Kathryn Kohler Menta

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Education

Case Western Reserve University **August 2023 – present**
Doctor of Philosophy
Biostatistics & Epidemiology

University of Missouri, Kansas City **January 2022 – May 2023**
Master of Science
Mathematics

University of Missouri, Kansas City **August 2020 – May 2023**
Master of Science
Statistics

University of Missouri, Kansas City **August 2018 – May 2020**
Bachelor of Science
Mathematics & Statistics

University of Missouri, Kansas City **August 2018 – May 2020**
Bachelor of Arts
Criminal Justice & Criminology

East Tennessee State University **August 2014 – May 2015**
Graduate Certificate
Forensic Document Examination

University of Florida **August 2009 – May 2011**
Master of Science
Pharmacy, Concentration in Forensic Science
Certificates in Forensic DNA & Serology and Forensic Death Investigation

University of Central Florida **August 2004 – May 2009**
Bachelor of Science
Forensic Science
Minors in Chemistry and Anthropology

Research Experience

Master's Thesis Research **March 2021 – May 2023**
University of Missouri, Kansas City
Division of Computing, Analytics, and Mathematics

- *Thesis: Using Stable Limit Cycles to Model p53-Mdm2 Protein Interactions in the Presence of DNA Damage*
- Mathematical modeling, limit cycles, and other mathematical analyses of the p53-Mdm2 interaction

Graduate Research Assistant **March 2021 – September 2022**
University of Missouri, Kansas City
Division of Computing, Analytics, and Mathematics

- Work in conjunction with Dr. Bi-Botti Celestin Youan's lab in the College of Pharmacy
- Performed lab's statistical analyses as requested

Teaching Experience

Adjunct Instructor **June 2023 – July 2023**
University of Missouri, Kansas City
- Summer 2023: Mathematics for Liberal Arts

Graduate Teaching Assistant/Graduate Instructor **January 2022 – May 2023**
University of Missouri, Kansas City
- Spring 2023: Grader for Linear Algebra I and Advanced (Real) Analysis
- Fall 2022: Mathematics for Liberal Arts, Trigonometry
- Summer 2022: Mathematics for Liberal Arts
- Spring 2022: Elementary Statistics, Special Topics - Introduction to Forensic Science

Adjunct Instructor **August 2021 – December 2021**
University of Missouri, Kansas City
- Fall 2021: Mathematics for Liberal Arts

Adjunct Instructor **June 2020 – July 2020**
University of Missouri, Kansas City
- Summer 2020: Special Topics - Introduction to Forensic Science

Adjunct Instructor **August 2017 – May 2018**
Columbia College
- Spring 2018: Crime Scene Investigation, Forensic Photography
- Fall 2017: Crime Scene Investigation, Bloodstain Pattern Analysis

Professional Experience

Forensic Scientist III/DNA Technician **January 2018 – January 2020**
Kansas City Missouri Police Department Crime Lab
Kansas City, Missouri
- DNA collection, extraction and amplification, among other laboratory duties
- Case Assessment and backlog reduction
- Evidence examination and processing

Crime Scene Specialist/Evidence Custodian **April 2013 – August 2017**
Forsyth County Sheriff's Office
Cumming, Georgia
- Conducted crime and death scene investigations
- Evidence collection and processing
- Crime scene photography
- Courtroom testimony as needed

Awards

Jedel Family Foundation Professor's Scholarship Mathematics **August 2019 – May 2020**
- Chosen as one of three mathematics students for the year for scholarship

Jack Haley Memorial Scholarship **January 2015**
- Awarded through Mensa

Presentations & Publications

Menta, K., Youan, B., & Bani-Yaghoub, M. **September 2023**
"Understanding Periodic Dynamics of p53-Mdm2 Interactions with the Stable Limit Cycles"

Submitted to Cell Cycle

Akinjole, O., Menta, K., Alsalhi, A., Bani-Yaghoub, M., & Youan, B. **May 2023**
"Novel Meta Iodobenzylguanidine and Etoposide Complex: Physicochemical Characterization and Mathematical Modeling of Anticancer Activity"

Accepted to *AAPS PharmSciTech*

UMKC Spring Interdisciplinary Symposium **April 2022**
"Analyzing and Further Development of a Mathematical Model of a Protein Interaction and its Implications in Cancer Research."

Missouri Section Meeting of the Mathematical Association of America **April 2022**
"Examination of Singular and Regular Perturbations on the Fitzhugh-Nagumo Model."

Computer Skills

LaTeX
MATLAB
R
SAS
SPSS