

CURRICULUM VITAE OF MD. TOFAZZAL HOSSAIN



OFFICE ADDRESS

Associate Professor
Department of Statistics
Bangabandhu Sheikh Mujibur Rahman Science & Technology
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CAREER OBJECTIVE

To build myself as a competent researcher and a good teacher.

CURRENT STATUS

Associate Professor, Department of Statistics, Bangabandhu Sheikh Mujibur Rahman Science & Technology University, Gopalganj-8100, Bangladesh.

RESEARCH INTEREST

Identification of potential biomarker for cancer (circRNA, lncRNA, gene).

JOURNAL PAPERS

1. †**Hossain, M.T.**; †Reza, M.S.; Peng, Y.; Feng, S.; Wei, Y. Identification of key genes as potential drug targets and drugs for gastric cancer. *Tsinghua Sci. & Tec.* (2023). (**SCIE, Q2, IF=2.016**).
2. **Hossain, M.T.**; Zhang, J.; Reza, M.S.; Peng, Y.; Feng, S.; Wei, Y. Reconstruction of Full-Length circRNA Sequences Using Chimeric Alignment Information. *Int. J. Mol. Sci.* 2022, 23, 6776, doi:10.3390/ijms23126776. (**SCIE, Q1, IF=6.208**).
3. **Hossain, M.T.**; Li, S.; Reza, M.S.; Feng, S.; Zhang, X.; Jin, Z.; Wei, Y.; Peng, Y. Identification of circRNA Biomarker for Gastric Cancer through Integrated Analysis. *Front. Mol. Biosci.* 2022, 9, 1–13, doi:10.3389/fmolb.2022.857320. (**SCIE, Q1, IF=6.113**).
4. †Rahman, M.M; †**Hossain, M.T.**; Reza, M.S.; Peng, Y.; Feng, S.; Wei, Y. Identification of potential long non-coding rna candidates that contribute to triple-negative breast cancer in humans through computational approach. *Int. J. Mol. Sci.* 2021, 22, doi:10.3390/ijms222212359. (**SCIE, Q1, IF=6.208**).

5. **Hossain, M.T.;** Peng, Y.; Feng, S.; Wei, Y. FcircSEC: An R Package for Full Length circRNA Sequence Extraction and Classification. *Int. J. Genomics* 2020, doi:10.1155/2020/9084901. (**SCIE, Q3, IF=2.758**).
6. Zhang, J.; **Hossain, M.T.;** Liu, W.; Peng, Y.; Pan, Y.; Wei, Y. Evaluation of CircRNA Sequence Assembly Methods Using Long Reads. *Front. Genet.* 2022, 13, 1–12, doi:10.3389/fgene.2022.816825. (**SCIE, Q1, IF=4.772**).
7. Reza, M.S.; Harun-Or-Roshid, M.; Islam, M.A.; Hossen, M.A.; **Hossain, M.T.;** Feng, S.; Xi, W.; Mollah, M.N.H.; Wei, Y. Bioinformatics Screening of Potential Biomarkers from mRNA Expression Profiles to Discover Drug Targets and Agents for Cervical Cancer. *Int. J. Mol. Sci.* 2022, 23, 3968, doi:10.3390/ijms23073968. (**SCIE, Q1, IF=6.208**).
8. Peng, Y.; Xu, Y.; Zhang, X.; Deng, S.; Yuan, Y.; Luo, X.; **Hossain, M.T.;** Zhu, X.; Du, K.; Hu, F.; et al. A novel protein AXIN1-295aa encoded by circAXIN1 activates the Wnt/ β -catenin signaling pathway to promote gastric cancer progression. *Mol. Cancer* 2021, 20, 1–19, doi:10.1186/s12943-021-01457-w. (**SCIE, Q1, IF=41.441**).
9. Reza, M.S.; Zhang, H.; **Hossain, M.T.;** Jin, L.; Feng, S.; Wei, Y. Comtop: Protein residue–residue contact prediction through mixed integer linear optimization. *Membranes (Basel)*. 2021, doi:10.3390/membranes11070503. (**SCIE, Q1, IF=4.562**).
10. Zhang, H.; Saravanan, K.M.; Yang, Y.; **Hossain, M.T.;** Li, J.; Ren, X.; Pan, Y.; Wei, Y. Deep Learning Based Drug Screening for Novel Coronavirus 2019-nCov. *Interdiscip. Sci. – Comput. Life Sci.* 2020, doi:10.1007/s12539-020-00376-6. (**SCIE, Q2, IF=3.492**).
11. Zhang, H.; Yang, Y.; Li, J.; Wang, M.; Saravanan, K.M.; Wei, Y.; Ng, J.T.Y.; **Hossain, M.T.;** Liu, M.; Zhang, H.; et al. A novel virtual screening procedure identifies Pralatrexate as inhibitor of SARS-CoV-2 RdRp and it reduces viral replication in vitro. *PLoS Comput. Biol.* 2020, doi:10.1371/journal.pcbi.1008489. (**SCIE, Q1, IF=4.779**).
12. Kumar, N.; **Hossain, M.T.;** J. Beh, E.; Sugimoto, M.; Nasser, M. Identification of Differentially Expressed Gene Using Robust Singular Value Decomposition. *Curr. Bioinform.* 2016, doi:10.2174/1574893611999160610124913 (**SCIE, Q1, IF=0.77**).
13. Haque, M. A.; **Hossain, M.T.;** Nasser, M. Predicting the Number of Children Ever Born Using Logistic Regression Model. *Biometrics Biostat. Int. J.* 2015, doi:10.15406/bbij.2015.02.00034.
14. **Hossain, M.T.;** Haque, M. A.; Nasser, M. Modeling Age at First Marriage of Female

Adolescents in Bangladesh, Asian Journal of Applied Sciences. 2015, ISSN: 2321–0893, Volume 03 – Issue 05.

CONFERENCE PAPER

1. **Hossain, M.T.;** Kumar, N.; Nasser, M. Performance of Wavelet Transformation, Fourier Transformation and Singular Value Decomposition (Classical and Robust) in Image Compression and Denoising. Proceedings (peer reviewed): International Conference on Statistical Data Mining for Bioinformatics Health Agriculture and Environment (2012), ISBN: 978-984-33-5876-9, page No: 602-610.

BOOK CHAPTER

1. Saravanan, K.M.; Zhang, H.; **Hossain, M.T.;** Reza, M.S.; Wei, Y. Deep Learning-Based Drug Screening for COVID-19 and Case Studies. In *Methods in Pharmacology and Toxicology*, 2021; pp. 631–660.

Award and Scholarship

2023: UCAS excellent international graduates.

2018: Shenzhen Universiade International Scholarship, Shenzhen, China

2017: Best Presentation award in CBB-LAB Group Research Symposium in 2017, Shenzhen, China

2017: UCAS-SIAT Fellowship Award for Doctoral Study Program, Shenzhen, China.

RESEARCH EXPERIENCES

1. Completed about 5 years PhD research experience with entitle **“Reconstruction of Full Length circRNA Sequence and circRNA Biomarker Discovery”**.
2. Having 8 months practical data analysis experiences when I was a **Research Trainee** of Centre for Communicable Diseases at International Center for Diarrhoeal Disease Research, Bangladesh (**icddr,b**), Mohakhali, Dhaka, Bangladesh.
3. Completed one year research works with entitle **“Performance of Wavelet Transformation, Fourier Transformation and Singular Value Decomposition in Image Compression and Denoising”** and submitted a dissertation in partial fulfillment of the requirements for the degree of M. Sc. to the Department of Statistics, University of Rajshahi, Rajshahi, Bangladesh.

TEACHING EXPERIENCE

I have teaching regular courses of Statistics at undergraduate and graduate level. Some of them are listed below:

1. Principles of Statistics
2. Probability Theory
3. Regression Analysis
4. Probability Distribution
5. Programming in C
6. Introduction to R and STATA
7. Biostatistics
8. Econometrics
9. Epidemiology
10. Bioinformatics

PROFESSIONAL EXPERIENCES

- 23 June 2023-Present** : **Associate Professor**, Department of **Statistics**
Bangabandhu Sheikh Mujibur Rahman Science &
Technology University, Gopalganj-8100, Bangladesh.
- 18 June 2016-22 June 2023** : **Assistant Professor**, Department of **Statistics**
Bangabandhu Sheikh Mujibur Rahman Science &
Technology University, Gopalganj-8100, Bangladesh.
- 20 October 2013- 17 June 2016** : **Lecturer**, Department of **Statistics**
Bangabandhu Sheikh Mujibur Rahman Science &
Technology University, Gopalganj-8100, Bangladesh.
- 06 March 2013-19 October 2013** : **Research Trainee**, Centre for Communicable Diseases
International Center for Diarrhoeal Disease Research,
Bangladesh (**icddr,b**), Mohakhali, Dhaka, Bangladesh.

ACADEMIC QUALIFICATIONS

PhD, 2023	Completed PhD in Computer Application Technology from the Shenzhen Institute of Advanced Technology, Chinese Academy of Sciences, Shenzhen, China.
Thesis Title	Reconstruction of Full Length circRNA Sequence and circRNA Biomarker Discovery.
Thesis Supervisor	Dr. Yanjie Wei, Professor, Shenzhen Institute of Advanced Technology, Chinese Academy of Sciences, China.

M. Sc., 2010	Completed one year M. Sc. course from the Department of Statistics, Faculty of Science, University of Rajshahi, Rajshahi, Bangladesh in 2010. Secured First class 2nd position in order of merit (74.38% Marks).
Subject studied	1. Statistical Inference, 2. Design and Analysis of Scientific Experiments, 3. Generalized Linear Models and Advanced Regression Analysis, 4. Time Series Analysis and Forecasting, 5. Biometry and Genetic Statistics
Thesis Title	Performance of Wavelet Transformation, Fourier Transformation and Singular Value Decomposition in Image Compression and Denoising.
Thesis Supervisor	Dr. Mohammed Nasser, Professor, Department of Statistics, Rajshahi University, Rajshahi, Bangladesh.
Medium of Instruction	English
B. Sc., 2009	Completed 4 years B. Sc. (Hons.) course from the Department of Statistics, Faculty of Science, University of Rajshahi, Rajshahi, Bangladesh in 2009. Secured First class 2nd position in order of merit (73.91% Marks).
Subject studied	<p>First Year: Probability Theory, Principles of Statistics (I & II), Algebra and Numerical Methods, Analytical Geometry and Calculus, Matrix Algebra, Introduction to Computers with Task-Oriented Software.</p> <p>Second Year: Statistical Methods, Regression and Modeling, Analysis of Variance, Mathematical Economics, Real Analysis, Differential Equations and Fourier Analysis, Computer Programming-I.</p> <p>Third Year: Multinormal Distributions and Order Statistics, Estimation, Hypothesis Testing, Regression and Diagnostics, Complex Variable and Matrix Analysis, Stochastic Processes, Survey Sampling, Computer Programming-II.</p> <p>Fourth Year: Multivariate Analysis, Modern Probability and Measure Theory, Demography, Biometrics, Economic Statistics and Econometrics, Sampling and Official Statistics, Statistical Quality Control and Linear Programming, Social and Occupational Statistics.</p>
Medium of Instruction	English

H.S.C., 2005	Passed two years Higher Secondary Certificate (H.S.C.) examination from Chandan Nagar College with GPA 4.90 (out of 5).
Subject studied	Bengali (Language and Literature), English (Language and Literature), Physics, Chemistry, Mathematics, Biology.
S.S.C., 2003	Passed five years Secondary School Certificate (S.S.C.) examination from Aiorpara High School, with GPA 4.19 (out of 5).
Subject studied	Bengali (Language and Literature), English (Language and Literature), Social Science, Mathematics (General and Higher), Physics, Chemistry, Biology and Islamic Studies.

COMPUTER SKILLS

Programming with Turbo C/C++, **R**, Python, Matlab, Stata, and QGIS.

LANGUAGE SKILLS

English (Fluent), Bengali (Mother Tongue)

REFERENCES

1. Dr. Md. Nurul Haque Mollah
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2. Dr. Dulal Chandra Roy
 Professor, Department of Statistics
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 Rajshahi-6205, Bangladesh.
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