

Robbie Beane

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Education

Ph.D. in Mathematics | Missouri S&T | May 2008

- Advisor: Włodzimierz J. Charatonik
- Dissertation Title: "Inverse limits of permutation maps"

Master of Science in Mathematics | Missouri S&T | May 2005

- Advisor: Włodzimierz J. Charatonik
- Thesis Title: "Local compactness of the hyperspace of connected subsets"

Bachelor of Science in Mathematics | Missouri S&T | May 2002

- Minor: Computer Science

Professional Exams

Society of Actuaries Exams Passed

- Exam FM, Score of 10, April 2014
- Exam P, Score of 10, January 2015
- Exam MFE, Score of 10, July 2016

Professional Experience

Associate Professor of Mathematics, Lindenwood Univ. (Aug 2010 – Present)

- Chair of the Division of Mathematics and Computer Science since August 2016.
- Taught courses in Mathematics, Data Science, and Computer Science.
- Developed programs in Actuarial Science and Data Science.
- Developed many courses to support new and existing programs.
- Taught and developed online courses.

Lecturer of Mathematics, Penn State (Aug 2008 – May 2010)

- Taught courses in Calculus and Linear Programming.

Graduate Teaching Assistant, Missouri S&T (Aug 2003 – May 2008)

- Taught courses in Trigonometry, Calculus, and Differential Equations.

Courses Taught

Data Science and Computer Science

- Intro to Data Science
- Data Analysis in R
- Machine Learning
- Neural Networks

Mathematics and Statistics

- Finite Mathematics
- Basic Statistics
- College Algebra
- Pre-Calculus
- Statistics for Natural Sciences
- Calculus I - III
- Elementary Differential Equations
- Linear Algebra
- Introduction to Linear Programming
- Introduction to Advanced Mathematics
- Algebraic Structures
- Introduction to Topology
- Regression Analysis
- Theory of Financial Mathematics I – II
- Probability and Statistics I – II
- Models for Financial Economics

Technological Skills

Programming Languages

- Moderate to advanced knowledge of R and Python.
- Some experience with C++, Java, SQL, PHP, Perl, HTML, Javascript, and CSS

Software and Online Services

- Google Colab
- Jupyter Notebook
- RStudio
- Microsoft Office
- Mathematica
- Geogebra
- Blackboard
- Canvas
- ProctorU
- ALEKS
- MyMathLab
- Respondus

Research Interests

Data Science and Machine Learning, Neural Networks, Reinforcement Learning, Actuarial Science, Topological Data Analysis, Topology, and Dynamical Systems.

Publications

Peer-Review Publications

- RB and Włodzimierz J. Charatonik, "Kelley remainders of $[0, \infty)$ ", Topology Proceedings 32 (2008), 101-114.
- RB, "Local compactness of the hyperspace $CLC(X)$ ", Houston Journal of Mathematics 37 (2011), 977-994

Conference Talks

Contributed Presentations

- "Local compactness of the hyperspace $C(X)$ ", Spring Topology and Dynamics Conference, Rome, GA, March 2005
- "Properties of Buffers", AMS Spring Central Section Meeting, Lubbock, TX, April 2005
- "Local compactness of hyperspaces", Continuum Theory: Special session dedicated to the memory of Janusz J. Charatonik, Wrocław, Poland, May 2005
- "Approximating Kelley continua by rays", Spring Topology and Dynamics Conference, Greensboro, NC, March 2006
- Kelley remainders of $[0, \infty)$ ", III International Meeting on Continuum Theory, Puebla, Mexico, June 2007
- "Inverse limits of permutation maps", Spring Topology and Dynamics Conference, Milwaukee, WI, March 2008
- "Inverse limits of continua with upper semi-continuous set-valued bonding functions", 11th Chico Topology Conference and 40th Cascade Topology Seminar, Chico, CA, May 2008

Honors

Teaching Awards

- Council of Graduate Students Outstanding Graduate Student Teacher for the 2004 - 2005 academic year
- UMR Parents' and Guardians' Association Graduate Teaching Assistant for the 2005 - 2006 academic year
- MST Department of Mathematics and Statistics GTA Teaching Excellence Award for the 2007 - 2008 academic year