

Thesis Title: “An Analytical and Numerical Study on Fixed Point Theorems”

4th January, 2006: Master of Science (M. Sc.) (Thesis Group)

Completed 1-year Master of Science (Thesis group) degree in Pure Mathematics from the Department of Mathematics, University of Rajshahi (RU), Rajshahi-6205, Bangladesh under the supervision of Dr. Mohd. Altab Hossain, Professor, Department of Mathematics, University of Rajshahi, Rajshahi-6205, Bangladesh and obtained **First Class (Top Grade)**. Medium instruction of study was English.

Thesis Title: “On Premeasures and Hausdorff Measures in Metric Spaces”

28 September, 2003: Bachelor of Science (B. Sc.) (Four Year Integrated Honours)

Completed 4-years Bachelor of Science (Honours) degree in Mathematics from the Department of Mathematics, University of Rajshahi (RU), Rajshahi-6205, Bangladesh and obtained **First Class (Top Grade)**. Medium instruction of study was English.

24 September, 1998: Higher Secondary Certificate (H.S.C.)

Passed 2-years Higher Secondary Certificate (H.S.C.) exam from Government City College, Jessore, under Jessore Education Board, Bangladesh and obtained **First Division**.

02 August, 1995: Secondary School Certificate (S.S.C.)

Passed 10-years Secondary School Certificate (S.S.C.) exam from Chougachha Shahadat Pilot High School under Jessore Education Board, Bangladesh and obtained **First Division**.

Academic Awards and Distinctions:

1. Obtained “Dutch Bangla Bank Foundation Fellowship” for carrying out M. Phil. degree under the Department of Mathematics, Faculty of Science, University of Rajshahi, Bangladesh.
2. Obtained “University Scholarships” for acquiring 1st Class in M.Sc. degree under the Department of Mathematics, Faculty of Science, University of Rajshahi, Rajshahi-6205, Bangladesh.

3. Obtained “University Scholarships” for acquiring 1st Class in B.Sc. (Honours) degree under the Department of Mathematics, Faculty of Science, University of Rajshahi, Rajshahi-6205, Bangladesh.

Research Interest:

Non-linear Differential Equations; Fixed Point Theory and Its Applications; Computational Iterative Algorithms; Optimization; Mathematical Modelling; Functional Analysis;

List of Publications:

SL No.	Indexed in and Impact Factor	Author(s), title, journal's name, volume, publication year and pages
01.	ISI, SCOPUS, THOMSON REUTERS I.F. 1.548	Md. Asaduzzaman , Convergence and stability of modified multi-step Noor iterative procedure with errors for strictly hemicontractive-type mappings in Banach spaces, <i>Fixed Point Theory and Algorithms for Sciences and Engineering</i> , 2021:6 (2021), 1-30.
02.	ISI, SCOPUS I.F. 2.258	Md. Asaduzzaman , Adem Kiliçman, Md. Zulfikar Ali and Siti Hasana Sapor, Fixed Point Theorem Based Solvability of 2-Dimension Dissipative Cubic Nonlinear Klein-Gordon Equation, <i>Mathematics (MDPI)</i> , 8(7) (2020), 1103.
03.	ISI, SCOPUS, THOMSON REUTERS I.F. 1.287	Md. Asaduzzaman and M. Zulfikar Ali, Existence of multiple positive solutions to the Caputo-type nonlinear fractional Differential equation with integral boundary value conditions, Accepted by Fixed Point Theory on dated 02 October, 2020 and in press.
04.	ISI, SCOPUS, I.F. 2.85	Abdulla–Al–Mamun, Nur Hasan Mahmud Shahen, Samsun Nahar Ananna, Md. Asaduzzaman , Foyjonnesa, Solitary and periodic wave solutions to the family of new 3D fractional WBBM equations in mathematical physics, <i>Heliyon</i> . 7(7) (2021) e07483.
05.	ISI, SCOPUS, I.F. 2.85	Abdulla–Al–Mamun, Tianqing An, Samsun Nahar Ananna, Nur Hasan Mahmud Shahen, Md. Asaduzzaman , Foyjonnesa, Dynamical behavior of travelling wave solutions to the conformable time-fractional modified Liouville and mRLW equations in water wave mechanics, <i>Heliyon</i> , 7(8) (2021), e07704.
6.	SCOPUS, DOAJ	Md. Asaduzzaman , Existence Results for a Nonlinear Fourth Order Ordinary Differential Equation with Four-Point Boundary Value Conditions, <i>Advances in the Theory of Nonlinear Analysis and its Applications</i> , 4(4) (2020), 233-242.
07.	ISI, SCOPUS I.F. 0.38	Md. Asaduzzaman and M. Zulfikar Ali, Existence of Triple Positive Solutions for Nonlinear Second Order Arbitrary Two-point Boundary Value Problems, <i>Malaysian Journal of Mathematical Sciences</i> 14(3) (2020), 335-349.
08.	GOOGLE SCOLAR, PUBLONS I.F. 1.0756 RG I.F. 1.27	Md. Asaduzzaman and Md. Zulfikar Ali, On the Symmetric Positive Solutions of Nonlinear Fourth Order Ordinary Differential Equations with Four-Point Boundary Conditions: A Fixed Point Theory Approach, <i>Journal of Nonlinear Sciences and Applications</i> , 13(6) (2020), 364-377.
09.	SCOPUS I.F. 0.340	Md. Asaduzzaman and M. Zulfikar Ali, On Convergence, Stability and Data Dependence of Four-Step Implicit Fixed Point Iterative Scheme for Contractive-Like Operators in Convex Metric Spaces, <i>Global Journal of Pure and Applied Mathematics</i> , 15(3) (2019), 279-

- 304.
10. ESCI,
SCOPUS **Md. Asaduzzaman**, Adem Kilicman and M. Zulfikar Ali, Presence and diversity of positive solutions for a Caputo-type fractional order nonlinear differential equation with an advanced argument, Journal of Mathematics and Computer Science, 23(3) (2021), 230-244.
 11. ISI,
SCOPUS,
I.F. 1.427 **Md. Asaduzzaman** and M. Zulfikar Ali, Existence of positive solution to the boundary value problems for coupled system of nonlinear fractional differential equations, AIMS Mathematics, 4(3) (2019), 880-895.
 12. ISI,
SCOPUS,
I.F. 1.427 Md. Nurul Islam, **Md. Asaduzzaman**, and Md. Shajib Ali, Exact wave solutions to the simplified modified Camassa-Holm equation in mathematical physics, AIMS Mathematics, 5(1) (2020), 26-41.
 13. Mathematical
Reviews
MathSciNet
Google I.F. 1.462 Md. Alamgir Hossain, Md. Zulfikar Ali, **Md. Asaduzzaman** and Md. Sazzad Hossain, On Some Applications of Kakutani's Fixed Point Theorem in Game Theory, Mathematical Sciences: Advances and Applications, 66 (2021), 49-69.
 14. CROSSREF,
GLOBAL I.F. 0.675 **Md. Asaduzzaman** and M. Zulfikar Ali, Fixed Point Theorem Based Solvability of Fourth Order Nonlinear Differential Equation with Four-point Boundary Value Conditions, Adv. Fixed Point Theory, 9(3) (2019), 260-272.
 15. CROSSREF,
GLOBAL I.F. 0.675 **Md. Asaduzzaman** and M. Zulfikar Ali, The unique symmetric positive solutions for nonlinear fourth order arbitrary two-point boundary value problems: A fixed point theory approach, Adv. Fixed Point Theory, 9(1) (2019), 80-98.
 16. Russian SCI,
SCOPUS,
EBSCO **Md. Asaduzzaman** and M. Zulfikar Ali, Existence of three positive solutions for nonlinear third order arbitrary two-point boundary value problems, Differential Equations and Control Processes, 2019: 2 (2019), 83-100.
 17. SCOPUS, DOAJ **Md. Asaduzzaman** and M. Zulfikar Ali, Existence of Solution to Fractional Order Impulsive Partial Hyperbolic Differential Equations with Infinite Delay, Advances in the Theory of Nonlinear Analysis and its Applications, 4(2) (2020), 77-91.
 18. GOOGLE SCOLAR,
WORLDSCAT,
PSJD **Md. Asaduzzaman** and M. Zulfikar Ali, Existence and Uniqueness of Time Periodic Solution to the Viscous Modified Degasperis-Procesi Equation, World Scientific News, 142 (2020), 25-43.
 19. PUBLONS **Md. Asaduzzaman** and M. Zulfikar Ali, Existence of Positive Solution for a Nonlinear Weighted Bi-harmonic System of Elliptic PDE's via Fixed Point Argument, GANIT: Journal of Bangladesh Mathematical Society, 40(1) (2020), 54-70.
 20. WORLDSCAT,
RESEARCHBIB A.A. Mamun, **Md. Asaduzzaman** and S.N. Ananna, Solution of Eighth Order Boundary Value Problem by Using Variational Iteration Method, International Journal of Mathematics and Computational Science, USA, 5(1) (2019), 13-23.
 21. WORLDSCAT,
RESEARCHBIB A.A. Mamun and **Md. Asaduzzaman**, Solution of Seventh Order Boundary Value Problem by Using Variational Iteration Method, International Journal of Mathematics and Computational Science, 5(1) (2019), 6-12.
 22. GOOGLE SCOLAR,
ERA, **Md. Asaduzzaman** and Md. Mizanur Rahman, On the Stability of Noor Iterative Scheme for Zamfirescu Multi-valued Contraction

- GOOGLE I.F. 0.87 Mapping in Metric Spaces, JP Journal of Fixed Point Theory and Applications, 13(3) (2018), 167-197.
23. GOOGLE SCOLAR, GLOBAL I.F. 0.675 **Md. Asaduzzaman** and Altaf Hossain, Data Dependence for Four-Step Fixed Point Iterative Scheme Allocating Via Contractive-Like Operators, Adv. Fixed Point Theory, 8 (2) (2018), 188-204.
24. GOOGLE SCOLAR, ERA, GOOGLE I.F. 0.87 **Md. Asaduzzaman**, M. Saleha Khatun and M. Zulfikar Ali, On New Three-Step Iterative Scheme for Approximating the Fixed Points of Non-expansive Mappings, JP Journal of Fixed Point Theory and Applications, 11(1) (2016), 23-53.
25. Md. Mizanur Rahman, M. Akher Chowdhuy, Mst. Kamrunnaher and **M. Asaduzzaman**, The Finite Element Method for Finding the Numerical Solutions of the Two-Dimensional Laplace Equation with Dirichlet Boundary Conditions, *Journal of Applied Science and Technology*, Islamic University, Kushtia, 12 (1) (2018), 1-5.
26. GOOGLE SCOLAR, GLOBAL I.F. 0.675 **M. Asaduzzaman**, M. Saleha Khatun and M. Zulfikar Ali, On the Convergence of the Multi-Step Noor Fixed Point Iterative Scheme with Errors in the Class of Zamfirescu Operators, Adv. Fixed Point Theory, 6(2) (2016), 150-166.
27. GOOGLE SCOLAR, WORLDCAT, PUBLONS Md. Mizanur Rahman, **Md. Asaduzzaman**, Md. Anisur Rahman, Shamima Aktar, Heat Transfer of a Heat Generation MHD Fluid Flow Over a Vertical Porous Flat Plate in a Rotating System, *Scholars Journal of Engineering and Technology*, 4(8) (2016), 344-358.
28. CROSSREF GLOBAL I.F. 0.675 **Md. Asaduzzaman** and Adem Kilicman, On the General Principle of Multi-Step Fixed Point Iterative Schemes, Adv. Fixed Point Theory, 5(3) (2015), 278-292.
29. GOOGLE SCOLAR, ERA GOOGLE I.F. 0.87 **M. Asaduzzaman**, M. Zulfikar Ali and M. Saleha Khatun, On some fixed point problems of non-expansive mapping and shrinking mapping, JP Journal of Fixed Point Theory and Applications, 9(2) (2014), 67-85.
30. PUBLONS **Md. Asaduzzaman** and M. Zulfikar Ali, Data Dependence for Noor Iterative Scheme Dealing with Contractive-Like Operators, *GANIT: Journal of Bangladesh Mathematical Society*, 33 (2013), 13-24.
31. WORLDCAT, Zentralblatt MATH **Md. Asaduzzaman** and M. Zulfikar Ali, On the Strong Convergence Theorem of Noor Iterative Scheme in the Class of Zamfirescu Operators, *Pure and Applied Mathematics Journal*, 2(4) (2013), 140-145.
32. CNKIULRICH, GOOGLE SCHOLAR, RESEARCHBIB, WORLDCAT **Md. Asaduzzaman**, M. Zulfikar Ali and Md. Hafiz Uddin, Equivalence of One-Step, Two-Step and Three-Step Iterative Schemes for Zamfirescu Operator, *International Journal of Scientific Knowledge*, 1(3) (2012), 16-25.
33. WORLDCAT, RESEARCHBIB CROSSREF, Zentralblatt MATH Md. Roknujjaman and **Md. Asaduzzaman**, On the Solution Procedure of Partial Differential Equation (PDE) with the Method of Lines (MOL) Using Crank-Nicholson Method (CNM), *American Journal of Applied Mathematics*, Vol. 6(1) (2018), 1-7.
34. **Md. Asaduzzaman**, M. Zulfikar Ali and Md. Nurul Islam, Equivalence of Mann and Ishikawa Iterative Schemes for Zamfirescu Operator, *Journal of Applied Science and Technology*, Islamic University, Kushtia, 8(1) (2012), 7-10.

35. WORLDCAT, PUBLONS, RESEARCHBIB M. Zulfikar Ali and **Md. Asaduzzaman**, On Some Fixed Point Convergence Theorems for Mann Iterative Process, Journal of Mechanics of Continua and Mathematical sciences, 4(1) (2009), 443-451.
36. Mohd. Altab Hossain and **Md. Asaduzzaman**, H-Premeasures and H-Measures in Metric Spaces, Rajshahi University Journal of Sciences, 35 (2007), 197-206.
37. **Md. Asaduzzaman** and M. Zulfikar Ali, Symmetric Positive Solutions for the Coupled System of Nonlinear Fourth Order Ordinary Differential Equations with Three-Point Boundary Value Conditions. (Accepted by Islamic University Journal of Sciences on dated 31 October 2020 and in press)

List of Submitted Articles:

**SL Indexed in and Author(s), title, journal’s name, publication years and pages
No. Impact Factor**

1. ISI, SCOPUS, I.F. 4.019 Abdulla – Al – Mamun, Samsun Nahar Ananna, Tianqing An, **Md. Asaduzzaman** and Ahammodullah Hasan, Optical soliton analysis to a family of 3D fractional WBBM equations via a dynamical approach, Submitted to **Results in Physics** in July, 2021, Under review.
2. SCOPUS I.F. 0.38 Md. Alamgir Hossain, Md. Zulfikar Ali, **Md. Asaduzzaman** and Md. Sazzad Hossain, On Some Applications of Brouwer’s Fixed Point Theorem in Economics, Submitted to Malaysian Journal of Mathematical Sciences, July 2021, Under review.

Participation of the International Conferences and presented papers:

S.N.	Conference Name, Date and Address	Paper Title
01.	International Conference on Recent Advances in Applied Mathematics 2020 (ICRAAM2020), 04-06 February, 2020, Kuala Lumpur, Malaysia.	Fixed Point Theorem Based Solvability of 2-Dimension Dissipative Cubic Nonlinear Klein-Gordon Equation.
02.	3 rd International Conference on Soft Computing and Mathematical Modelling (ICSCMM-19), 22-23 December, 2019, Department of Applied Sciences, KITE Group of Institution, Ghaziabad, U.P., India	Existence and Uniqueness of Time Periodic Solution to the Viscous Modified Degasperis-Procesi Equation.
03.	21 st Mathematics Conference of Bangladesh Mathematical Society, 06-08 December, 2019, Department of Applied Mathematics, University of Dhaka, Dhaka-1000, Bangladesh.	Existence of Positive Solution for a Nonlinear Weighted Bi-harmonic System of Elliptic PDE’s via Fixed Point Argument.
04.	17 th Mathematics Conference of Bangladesh Mathematical Society, 22-24 December, 2011, Department of Mathematics, Jahangirnagar University, Savar, Dhaka, Bangladesh	Data Dependence for Noor Iterative Scheme Dealing with Contractive-Like Operators.
05.	16 th Mathematics Conference of Bangladesh Mathematical Society, 17-19 December, 2009, BUET, Dhaka-1000, Bangladesh	Equivalence of Mann and Ishikawa Iterative Schemes for Zamfirescu Operator

Professional Experiences:

1. **05th March, 2017 to Date:**
Associate Professor, Department of Mathematics, Islamic university, Kushtia-7003, Bangladesh
2. **20th October, 2011 to 05 March, 2017:**
Assistant Professor, Department of Mathematics, Islamic university, Kushtia-7003, Bangladesh
3. **18th April, 2010 to 19th October, 2011:**
Lecturer, Department of Mathematics, Islamic university, Kushtia-7003, Bangladesh
4. **23rd April, 2007 to 18th April, 2010:**
Lecturer in Mathematics, Department of Arts and Sciences, Ahsanullah University of Science and Technology, Dhaka, Bangladesh
5. **15th March, 2013 to 14th March, 2016:**
Chairman (Head of the Department), Department of Mathematics, Islamic university, Kushtia-7003, Bangladesh
6. **01st July, 2017 to 30th June, 2018:**
Executive Member of Self-Assessment Committee, Department of Mathematics, Islamic University, Kushtia-7003, Bangladesh under Quality Assurance Sell of University Grants Commission (UGC), Bangladesh

Research Experiences:

1. **July, 2014 to June, 2019:**
Worked as a Doctor of Philosophy (PhD) Researcher in the Department of Mathematics, Faculty of Science, Islamic University (IU), Kushtia-7003, Bangladesh
2. **July, 2006 to June, 2011:**
Worked as a Master of Philosophy (M. Phil) Researcher in the Department of Mathematics, Faculty of Science, University of Rajshahi (RU), Rajshahi-6205, Bangladesh
3. **June, 2004 to September, 2005:**
Worked as a Master of Science (M. Sc.) Researcher in the Department of Mathematics, Faculty of Science, University of Rajshahi (RU), Rajshahi-6205, Bangladesh

Research Guidance:

M.Sc. Thesis Supervision (5)

1. A Study on Variational Iteration Method and Its Applications
2. A Study on the Applications of Banach Fixed Point Theorem
3. A Study on Different Matrix Decompositions and Applications Thereof
4. On the Spatial Object Modeling in Fuzzy Topological Spaces
5. A Study on the Application of Fixed Point Theorems in Fuzzy Metric Spaces

B.Sc. (Honors) and M.Sc. Project Supervision (12)

1. A study on the analytical solutions of Modified Camassa-Holm and Modified Degasparis-Procesi Equations applying variational homotopy perturbation method
2. A Study on Riemann-Stieltjes Integral and its applications
3. A Study on Fixed point methods for nonlinear partial differential equations
4. A Study on Partial differential equation of elliptic types
5. A Study on Fractional Calculus
6. A study on Fourier series and its application
7. A study on Moor-Penrose Pseudoinverse
8. A study on solving polynomial equations using circulant matrix
9. A study on numerical methods for nonlinear algebraic and transcendental equations
10. A study on perfect numbers
11. A study on Riemann and Lebesgue integration and their comparison
12. A note on searching procedures of perfect numbers and its necessity

Membership of Scientific Organization:

Working as a life member of the Bangladesh Mathematical Society, Dhaka, Bangladesh

Skills on Various Programming Languages:

Skilled in - Text editing and presentation software- MS Word, Excel, Power Point, Latex
 - Graphics and Graph making software- Adobe Photoshop, Windows Picture Editor
 - Programming Language- Programming with FORTRAN-90, C, C++, MATLAB, MAPLE and Visual Basic

Reviewer of Scientific Journals:

Working as a reviewer of the following international scientific journals:

1. Advances in Difference Equations (Springer), Germany
2. Mathematical Modelling and Analysis (Vilnius Gediminas Technical University), Lithuania
3. Jordan Journal of Physics (Yarmouk University), Jordan
4. Malaysian Journal of Mathematical Sciences (Universiti Putra Malaysia), Malaysia
5. Thai Journal of Mathematics (Chiang Mai University), Thailand
6. Cogent Mathematics & Statistics (Taylor and Francis), UK
7. Partial Differential Equations in Applied Mathematics (Elsevier), USA
8. Open Science Journal of Mathematics and Application (Open Science), USA
9. Asian Journal of Advanced Research and Reports (Science Domain International), India
10. Asian Journal of Probability and Statistics (Science Domain International), India
11. Asian Journal of Mathematics and Computer Research (International Knowledge Press), India

Theoretical Courses Taught in Under Graduate and Graduate Levels:

- | | |
|--------------------------|---------------------------------------|
| 1. Set Theory and Logics | 2. Differential and Integral Calculus |
| 3. Real Analysis | 4. Vector Analysis |
| 5. Advanced Calculus | 6. Differential Equations |
| 7. Complex Analysis | 8. Abstract Algebra |
| 9. Topology | 10. Functional Analysis |
| 11. Advanced Analysis | 12. Lattice Theory |
| 13. Homological Algebra | 14. Ring Theory |
| 15. Operation Research | 16. Group Theory |
| 17. Commutative Algebra | 18. Discrete Mathematics |

Language Proficiency:

-Bengali: Mother tongue
 -English: Fluency in speaking and have a good command in writing.