Dr. Muntasir Alam

Lecturer

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Personal Information

First Name	: Muntasir
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Present Address	: Flat# A1, House# 7, Road# 9, Sector# 6, Uttara Model Town, Dhaka.
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URL	: http://appliedmath.du.ac.bd
Sex	: Male
Date of Birth	: 1st January 1990
Religion	: Muslim
Nationality	: Bangladeshi

Educational Background

i. Degree   : Doctor of Philosophy (Ph.D.)

    Department   : Energy and Environmental Engineering

    School   : Interdisciplinary Graduate School of Engineering Sciences

    Date of enrollment : 1st April, 2018

    Degree awarded   : 24th March, 2021

    University   : Kyushu University, Fukuoka, Japan.

ii. Degree   : Master of Science (M.S.)

	Department	: Applied Mathematics
	University	: University of Dhaka
	G.P.A.	: 4.00 (out of 4.00)
	Result published in	: 21st July 2016.

iii. Degree : Bachelor of Science (B.S.)

Department : Mathematics

University : University of Dhaka

C.G.P.A. : 3.85 (out of 4.00)

Result published in : 16th November 2014.

iv. Degree : Higher Secondary Certificate (H.S.C)

Board : Dhaka

Group : Science

G.P.A. : 5.00 (out of 5.00)

Result published in : 10th September 2008.

v. Degree : Secondary School Certificate (S.S.C)

Board : Rajshahi

Group : Science

G.P.A : 5.00 (out of 5.00)

Result published in : 22nd June 2006.

Profession

Position : Lecturer

Affiliation : Department of Applied Mathematics

Institute : University of Dhaka

Duration   : 2nd February 2017 onwards

Research Interest

- Evolutionary game theory
- Mathematical modeling in epidemiology using intervention game
- Traffic flow modeling and its mathematical analysis
- Applied numerical analysis and simulation approaches in solving BVPs
- Application of Finite Element Method in engineering sciences

Research Articles

- ❖ **Journal Articles:** Total 06 (Peer Reviewed)
    - i. **Muntasir Alam**, Yuki Ida, and Jun Tanimoto; "Abrupt epidemic outbreak could be well tackled by multiple pre-emptive provisions-A game approach considering structured and unstructured populations", *Chaos, Solitons & Fractals*, Vol. 143, 110584, 2021.
    - ii. **Muntasir Alam**, K M Ariful Kabir, and Jun Tanimoto; "Based on mathematical epidemiology and evolutionary game theory, which is more effective: quarantine or isolation policy?", *Journal of Statistical Mechanics: Theory and Experiment*, 033502, 2020.
    - iii. **Muntasir Alam**, Masaki Tanaka, and Jun Tanimoto; "A game theoretic approach to discuss the positive secondary effect of vaccination scheme in an infinite and well-mixed population", *Chaos, Solitons & Fractals*, Vol. 125, pp. 201-213, 2019.
    - iv. **Muntasir Alam**, Kazuki Kuga, and Jun Tanimoto; " Three-strategy and four-strategy model of vaccination game introducing an intermediate protecting measure", *Applied Mathematics and Computation*, Vol. 346, pp. 408-422, 2019.
    - v. **Muntasir Alam,** and Md. Shafiqul Islam; "Numerical Solutions of Time Dependent Partial Differential Equations Using Weighted Residual Method With Piecewise Polynomials", *Dhaka University Journal of Science*, Vol. 67, pp. 5-12, 2019.
    - vi. **Muntasir Alam**, Keisuke Nagashima, and Jun Tanimoto; "Various error settings bring different noise-driven effects on network reciprocity in spatial prisoner's dilemma",

Chaos, Solitons & Fractals, Vol. 114, pp. 338-346, 2018.

❖ **Conference Proceedings:** Total 03

    i. **Muntasir Alam**, and Jun Tanimoto; "Dynamical Analysis of a Disease Transmission Model Coupled with Two Pre-emptive Provisions and Quarantine-Isolation Policy-An Approach Based on Evolutionary Game Theory", *7th International Conference on Infectious Disease Dynamics by Elsevier, Charleston, South Carolina, USA*, December 2019.

    ii. **Muntasir Alam**, Jun Tanimoto; "Introduction of intermediate defense measure in an evolutionary vaccination game", *Traffic Flow Conference at Nagoya University, Japan*, December 2018.

    iii. **Muntasir Alam**, Jun Tanimoto; "Secondary effect of vaccination on evolutionary vaccination game in and infinite and well-mixed population", *20th Cross Straits Symposium on Energy and Environmental Science and Technology at Pusan National University, South Korea,* November 2018.

Professional Experience

- **Teaching:** Lecturer, Department of Applied Mathematics, University of Dhaka, Dhaka 1000, Bangladesh.
- **Courses taught:** Calculus, Coordinate Geometry, Fundamental of Mathematics, Applied Mathematical Methods, MATLAB Programming, Mathematica Software Learning, Fortran Programming.

Technical Skills

- ➤ **Programming Languages:** C, C++, FORTRAN, Python, Origin
- ➤ **Data Analysis and Graphing:** MATLAB, Wolfram Mathematica, SPSS
- ➤ **Other Application Software:** Microsoft Office Tools

Awards

    i. Complementary Scholarship for extraordinary academic performance during one year of master course studies.

ii.   Complementary Scholarship for extraordinary academic performance in all four years of undergraduate studies.

iii.   National Science and Technology fellowship under Ministry of Science and Technology- Government of People's Republic of Bangladesh for M.S. Thesis in the year of 2015-16.

iv.   Board scholarship for extraordinary academic result in S.S.C board examination.

Co-curricular Activities

- Singing   :   Participated in various programs for singing songs
- Sports   :   Good at Cricket, Football, Bowling, Badminton, Carrom, Chess, Swimming, Cycling etc.
- Member   :   KUFSA, KIISA, Bangladesh Mathematical Society, Dhaka University Mathematics Alumni Association

References

1. Professor Dr. Jun Tanimoto
   Head of Urban and Architectural Environment Laboratory
   Department of Energy and Environmental Engineering
   Interdisciplinary Graduate School of Engineering Sciences
   Kyushu University, 6-1 Kasuga-koen, Kasuga-shi, Fukuoka, 816-8580, Japan
   Tel and Fax: +81-92-583-7600
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2. Professor Dr. Md. Shafiqul Islam
   Department of Applied Mathematics
   University of Dhaka, A F Mujibur Rahman Mathematics Building, Dhaka-1000, Bangladesh
   Phone: +880 17 11 86 47 25
   Email: mdshafiqul@du.ac.bd