**Dadashova Kamala**

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North Carolina State University

Raleigh, NC27695

Email address: [kdadash@ncsu.edu](mailto:kdadash@ncsu.edu)

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**Education**

**Ph.D. in Applied Mathematics,** *North Carolina State University. 3.92/4.00*. 2020-2024

Dissertation: Enhancement of Predictive Capabilities for Pharmaceutical Modeling

via Sensitivity Analysis, Parameter Subset Selection, and Virtual

Population Approaches

Advisors: Dr. Ralph Smith and Dr. Mansoor Haider

**M.S. in Mathematics***, Western Kentucky University. 4.00/4.00* 2018-2020

Thesis*: h-*Discrete Fractional Model of Tumor Growth and Anticancer Effects

of Mono and Combination Therapies

Advisor: Dr. Ferhan Atıcı

**B.A. in Mathematics Education***, Baku Engineering University. 3.97/4.00* 2013-2018

Senior Thesis: Random Walk and Their Applications

Advisor: Dr. Humbat Aliyev

**Research Interests**

Mathematical Biology, Uncertainty Quantification, Bayesian statistics, Machine Learning

**Work and Teaching Experience**

**Research Experience**

Graduate Research Asssistant Fall 2021-

Pfizer QSP intern Summer 2023

**Teaching Experience**

**North Carolina State University**

Instructor, Calculus I (MA131) 2023- 2024

Lecture Assistant, Calculus I (MA141) Spring 2023

Instructor, Precalculus (MA 107) Fall 2022

Teaching Assistant, two sections of recitation for Calculus II (MA241) Fall 2021  
Instructor, Precalculus Algebra and Trigonometry (MA111) Summer 2021 Teaching Assistant, two sections of recitation for Calculus II (MA241) Spring 2021  
Teaching Assistant, two sections of recitation for Introduction to Fall 2020

Finite Mathematics (MA114)

**Western Kentucky University**

Teaching Assistant, two sections of recitation for Calculus II (MATH137) Spring 2020  
Teaching Assistant, three sections of recitation for Calculus II (MATH137) Fall 2019 Teaching Assistant, two sections of recitation for Calculus I (MATH136) Spring 2019  
Teaching Assistant, two sections of recitation for Honors Calculus II (MATH137) Fall 2018

**Publications**

**K. Dadashova**, R.C. Smith, M.A. Haider, “Local Identifiability Analysis, Parameter Subset Selection and Verification for a Minimal Brain PBPK Model”, *Bulletin of Mathematical Biology*, 86(12), 2024.

F. M. Atıcı, **K. Dadashova**, and J. M. Jonnalagadda, “Linear Fractional-Order h-Difference Equa-  
tions”, *International Journal of Difference Equations*, 15(2), 2020, pp. 281-300

F. M. Atıcı, N. Nguyen, **K. Dadashova**, S. Pedersen, and G. Koch, “Pharmacokinetics and Phar-  
macodynamics Models of Tumor Growth and Anticancer Effects in Discrete Time”, *Computational  
and Mathematical Biophysics*, 8(1), 2020, pp. 114-125

**Presentation and Posters**

**Presentations**

*Parameter Subset Selection with Application to Bayesian Inference* Spring 2024

*for mPBPK Model.* QSP/T Seminar Series, GSK*.*

*Development of a QSP Model for VZV Vaccine Immunogenicity* Summer 2023

Pfizer. Boston, MA.

*Local Identifiable Based Parameter Subset Selection with Verification for mPBPK Model* Spring 2023

Takeda. Virtual.

*Parameter Subset Selection for mPBPK Model* Spring 2022

SIAM Conference on Uncertainity Quantification (UQ22). Atlanta, GA.

*Tumor Growth Model with Fractional h-Difference Equations* Fall 2019  
39th Annual Mathematics Symposium. Western Kentucky University.

*A Study of Pharmacodynamics Model on hN*, Fall 2019

International Symposium on Biomathematics and Ecology, Education

and Research. University of Wisconsin.

**Posters**

*Parameter Subset Selection for identifiabbility analysis in mPBPK* Fall 2023

Mathematics in Digital Twins (MATH-DT Workshop), George Mason University.

*Parameter Subset Selection for mPBPK Model* Fall 2023

American Conference on Pharmacometrics (ACoP14). National Harbor, MD.

**Awards and Honors**

**NSF Travel Grant.** For attending the Mathematical Opportunities in Fall 2023

Digital Twins workshops. George Mason University, Fairfax, VA

**Department Travel Grant.** For attending the ACoP14 conference, Fall 2023

National Harbor, MD

**SIAM Travel Award.** For attending the SIAM UQ conference. Spring 2022

Atlanta, GA

**NSF Grant (SAMSI).** For research assistantship. Spring 2022

**Travel Grant to attend International Symposium on Biomathematics** Fall 2019 **and Ecology Education and Research.** Ogden College of Science and  
The Graduate School. Western Kentucky University, Bowling Green, KY

**E. Margaret Curtis-Howe Scholarship.** For a good academic standing. Fall 2019  
Western Kentucky University, Bowling Green, KY

**Math Department Award, Powers Scholarship.** For a good academic Spring 2019  
standing. Western Kentucky University, Bowling Green, KY

**Honorary Degree.** For completing all semesters as a top student. Summer 2018  
Baku Engineering University, Baku, Azerbaijan

**Second and Third Places.** University-wide Mathematics Olympiads. 2016–2015  
Baku Engineering University, Baku, Azerbaijan

**Merit-Based Scholarship for Undergraduate Studies.** Awarded by the 2013–2017  
Azerbaijani Government, Azerbaijan

**Extracurricular and Leadership Activities**

**Vice President of the American Mathematical Society (AMS).**  Spring 2023

Graduate Student Chapter, NCSU.

**Member.** Student Chapter of SIAM, NCSU 2020–Present

**President of the American Mathematical Society (AMS).** 2019–2020  
Graduate Student Chapter, WKU.   
**Member.** Student Chapter of SIAM, Western Kentucky University 2018–2020  
**Volunteer.** Fourth International Scientific Conference of Young Researchers Spring 2017  
Baku, Azerbaijan  
**Member.** Baku Engineering University Student Scientific Society 2015–2018

**Technical Skills**

**Programming Skills:** Python, R, MATLAB, C#, Mathematica

**Libraries:** Keras, Tensforflow, Scikit-learn, Pandas, Numpy, ggplot