

# MOHAMMAD M. ISLAM

## Current Address:

Assistant Professor of Biostatistics

Email: [mislam@uvu.edu](mailto:mislam@uvu.edu)

Department of Mathematics

Phone: 801-863-6430

Utah Valley University

Fax: 801-863-6254

800 W University Parkway, Orem, UT 84058, USA

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## Education

**Ph.D.** in Statistics (GPA=3.84), 2016

[Bowling Green State University](#), Bowling Green, OH

Dissertation Title : Dose-Response Analysis for Time-Dependent Efficacy

**M.A.** in Statistics (GPA=4.0), 2012

[Ball State University](#), Muncie, IN

**M.Sc.** in Statistics (First Class Second ), 2002

[Jahangirnagar University](#), Bangladesh

Thesis: Distribution of Total Number of Runs of Both Kinds under Binomial Sampling

**B.Sc. (Hons.)** in Statistics (First Class Fifth), 2000

[Jahangirnagar University](#), Bangladesh

## Academic Positions

**Assistant Professor of Biostatistics**

August 15, 2016-present

Department of Mathematics

[Utah Valley University, 800 W University Pkwy, Orem, UT 84058, USA](#)

**Graduate Teaching Associate(Instructor)**

Fall 2012-Spring 2016

Department of Mathematics and Statistics

[Bowling Green State University, OH, USA](#)

**Graduate Assistant**

Fall 2010-Spring 2012

Department of Mathematical Sciences

[Ball State University, Muncie, IN, USA](#)

**Assistant Professor**

July 2006- Aug 2010

Department of Statistics, [Jahangirnagar University, Bangladesh](#)

**Visiting Assistant Professor**

July 2007- December 2008

Department of Environmental Science and Resource Management, and  
Department of Computer Science and Engineering

[Mawlana Bhasani Science and Technology University, Tangail,](#)

## Bangladesh

### Lecturer

Department of Statistics

**Jahangirnagar University, Bangladesh**

Oct 2002- June 2006

### Teaching

Course Taught at

- Utah Valley University:
  - STAT 4710: Mathematical Statistics I
  - STAT 4720: Mathematical Statistics II
  - STAT 4200 : Survey Sampling
  - STAT 2050: Introduction to Statistical Methods
  - STAT 2040: Principles of Statistics
  - STAT 1040: Introduction to Statistics QL
  - STAT 1045: Introduction to Statistics with Algebra QL
  - MATH 1055: College Algebra
- Bowling Green State University:
  - MATH 1150: Introduction to Statistics
  - MATH 1210: College Algebra I
  - MATH 1220 : College Algebra II
- Ball State University:
  - Tutored students in Pre-Algebra, College Algebra, Statistics, and Business statistics as a tutor at ”**Learning Center**” of BSU.
  - Assisted undergraduate students with SAS, R , Mathematica, and Minitab in computer lab of the Department of Mathematical Sciences.
- Jahangirnagar University, Bangladesh:
  - STAT 305: Regression Analysis
  - STAT 401: Multivariate Analysis and Categorical Data Analysis
  - STAT 405: Stochastic Process and Simulation
  - STAT 407: Econometrics
  - STAT 413: Environmental Statistics
  - STAT 102 Probability Distributions and Their Applications
  - STAT 203: Numerical Mathematics and Computer Applications
  - STAT 101: Basic Statistics

- BOT 209: Biostatistics
- BOT 214: Computer Basics and Biostatistics
- Mawlana Bhasani Science and Technology University, Tangail, Bangladesh
  - CSE 2109: Probability and Statistics
  - ESRM 2209: Biostatistics

**Research and Teaching Interests**

- Multiple comparisons
- Dose-Response Analysis
- Biostatistics
- Multivariate Analysis
- Computational Statistics

**Publications**

1. **Islam, M.**, and Heiny, E. “A Robust Statistical method to Estimate the Intervention Effect with Longitudinal Data”. accepted ,Feb 8, 2020, *Statistics, Optimization & Information Computing* .
2. **Islam, M.**, Webb, B., Palais, R., and Kuddus, R. “Assessing the potential impact of the Istanbul Declaration 2008 on Internet reporting of human organ transplantation-related crimes using Interrupted Time Series Analysis (ITSA) and Meta-Analysis approaches.” Volume 52, Issue 1, January-February 2020, Pages 12-19 *Transplantation Proceedings*.
3. **Islam, M.** , and Begum, M. “Bootstrap Confidence Intervals for Dissolution Similarity Factor  $f_2$  .” *Biometrics & Biostatistics International Journal*, 2018;7(5):397-403.
4. Ferdousy, E. , **Islam, M.**,and Matin, M. “ Combination of Naive Bayes Classifier and K-Nearest Neighbor(cNK) in the Classification Based Predictive Models.” *Computer and information science* , 6(3),48 , 2013.
5. Roy, M., Choudhury, K., **Islam, M.**,and Matin, M. “Dose-Time-Response Modeling using Negative Binomial Distribution.” *Journal of Biopharmaceutical Statistics* , 23(6):1249–1260, 2013.
6. **Islam, M.**, Alam, W., Tariqzaman, M., Kabir, M., Pervin, R., Begum, M., and Khan, M. “Predictors of the number of under-five malnourished children in Bangladesh: application of the generalized poisson regression model.” *BMC public health*, 13(1):11, 2013.
7. **Islam, M.**, Islam, H., and Ferdousy, E. “Analysis of Social Structure with Markov Process .” *Journal of Statistical Studies*, 30:57-64, 2011.

8. **Islam, M.** “A Markov Chain Model for Drought Class in Bangladesh -An Evidence from Rainfall of Mymensingh.” *Journal of Statistical Studies*, 28:61–64, 2010.
9. **Islam, M.**, Rashid, M. “Modeling Maximum Rainfall Occurrence in Bangladesh ” *Journal of Statistical Studies*, 29:1–25, 57-66, 2012.
10. **Islam, M.** “Household Fertility Decision in Bangladesh with Generalized linear Poisson Regression Model”. Submitted to *Biometrics & Biostatistics International Journal*.

### Papers in Preparation

1. **Islam, M.**, Robles, F. , Ram, T. , and Heiny, E. “An Alternative Parametric Approach to Detect the Trend in Time Series Data”.
2. **Islam, M.**, and Chen, J. “Estimating Minimum Effective Dose with Longitudinal Data.”
3. **Islam, M.**, and Chen, J. “Estimating Maximum Tolerated Dose with Longitudinal Data.”
4. **Islam, M.** , and Rana, S. “Smoking Behaviors among Jahangirnagar University Students: Use of the Structural Equation Modeling. ”

### Research Presentations

1. **Islam, M.**, and Heiny, E. “A Robust Statistical method to Estimate the Intervention Effect with Longitudinal Data”. Joint Statistical Meetings, Denver, Co.( July 2019).
2. **Islam M** , Kuddus R, Webb B. “Assessing the effectiveness of the Istanbul Declaration on Internet reporting of illegal and immoral activities related to human organ acquisition using interrupted time series analysis (ITSA) and a Meta-Analysis approaches”. TTS Regional Meeting, Istanbul, Turkey (March 2019).
3. **Islam, M.**, and Chen, J. “Estimating Minimum Effective Dose with Longitudinal Data.” Department of Mathematics and Statistics, Bowling Green State University, OH( Oct 2015).
4. **Islam, M.**, and Heiny, E. “A Robust Statistical method to Estimate the Intervention Effect with Longitudinal Data”. Department of Mathematics, Utah Valley University, UT(Oct 2019).
5. Robles, F., Ram, T., and **Islam, M.** “An Alternative Parametric Approach to Detect the Trend in Time Series Data“. Department of Mathematics, Utah Valley University ( Nov 2019).

6. Jamal, Islam, Ajit “Distribution of Total Number of Runs of success or failure under Binomial Sampling” International Conference on Statistical Sciences (ICSS), December 26- 27, 2008, Dhaka, Bangladesh.
7. Islam, Ajit “Distribution of Total Number of Runs of Both Kinds under Binomial Sampling” National Statistical Conference (9th 2005 Dhaka, Bangladesh)

**Student Supervising**

1. Trevor Ram (B.S., Statistics, Utah Valley University, 2020), Biostatistics Intern
2. Francisco Robles (B.S, Statistics, Utah valley University, 2019), Biostatistics Intern
3. Francisco Robles, and Trevor Ram ( Summer Research, 2019, Utah Valley University) “An Alternative Parametric Approach to Detect the Trend in Time Series Data”.
4. Biranda Buckner(B.S., Statistics, Utah Valley University, 2018), Biostatistics Intern
5. Jerrold Black(B.S., Mathematics, Utah Valley University, Spring 2018) , Capstone Project “A Goodness of Fit-The Chi-Square Test” .
6. Md. Habibur Rahman (B.Sc., Statistics , Jahangirnagar University, Bangladesh) : “A Stochastic Model for Daily Temperature at Jessore, Bangladesh”, 2008
7. Umma Salma(B.Sc., Statistics, Jahangirnagar University, Bangladesh): “Modeling Trend and Seasonal Pattern of SST at Bay of Bengal With Fourier Series Analysis”, 2008

**Statistical Consulting**

- Advised and supervised Trevor Ram for his biostatistics internship in the Department of Biology for helping Dr. Olga’s research students, Spring 2020.
- Provided statistical consulting for Biology major students Ashley, Bryce, Mathew, supervised by Dr. Olga for their research project called ” Are Electrohydraulic Shockwaves as a Possible Treatment against Bacterial Biofilms” in Spring 2020
- Provided statistical consulting for the faculty member Francine B. Jensen, Associate Professor of Nursing for her mental health data analysis , summer 2019.
- Supervised and guided Francisco Robles for his biostatistics internship in the Department of Biology for supporting Dr. Olga’s BOT-3800: the Principles of ethnobotany, Spring 2019; and BOT- 4700: Plant Tissue Culture, Spring 2019 classes. This statistical support resulted in six presentation at the Biology symposium. 2019

- Provided statistical consulting to Tania Islam, a scientific officer at Bangladesh Oceanographic Research Institute (BORI), Ramu, Cox's Bazar, Bangladesh to conduct a research on "Trend detection of temperature and rainfall in coastal region of Bangladesh", 2019.
- Provided statistical consulting for Biology major student Brady Webb supervised by Dr. Ruhul Kuddus for his research project called "Assessing the potential impact of the Istanbul Declaration 2008 on Internet reporting of human organ transplantation-related crimes using Interrupted Time Series Analysis (ITSA) and Meta-Analysis approaches." in Spring 2018
- Supervised and guided Miranda Buckner for his biostatistics internship in the Department of Biology for supporting Dr. Olga's BOT-3800: the Principles of ethnobotany, Spring 2018; and BOT- 4700: Plant Tissue Culture, Spring 2018 classes.

**Research Experience**      **Research Assistant**      January 2011-May 2012  
 Department of Mathematical Sciences,  
 Ball State University  
 Supervisor: Jose Contreras, Ph.D, and Munni Begum, Ph.D

**Funding**      [Utah Valley University](#), Department of Mathematics  
 • Undergraduate Research Summer Institute Grants (URSIG) for "Simulation Studies of the Tests for Trend Detection" totaling \$ 6,869.      May 8, 2019-August 8, 2019  
 • UVU SAC (College of Science & Health Scholarly Activities Committee ) grant, totaling \$ 2500.      Nov 20 2019

**Awards**      [Bowling Green State University](#), Department of Mathematics and Statistics  
 • Eugene and Elizabeth Lukacs Scholarship award      May 2015  
 • Summer Fellowship      June 2012-August 2012  
 • The Summer Fellowship program is a teaching seminar aimed at helping graduate teaching assistant build confident and prepare for classroom teaching duties.  
[Ball State University](#)  
 • Outstanding Graduate Assistant award      May 2012  
 • Dean Academic Excellence award      May 2012

**Professional Development**      [Bowling Green State University](#)  
 • MATH 5910-Curriculum Analysis and Classroom Behavior      Fall 2012  
 • MATH 5920 Technology for the Mathematics Graduate Student Spring 2013

**Services**      • Department Promotion Committee      Fall 2015-Fall 2019  
 • Department of Mathematics Curriculum Committee      Fall 2019

- Undergraduate Activities Committee Fall 2019-present
- Awards and Functions Committee Fall 2019-present
- Course Facilitators for STAT 2040 Fall 2018-present
- Policy 648: Faculty Separation due to Institutional Reasons Fall 2019-present
- Statistics Faculty Search Committee, Department of Mathematics, Utah Valley University, 2019-2020

- Professional Membership**
- American Statistical Association
  - Bangladesh Statistical Association

- Computer Experience**
- Programming Language
- FORTRAN 77 and 90/95, BASIC and C, C++
- Statistical software
- SAS, SPSS , GAUSS, MINITAB,STATA and R.
- SAS Certification
- SAS Base Programming Exam for SAS 9
- Typography
- $\text{\LaTeX}$ : Extensive use for writing exams/quizzes and other course materials.
  - Microsoft Office

**Languages** Fluent in English and Bangla