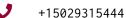
# **Akidul Haque**

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Street,Louisville,Kentucky-40208,USA



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West

Lee

## **Objective:**

I am a mathematics graduate passionate about applying mathematical principles to real-world challenges. I specialize in computational methods and theoretical frameworks and eager to enhance my expertise in analytical problem-solving and quantitative reasoning in mathematics and statistics.

#### **Education:**

Aug,2023 – ongoing

PhD in Applied and Industrial Mathematics and Masters in Biostatistics (Dual Degree program), University of Louisville, KY, USA.

I have successfully passed all the required qualifying exams (analysis, algebra, and modeling) and completed required course works.

2023 - 2024

Masters of Science (M.S) in Applied Mathematics, University of Louisville, KY, USA.

2020 - 2021

Masters of Science (M.S.)(Thesis based) in Mathematics, University of Dhaka, Bangladesh.

**Thesis title**: Harvesting Strategies and Environmental Fluctuations on Holling-types Predator-prey Models.

2016 - 2019

Bachelor of Science (B.S.) Honours in Mathematics, University of Dhaka, Bangladesh.

**Honours Project**: Numerical Studies of Two-Point Boundary Value Problem.

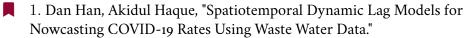
### **Publications:**

Journal Publication

- 1. Pritam Saha, Akidul Haque, Md. Shahidul Islam, and Uttam Ghosh, "Dynamic complexities of a modified Leslie–Gower model in deterministic and stochastic environments.", Modeling Earth Systems and Environment, January 2025, DOI: 10.1007/s40808-024-02179-w.
  - 2. Akidul Haque, Pritam Saha, Shubhadeep Ghosh, Shahidul Islam, and Uttam Ghosh, "Effects of environment fluctuation and allee on predator of a Brazykin type population model." (submitted)
  - 3. MD Rakibul Hasan, Parker Frank, Saifur Rahman, Andrew Harrison, Sankar Chowdhury, and Akidul Haque, "Behavioural Interventions, Mental Health, and Microbial Dysbiosis as Intersecting Determinants of HIV PrEP Adherence: A Mixed-Methods Study Among African American Adults in the Southern United States." (submitted)
  - 4. Akidul Haque, Md. Anuar Hossen, and Shahidul Islam, "Dynamical Behavior Analysis of anti-control Lorenz System." (submitted)

### **Publications: (continued)**

Papers in preparation



- 2. Dan Han, Akidul Haque, "Relationship between the wastewater virus level and underreported positive COVID-19 cases."
- 3. Akidul Haque, Md. Shahidul Islam, and Uttam Ghosh, "Mathematical modeling on Dengue and Chikungunya Co-infection disease."
- 4. Md. Anuar Hossen, Akidul Haque, Md. Shahidul Islam, and Uttam Ghosh, "Mathematical Analysis to Control Invasive Species in Competition with Native Species."

#### **Research Interest:**

My research focuses on the mathematical and statistical modeling of biological and environmental systems, with an emphasis on linear and nonlinear dynamical systems, epidemic and infectious disease modeling, and ecosystem dynamics. I also have a strong interest in applying Bayesian statistics and time series forecasting to analyze and predict complex behaviors in ecological and epidemiological contexts.

### Skills:

Languages Proficient in reading, writing, and speaking in both English and Bengali.

Coding Matlab, Fortran, C, Mathematica, R.

Soft Packages Latex, MS word, MS Powerpoint, Excel.

Misc Academic research, Data- cleaning, Data Analysis and Teaching.

#### **Awards:**

2023-ongoing Graduate Teaching Assistantship of University of Louisville, KY, USA.

2021-2022 National Science and Technology Fellowships for Master's Thesis research.

Honours merit-based Scholarship of the University of Dhaka.

### **Extra-Curricular Activities:**

- 1. General Member at Graduate Student Council of University of Louisville.
- 2. General Member of Dhaka University Model United Nations.
- 3. Volunteer at a non-profitable social organization named "Light of Hopes Youth Foundation."
- 4. Program Co-ordinator and founding member of Mathematics Photography club, University of Dhaka.
- 5. Member of "Badhon" (A student-based Blood Donations Group).