ALINA R. KUVELKAR

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EDUCATION

PhD, Statistics 2018 – 2024
Pennsylvania State University
Advisor(s): Prof. David Hunter, Prof. Ashton Verdery
Awards: University Graduate Fellowship

B.S. with honors, Mathematics – Specialization: Statistics 2014 - 2018
The College of New Jersey
Minor: Actuarial Studies and Financial Risk
GPA: 3.97/4.00 (Summa Cum Laude)
Thesis: "Exploring Biomolecular Drivers of Pathway Activity in Head and Neck Squamous Cell Carcinoma Using Structural Equation Modeling"
Advisor: Prof. Michael Ochs
Awards: Dean's List, Achievement Award [Sophomore, Junior, Senior]

PUBLICATIONS

Published

Pavel Krivitsky, **Alina R. Kuvelkar**, and David R. Hunter. "Likelihood-based Inference for Exponential-Family Random Graph Models via Linear Programming." Electronic Journal of Statistics. *In press.*

Submitted

Rashmi P. Bomiriya, **Alina R. Kuvelkar**, David R. Hunter, and Steffen Triebel. "Modeling Homophily in Exponential-Family Random Graph Models for Bipartite Networks."

In Progress

Alina R. Kuvelkar, Ashton M. Verdery, and David R. Hunter. "Evaluating Prevalence Estimators for Respondent-Driven Sampling Under Dynamic Conditions."

CONFERENCE ACTIVITIES

Poster Presentations

"Evaluating Prevalence Estimators for Respondent-Driven Sampling Under Dynamic Conditions."

- Rao Prize Conference, Penn State, May 2023
- Statistical Network Science with Applications Workshop, Penn State, May 2023
- Keystone State Statistics Symposium, Penn State, October 2023

Workshops

David R. Hunter and **Alina R. Kuvelkar**. "Bipartite ERGMs." Social Networks and Health Workshop, Duke University, 2021

Panel Moderator

"Navigating the Research Landscape: Insights, Hurdles, and Prospects for Junior Researchers."
Keystone State Statistics Symposium, Penn State, October 2023

TEACHING EXPERIENCE

Teaching Assistant Professor, University of Pittsburgh
Fall 2024, Spring 2025

- Taught online and in-person sections of two introductory probability classes (STAT1000 and STAT0200)
- Assessed student performance through assignments and exams, providing constructive feedback to foster academic growth.
- Actively engaged in professional development through workshops and webinars.
- Participated in faculty meetings to discuss curriculum improvements, student outcomes, and research initiatives.

Adjunct Instructor, Penn State World Campus
Fall 2024, Spring 2025

- Taught online asynchronous sections of three one-credit coding courses (STAT480, STAT481, STAT482)
- Assessed student performance through coding assignments, giving detailed feedback regularly.

Instructor: STAT318: Elementary Probability, Penn State
Fall 2019, Spring 2020, Spring 2021

- Developed lectures, quizzes, and exams suitable for an introductory probability class.
- Coordinated with TAs to ensure students received detailed feedback on graded quizzes.

Instructor: STAT200: Elementary Statistics, Penn State
Summer 2020

- Presented lecture material in an online accelerated summer course.
- Coordinated with TAs to ensure weekly labs were synchronized with material learned in class.

Instructor: STAT401: Experimental Methods, Penn State
Instructor, Fall 2020

- Developed lectures, lab assignments, quizzes, and exams suitable for a synchronous online course.
- Introduced students to R, and taught them how to use R for statistical analysis (regression, t-tests, random variable simulation, and more).

Instructor: STAT480: Introduction to SAS, Penn State
Summer 2021, Fall 2021, Spring 2022, Summer 2022, Fall 2022, Summer 2023, and Fall 2023

- Developed lectures, homeworks, and exams suitable for an introductory computing class.
- Coordinated with TAs to ensure students received detailed feedback on graded homeworks.

Teaching Assistant: Summer School in Statistics for Astronomers, Penn State
Summer 2023

- Teaching support for the following courses in the Summer School: Introduction to R, Regression, Clustering, Classification, Time Series Analysis

Graduate Student Online Teaching Certificate, Penn State
Summer 2020

- Completed course OL2050 through Online Faculty Development Program
- Developed skills needed to effectively teach an online course at the college level
- Learned best practices for online instruction including how to manage an online presence, how to facilitate online class discussions, and how to provide useful feedback in online grading

HONORS AND PROFESSIONAL SOCIETIES

Phi Beta Kappa
Pi Mu Epsilon
Association for Women in Mathematics

WORK AND PROFESSIONAL EXPERIENCE

Peer Tutor, TCNJ Tutoring Center
Fall 2016 – Spring 2018

- Tutored students in lower and upper level mathematical and statistical courses including: Proof Writing through Discrete Mathematics, Linear Algebra, Multivariable Calculus, Introduction to Statistics and Statistical Inference
- Clarified and explained concepts and material students have questions on
- Made note of student progress to instructor

Enterprise Systems & Financial Services Actuarial Tech Intern, Prudential
Summer 2016, 2017

- Wrote and updated system specifications for various utilities
- Helped maintain utilities by developing and testing tickets on utilities
- Assisted with production runs and population generation

PEER REVIEW SERVICE

Journal of Statistical Planning and Inference	Spring 2025
Sociological Methodology	Spring 2023
Journal of Computational and Graphical Statistics	Fall 2022

SERVICE AND LEADERSHIP ACTIVITIES

Statistics Department Faculty Social Committee	2024 - Present
Statistical Network Science with Applications Workshop Organizing Committee	2023
Penn State College of Science Climate and Diversity Committee Member	2021 – 2023
Penn State Statistics Graduate Student Associate President	2021 – 2022

Penn State Statistics Department Climate and Diversity Committee Member	2019 – 2022
Penn State DataFest Volunteer Coordinator	2022
Penn State DataFest Volunteer	2019
TCNJ Mathematics and Statistics Club Treasurer	2017-2018
Pi Mu Epsilon TCNJ Chapter Vice President & Treasurer	2017-2018