

Shaikh Obaidullah

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Mathematics, Ph.D. Candidate, Research Focus: Gut Microbes

*I am currently a Ph.D. candidate, working as a Teaching Assistant.
My research areas are in biofilm, gut microbiota, and optimization*

Education

- 2018–present **Florida State University**, PhD Candidate, Biomathematics.
- 2016–2018 **Western Illinois University**, M.Sc., Mathematics, *Applied Mathematics*.
- 2010–2014 **University of Dhaka**, B.Sc., Mathematics.

Experience

Teaching

- 2020–present **Instructor**, Florida State University, Teaching, *Calculus 1, 2, and 3*
- 2018–2020 **Teaching Assistant**, Florida State University, Helped Undergraduate Students, *Calculus*
- 2016–2017 **Instructor**, Department of Mathematics, Western Illinois University, Taught, *Pre calculus*

Leadership

- 2023 **Judge**, The Capital Regional Science and Engineering Fair, Tallahassee, Florida
- 2019 **Volunteer**, FSU Math Fun Day, Department of Mathematics, Florida State University
- 2017–2018 **Secretary**, MathClub, Department of Mathematics, Western Illinois University, Macomb, Illinois
- 2012–2013 **President**, MathClub, University of Dhaka, Dhaka, Bangladesh

Given Talks And Poster Presentation

- 2022 **Presenter**, “Osmotic Perturbation Promotes Competition Between Bacteria in Gut”, BAMM! Conference, Virginia Commonwealth University
- 2021 **Presenter**, “Host Gut Motility Promotes Competitive Exclusion within an Intestinal Microbiota”, Journal Club Talk, Florida State University
- 2020 **Presenter**, “Biofilm and Diseases”, Grad Seminar, Florida State University
- 2020 **Presenter**, “Osmotic Perturbation in Gut Microbiota”, Biomath Seminar, Florida State University
- 2019 **Presenter**, “Porosity in Prosthetics”, Biomath Seminar, Florida State University
- 2017 **Poster Presenter**, “Leslie Matrix Model”, WIU Conference, Western Illinois University

Awards

- 2022 **Travel Award**, “BAMM! Conference”, Virginia Commonwealth University
- 2022 **Bettye Anne Busbee Case Awards**, “Distinguished Research Among Peers”, Florida State University
- 2018 **Travel Award**, “47th Annual Syracuse Mathematics Conference”, Syracuse University

Research Skills and Expertise

As a skilled researcher, I have expertise in utilizing a range of programming languages, including MATLAB, Simulink, R, and Python, to conduct data analysis and modeling. My experience includes conducting steady-state analysis and numerical simulations of differential equations, which I have applied in my research on gut microbiota and its impact on human health. To further enhance my skills in this area, I am currently working on incorporating the mucus effect into the model, which involves extending a system of partial differential equations. Through the effective use of these tools, I have contributed to important research projects and produced valuable insights. The future implications of this work include an improved understanding of the gut microbiota and its potential impact on human health, leading to the development of new treatments and interventions for various health conditions.