JOSEPH NJUKI

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EDUCATION

Bowling Green State University, Bowling Green, OH   August 2022
Ph.D in Statistics
Dissertation: Nonparametric Sequential tests for Change Point Analysis Using Energy Statistics
Advisor: Dr. Wei Ning

State University of New York at Binghamton, Binghamton, NY   August 2018
Graduate Coursework in Mathematical Sciences - Mathematics track
Earned forty (40) graduate - level credit hours in both Mathematics and Statistics

Miami University, Oxford, OH   August 2016
Masters of Science (Mathematics)
Masters' Project: Convergence of Numerical Algorithms Based on the SQP Method
Advisor: Dr. Brezhneva Olga

University of Nairobi, Nairobi, Kenya   August 2012
Bachelor of Science in Mathematics (Statistics minor)   First class honors

WORK EXPERIENCE

Assistant Professor of Statistics, Department of Mathematics and Statistics, Coastal Carolina University, Conway - USA   August 2022 - Present

Teaching Associate, Department of Mathematics and Statistics, Bowling Green State University, Ohio - USA   August 2018 - August 2022

Assistant to Course Coordinator, Math 1150 - Introduction to Statistics, Department of Mathematics and Statistics, Bowling Green State University, Ohio - USA   Spring 2019 and Fall 2019

Research Assistant (NSF Peer Mentor), Department of Mathematics and Statistics, Bowling Green State University, Ohio - USA   Spring 2020 - Present

Online Teaching Instructor, Department of Mathematics and Statistics, Bowling Green State University, Ohio - USA   Summer 2020

Online Teaching Instructor, Department of Mathematics and Statistics, Bowling Green State University, Ohio - USA   Summer 2019

Mathematics Tutor, SUNY - Binghamton Enrichment Program, NY - USA   Summer 2018

Teaching Assistant, Department of Mathematics, SUNY - Binghamton, NY - USA   August 2016 - May 2018

Graduate Assistant, Department of Mathematics, Miami University, Ohio - USA   August 2015 - May 2016

Graduate Assistant, B. Rinella Learning Center, Miami University, Ohio - USA   August 2014 - May 2015

Clerk Assistant, County Assembly, Embu County Government, Kenya   2013 - 2014

Presiding and Registration Officer , IEBC - Mbeere South, Kenya   November 2012 - March 2013

Research Analyst, Kenya Agricultural Research Institute, Kenya   August 2012 - October 2012

Teacher (Mathematics), Siakago Boys High School - Embu county, Kenya   Summer 2011

Data Analyst, Supreme Consultants Company Limited - Nairobi, Kenya   Summer 2010

Teacher (Mathematics) , Kiambere Mixed Secondary School - Embu county, Kenya   2007 - 2008

GRANTS AND AWARDS

1. **Winner of 2022 Graduate Excellence in Teaching Award** in the department of Mathematics and Statistics, Bowling Green State University

2. **Winner of 2022 James Robert and Gretchen Overman Graduate Scholarship Award** in the department of Mathematics and Statistics, Bowling Green State University

3. **NSF funding scholarship Award** to mentor novice graduate Instructors at **Department of Mathematics and Statistics** under the supervision of Dr. Kimberly Rogers, Bowling Green State University, **January 2020 - Present**

4. **Winner of 2020 James Robert and Gretchen Overman Graduate Scholarship Award** in the department of Mathematics and Statistics, Bowling Green State University

5. Selected as a **Journal Award Winner for Outstanding Scholarship** in the **Department of Mathematics, Miami University, Spring 2016**

6. Certificate of Achievement as **a Graduate Peer Mentor in Teaching** in the Department of Mathematics and Statistics, Bowling Green State University

7. Certificate of participation as a **Judge/Grader** at **Pan Olympic International Mathematics Contest,** University of Nairobi - Kenya, 2011

8. Certificate of participation in **Transformational Leadership Course**, Nairobi - Kenya

9. Certificate of recognition as a **Highly Effective Mathematics Teacher** at **Kiambere Mixed Secondary School - Kenya**, 2008

TEACHING AND MENTORING EXPERIENCE

1. Instructor STAT 318 - Applied Statistical Methods (Lecture) at CCU   **Spring 2023**

2. Instructor STAT 201 - Elementary Statistics (Lecture) at CCU   **Fall 2022 - Spring 2023**

3. Instructor Math 2470 - Fundamentals of Statistics (Lecture) at BGSU   **Spring 2022**

4. Instructor Math 1150 - Introduction to Statistics (Lecture) at BGSU   **Fall 2018 - Fall 2021**
With average rating of teaching effectiveness from student evaluations ranging from 4 to 4.51 out of 5.00.

5. Peer Mentor Math 1150 - Intr.Statistics and Math 1190 - Real World Math Skills   **Spring 2020 - Present**
Mentored 15 novice graduate instructors to teach Introduction to Statistics (Math 1150) and Real World Math Skills (Math 1190) during their first year of teaching in the department.
Worked as a research assistant in the Mathematics Graduate Student Peer-Mentorship Program to assist in collecting and summarizing data from novice graduate instructors.

6. Assistant to course Coordinator - Introduction to Statistics at BGSU   **Spring 2019 and Fall 2019**
Assigned to assist new teaching instructors for Math 1150 to run their classes smoothly.
Assigned to improve course teaching materials such as PowerPoint slides and exam questions' bank.

7. Instructor Math 1150 - Introduction to Statistics (Online) at BGSU   **Spring 2019 and Fall 2019**
With average rating of teaching effectiveness from student evaluations of 4.00 and 4.13 out of 5.00, respectively.

8. Instructor Math 1150 - Introduction to statistics (Online) at BGSU   **Summer '19 and Summer '20**
With average rating of teaching effectiveness from student evaluations of 4.13 on average out of 5.00.

9. Mathematics Tutor for BEP Summer program at SUNY - Binghamton   **Summer 2018**
Both teaching and tutoring mathematics to pre-college students before joining State University of New York at Binghamton.

10. Lead Teaching Assistant Math 130 - Mathematics In Action at SUNY - Binghamton   **Spring 2018**
Assigned to prepare assignments, quizzes and exams with the help of the class instructor for the whole group.
Assigned to hold class discussions twice a week for two different groups of Math 130.

11. Instructor Math 224/225 - Differential/Integral Calculus at SUNY - Binghamton   **Fall 2017**

12. TA Math 147/148 - Elementary Statistics at SUNY - Binghamton **2016 -2017**
Assigned two sections of Math 147 (Fall) and Math 148 (Spring) to hold discussions and grading of assignments, quizzes and exams.

13. TA MTH 151/249 - Calculus I and II at Miami University **2015 - 2016**
Assigned to hold office hours for tutoring and grading.

14. Teacher at Kiambere Mixed Secondary school **2007 - 2008**
Taught high school mathematics and physics to juniors and seniors prior to their national exam.

RESEARCH INTEREST

Change Point Analysis, Empirical Likelihood Method, Survival Analysis, Statistical Learning and Modeling, Data mining and High Dimension Data, Biostatistics

SKILLS

Programming skills:
R, Python, SAS, SPSS, Matlab, SQL, LaTex
Communication and report writing skills
Fluent
Microsoft products
Proficient
Extracurriculars:
Soccer, Volleyball.

RESEARCH PROJECTS

Undergraduate Research Mentorship **Fall 2022**
Guided and Mentored Michael H. in his undergraduate research work on linear models and predictions.
Also, performed results-comparison with different methods.

Statistical Computing Project Work **Fall 2019**
Read, reproduce and present the results in the paper "Macaulay Okwuokenye, Karl E. Peace (2016). A comparison of inverse transform and composition methods of data simulation from the Lindley distribution", Communications for Statistical Applications and Methods 2016, Vol. 23, No. 6, 517–529.
This class project expected us to reproduce the results in the paper and modify results with new statistical computing methods such Bisection and Brent's methods to mention a few to improve results in the paper. Our results were almost same or even performed better in some cases.

Survival Analysis summer Project **Summer 2019**
Read and present the paper "Asad Haris, Ali Shojaie, and Noah Simon (2018). Nonparametric Regression with Adaptive Truncation via a Convex Hierarchical Penalty", Biometrika 2018, Vol. 106, No. 1, 87-107.
Also, compared some of the results provided in the paper to what learned in the course.

Satatistical Learning and Data mining Competition Project (Piazza Platform) **Spring 2018**
Assigned with high dimension data of 40,000 features and a binary response with a goal to build a good model with fewer and most important features for classification. The final model had an accuracy of above 90% in the test dataset and ranked among top teams in the class.

Linear Regression Project on Housing Price In King County, Seattle - WA **Fall 2017**
The project aimed at predicting future trends in house prices in America's most populous county. With growing urban populations, results from this project would go along way in helping buyers and sellers to plan for future of the metropolitan county.

PRESENTATIONS

Research Conference   **Fall 2022**

Attended the International Conference on Advances in Interdisciplinary Statistics and Combinatorics at UNC - Greensboro

PhD Candidacy Preliminary examination   **Fall 2020**

Reproduce and present results in the paper "Edit Gombay (2004). U-Statistics in Sequential Tests and Change Detection", Sequential Analysis: Design Methods and Applications, 23:2, 257-274. As the main paper of reference, I worked under the supervision of Dr. Wei Ning to prepare for my PhD candidacy exam.

Master's Project Thesis   **Summer 2016**

Convergence of Numerical Algorithms Based on the Sequential Quadratic Programming Method.

Produced, presented and defended this exit project thesis Summer 2016. Under the direction of Dr. Brezhneva Olga, I worked on different numerical algorithms based on Sequential Quadratic Programming Method.

PUBLICATIONS

1. Sequential Nonparametric Tests for a Change in Distribution Based on Energy Statistics. In Preparation.

2. Enery statistics in Sequential Tests and Change Detection. In preparation.

3. Energy-Statistic Based Modified Information Criterion for Change Point detection. In preparation.

4. Co-authored: The Effect of Cause Related Marketing Participation in the Black Lives Matter Movement on Purchase Intention. Submitted.

5. Co-authored: The Effect of Cause Related Marketing Participation in the Black Lives Matter Movement on Company Image. Submitted.

PROFESSIONAL MEMBERSHIP

American Mathematical Society

LEADERSHIP EXPERIENCE

1. GSS senator for Department of Mathematics and Statistics at BGSU   **August 2021 - May 2022**

2. Students' Representative in ONUSS at University of Nairobi, Nairobi - Kenya   **2009 - 2010**

VOLUNTEER EXPERIENCE

BOM member at Karura Secondary school   **2017 - 2022**

Volunteering as a board member in the management of Karura Secondary school for the second term.

Fall 2021 BGSU International Orientation

A three-day event to assist in international orientation programming that consist of roll call, campus tour, BG downtown trip and accompanying new students in their shopping trips.

December, 2020 BGSU Graduation Ceremony

Helped in scanning tickets and ferrying old guests to their designated seats or entrances.

Spring and Summer, 2021 BGSU Graduation Ceremonies

Assigned to help old guests to their designated seats and transportation all guests from their parking lots to the graduation grounds

REFERENCES

References available upon request