

Timothy (Tim) J. Keaton

keatont@purdue.edu

[linkedin.com/in/timkeaton](https://www.linkedin.com/in/timkeaton)

Education

- Purdue University, West Lafayette, IN, 2019:
 - Doctor of Philosophy: Statistics
 - Dissertation: "Dismembering the Multi-Armed Bandit"
 - Advisor: Arman Sabbaghi
- Purdue University, West Lafayette, IN, 2016:
 - Master of Science: Mathematical Statistics and Probability
- Bowling Green State University, Bowling Green, OH, 2011:
 - Master of Science: Applied Statistics
 - Cognate: Operations Research
- Grace College, Winona Lake, IN, 2009:
 - Bachelor of Science: Statistics
 - Minors: Information Technology, Accounting
 - Graduated Summa Cum Laude, 3.975 GPA

Academic Employment

- Purdue University, West Lafayette, IN:
 - Assistant Professor of Practice, Department of Statistics, 2021 – present
 - Led development of Online MS in Applied Statistics program
 - Taught STAT 506: SAS Programming [Fa 2021, Sp & Fa 2022, Sp, Su, & Fa 2023, Sp 2024]
 - Taught STAT 355: Statistics for Data Science [Fa 2021, Sp & Fa 2022, Sp & Fa 2023, Sp 2024]
 - Taught and re-developed STAT 513: Statistical Quality Control [Spring 2024]
 - Visiting Assistant Professor, Department of Statistics, 2019 – 2021
 - Co-designed STAT 30301: Probability & Statistics for Business [Spring 2021]
 - Taught STAT 506: SAS Programming [Fall 2019, Spring & Fall 2020, Spring 2021]
 - Taught STAT 355: Statistics for Data Science [Fall 2019, Spring & Fall 2020]
 - Taught STAT 501: Experimental Statistics I [part of Spring 2020]
 - Graduate Instructor & Research Assistant, Department of Statistics, 2014 – 2019
 - Instructor for STAT 506: SAS Programming [Spring & Fall 2018, Spring 2019]
 - Online Video Creator for STAT 225: Introduction to Probability [Summer 2018]
 - Research Assistant [Summer & Fall 2016, 2017]
 - Instructor for STAT 598: Qualifier Prep [Summer 2017]
 - Course Redesigner for STAT 225: Introduction to Probability [Summer 2017]
 - Instructor for STAT 225 [Spring, Summer, & Fall 2015, Spring 2016, Summer 2018]
 - Teacher's Assistant for STAT 301: Elementary Statistical Methods [Fall 2014]
 - Teacher's Assistant for STAT 113: Statistics and Society [Fall 2014]

Academic Employment (continued)

- Private Tutor, West Lafayette, IN:
 - One-on-one and small group tutoring for a variety of Purdue University classes, 2017 – 2019
 - STAT 225: Introduction to Probability
 - MGMT 305: Business Statistics
 - STAT 416: Probability
 - POL 501: Introduction to Political Methodology
 - POL 605: Research Design and Methods: Linear Models and Causal Inference
- Miami University, Oxford, OH:
 - Instructor, Farmer School of Business, Department of Information Systems & Analytics, 2011 – 2014
 - Course Designer and Instructor for ISA 480: Business Statistics Using R [2014]
 - Instructor for DSC/ISA 205: Business Statistics [2011 – 2014, 17 sections over 6 semesters]
 - Instructor for ISA 203: Supplemental Business Statistics [2012 – 2013, 4 sections over 2 semesters]
- Bowling Green State University, Bowling Green, OH:
 - Teaching Assistant, 2009 – 2011
 - Consultant in the Center for Business Analytics, 2011
 - Co-developer of the Randall-Reilly Consumption Index (Consulting Project), 2010 – 2011
 - Tutor in the Math & Stats Tutoring Center, 2010
- Grace College, Winona Lake, IN:
 - Tutor for Calculus and Probability and Statistics, 2007 – 2009
 - Teacher's Assistant for Basic Algebra, 2007

Non-Academic Employment

- Statistical Consultant, West Lafayette, IN:
 - Private consulting on various projects with local medical professionals, 2018 – present
- 212 Media Studios (formerly PayProMedia Studios), Warsaw, IN:
 - Back-End Web Developer, 2013 – 2014
- Niles Lankford Group, Inc., Plymouth, IN:
 - Various programming projects, 2008 – 2009
 - Creation of a contact management and billing database in Microsoft Access, 2008

Skills and Certifications

- Higher education, including course design, coordination, and technology
- Programming proficiency in Office, VBA, HTML, PHP, SQL, Minitab, SPSS, SAS, and R
- Scored 10/10 on Society of Actuaries Exam P (Casualty Actuarial Society Exam 1), 2012
- SAS Certified Base Programmer for SAS 9, 2010

Professional Service

- Served on committees for Purdue Department of Statistics, 2020 – present
 - Online (degree) program committee, 2021 – present (appointed chair in Jan. 2024)
 - Quality of online teaching committee, 2021 – present
 - Hiring committees for Staff, Lecturer, VaP, and PoP positions, 2021 – present
 - Entertainment committee, 2020 – present
 - Undergraduate awards committee, 2022 – 2023
 - Website committee, 2020 – 2021
- Faculty Fellow with Purdue Student Residences, 2019 – present
- Faculty Advisor for Purdue student organizations
 - Phi Upsilon social fraternity, 2021 – present
 - Purdue Raas team, 2020 – present
 - StormHub brainstorming club, 2023 – present
 - Trading Card Games (TCG) Club, 2023 – present
 - Dataception data visualization club, 2022 – 2023
- Mentor for New Department TAs, 2019 – present
- Served as President of the Statistics Graduate Student Organization, 2017 – 2018
- Statistics Graduate Student Organization Mentor, 2015 – 2018

Publications

- Schul, M.W., Melin, M.M., & **Keaton, T.J.** (2023)
"Venous Leg Ulcers and Prevalence of Surgically Correctable Reflux Disease in a National Registry"
Accepted at *Journal of Vascular Surgery: Venous and Lymphatic Disorders* 11 (3), 511-516
- **Keaton, T.J.**, & Sabbaghi, A. (2022)
"Dismemberment and Design for Controlling the Replication Variance of Regret for the Multi-Armed Bandit"
Journal of Statistical Theory and Practice 10.1007/s42519-022-00280-w
- Schul, M.W., Vayuvegula, S., & **Keaton, T.J.** (2020)
"The clinical relevance of anterior accessory great saphenous vein reflux"
Journal of Vascular Surgery: Venous and Lymphatic Disorders 8 (6), 1014-1020
- **Keaton, T.J.**, & Sabbaghi, A. (2020)
"Visualizations for Interrogations of Multi-Armed Bandits"
Stat 8(1): e247

Presentations and Conference Involvement

- Invited Workshop: "A crash course in R to analyze NFL data" Purdue Sports Statistics Club, Sep. 2023
- Session Chair: "Advances in Learning Algorithms for Application" INFORMS Annual Meeting, Oct. 2022
- Invited Talk: "Bandits with Priors" INFORMS Annual Meeting, October 2022
- Session Chair: "Advances in Active Learning" International Conference on Advances in Interdisciplinary Statistics and Combinatorics (AISC), October 2022
- Invited Talk: "Actively Learning About Active Learning" International Conference on Advances in Interdisciplinary Statistics and Combinatorics (AISC), October 2022
- Session Chair: "Advances in Causal Inference and Reinforcement Learning for the Online Service Industry" INFORMS Annual Meeting, October 2021
- Invited Talk: "Design and Dismemberment of the Multi-Armed Bandit" International Conference on Advances in Interdisciplinary Statistics and Combinatorics (AISC) 2021, October 2021
- Invited Talk: "Improving Multi-Armed Bandit Quality via Dismemberment" Institute of Industrial and Systems Engineers (IISE) Annual Conference & Expo 2021, May 2021
- Invited Talk: "Dismembering the Multi-Armed Bandit" INFORMS Virtual Annual Meeting, November 2020
- Contributed Talk: "Design and Dismemberment for Controlling the Risk of Regret for the Multi-Armed Bandit" International Conference on Design of Experiments (ICODOE), May 2019
- Invited Poster: "Dismembering the Multi-Armed Bandit" Design & Analysis of Experiments (DAE) Conference, October 2019
- Poster: "Dismembering the Multi-Armed Bandit" Purdue University Symposium on Statistics, June 2018

Honors

- Faculty/Staff Recognition Award, Purdue University Department of Statistics, 2024
"Tim has co-created a very promising online applied statistics master program for our department."
- I.W. Burr Graduate Student Award, Purdue University Department of Statistics, 2019
"This award was established in 1974 upon the retirement of Professor Burr, an eminent statistician who taught at Purdue for nearly 35 years. The criteria for this award are: (a) promise of contribution to the profession as evidenced by academic excellence in courses and exams, and by the quality of the thesis research, (b) and excellence in teaching or consulting as a graduate student at Purdue."
- Outstanding Teaching by a Statistics Teaching Assistant Award, Purdue Statistics, 2019
"Teaching assistants contribute substantially to the teaching mission of the Department of Statistics. Their classroom performance is important to the quality of service to students. Therefore, the Department of Statistics faculty annually recognizes a statistics teaching assistant for teaching excellence in the classroom."
- Teaching Academy Graduate Teaching Award, Purdue University, 2018 & 2019
"This award honors graduate students with teaching responsibilities from across campus for their dedication to Purdue students and their outstanding teaching contributions. Recipients are selected by each academic department for their commitment to undergraduate education."
- James A. Sullivan Outstanding Graduate Student Award, BGSU Department of ASOR, 2011
Presented "...in recognition of his superior contributions to and performance of his graduate assistantship duties."
- Alpha Chi National Academic and Character Honor Society, 2007 – 2009
- Millennial Scholar Academy, Grace College, 2005 – 2009
- National Merit Scholarship Finalist, 2005
- Valedictorian, Blackhawk Christian High School, Fort Wayne, IN, 2005