

LEE KENNEDY-SHAFFER

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EDUCATION

Harvard University Graduate School of Arts and Sciences, Cambridge, MA, Aug. 2016–present

- Ph.D. Candidate, Department of Biostatistics at the Harvard T.H. Chan School of Public Health
- A.M., Biostatistics, May 2018
- Ph.D., Biostatistics, Expected May 2020
 - Advisor/Dissertation Committee Chair: Professor Michael D. Hughes
 - Dissertation Committee Members: Professor Victor De Gruttola, Professor Marc Lipsitch
 - Dissertation: Statistical Methods for the Design and Analysis of Infectious Disease Studies
- Cumulative GPA: 4.00/4.00

Yale University, New Haven, CT, August 2009–May 2013

- B.S., Mathematics, May 2013
- Honors: Summa Cum Laude, Phi Beta Kappa

TEACHING EXPERIENCE

Instructor

- Biostatistics Summer Preparatory Course, Summer 2019.
 - Created syllabus, created course materials, and taught course covering linear algebra, single- and multi-variable calculus, programming skills, and probability and statistics for incoming Ph.D. students.
 - Materials available upon request.

Teaching Assistant/Fellow

- BIOSTAT 232/BST 232: Methods I, Fall 2019.
 - Harvard University Graduate School of Arts and Sciences/Harvard T.H. Chan School of Public Health. Instructor: Professor Brent Coull.
 - Designed lab session materials, taught lab sessions, held office hours, performed grading for course with first-year Ph.D. students and students from other programs and departments at the School of Public Health.
- GENED 1129: Infectious Diseases and Social Injustice, Fall 2019.
 - Harvard College. Instructors: Professors Donald Goldmann and Kenneth McIntosh.
 - Designed section materials, taught small-group discussion sections, handled administrative responsibilities, held office hours, and performed grading for general education course for undergraduates from all years from a variety of departments.
- BST 223: Applied Survival Analysis, Spring 2019.
 - Harvard T.H. Chan School of Public Health. Instructor: Dr. Andrea Bellavia.
 - Updated lab session materials, taught lab sessions, held office hours, performed grading for course with biostatistics master's students and master's and doctoral students from a variety of public health disciplines.
- BIOSTAT 232/BST 232: Methods I, Fall 2018.
 - Same course and responsibilities as Fall 2019.
- BST 216: Introduction to Quantitative Methods for Monitoring and Evaluation, Spring 2018.
 - Harvard T.H. Chan School of Public Health. Instructors: Professor Marcello Pagano and Dr.

Bethany Hedt-Gauthier.

- Updated lab session materials, taught lab sessions, held office hours, performed grading for course with global health and health policy master's students.

Other Experience

- Curriculum Development Fellow, Biostatistics Summer Preparatory Course, Summer 2019.
 - Re-designed summer preparatory course to increase the relevance for current department priorities and expectations and to better fit the backgrounds of incoming PhD students.
 - Constructed list of priorities and syllabus. Created materials that are used in biostatistics core courses for PhD and master's students as well as in the summer preparatory course.
 - Supported by a grant from the Harvard T.H. Chan School of Public Health Dean of Education and by the Department of Biostatistics.
- Tutor, BIOSTAT 231: Statistical Inference I, Harvard University Graduate School of Arts and Sciences. Spring 2019.
 - Tutored two students in a core biostatistics PhD course.
- Curriculum Development Fellow, BIOSTAT 232/BST 232: Methods I, Summer 2018.
 - Worked with Professor Brent Coull to re-design the core PhD methods course to fit department priorities and expectations. Designed a new syllabus and created new course material to fit the re-designed course.
 - Supported by the Department of Biostatistics.
- Course Grader, Yale University Department of Mathematics, Fall 2010–Spring 2012
 - Graded assignments for Mathematics Department courses: MATH 250: Vector Analysis; MATH 112: Multivariable Calculus; MATH 230a/b: Vector Calculus and Linear Algebra

PUBLICATIONS

Peer-Reviewed Publications

- **Kennedy-Shaffer, L.** and M. Hughes. Sample size estimation for stratified individual and cluster randomized trials with binary outcomes, *Statistics in Medicine*, Volume 39, Issue 10 (2020): 1489–1513. <https://doi.org/10.1002/sim.8492>.
 - R software implementing methods available at <https://github.com/leekshaffer/strat-crt-ss>.
 - R Shiny application to size clinical trials available at <https://leekshaffer.shinyapps.io/stratcrt/>.
- **Kennedy-Shaffer, L.**, V. De Gruttola, and M. Lipsitch. Novel methods for the analysis of stepped wedge cluster randomized trials, *Statistics in Medicine*, Volume 39, Issue 7 (2020): 815–844. <https://doi.org/10.1002/sim.8451>.
 - R software implementing methods available at <https://github.com/leekshaffer/SW-CRT-analysis>.
- **Kennedy-Shaffer, L.** Before $p < 0.05$ to Beyond $p < 0.05$: Using History to Contextualize p -Values and Significance Testing, *The American Statistician*, Volume 73, Issue sup1 (2019): 82–90. Available open access at <https://doi.org/10.1080/00031305.2018.1537891>.
- **Kennedy-Shaffer, L.** When the Alpha is the Omega: P -Values, “Substantial Evidence,” and the 0.05 Standard at FDA, *Food and Drug Law Journal*, Volume 72, Issue 4 (2017): 595–635. <https://www.fda.gov/2017/12/alpha-omega-p-values-substantial-evidence-0-05-standard-fda/>.
- Charles, Z., M. Farber, C. Johnson, and **L. Kennedy-Shaffer**. Nonpositive eigenvalues of hollow, symmetric, nonnegative matrices, *SIAM Journal of Matrix Analysis & Applications*, Volume 34, Issue 3 (2013): 1384–1400. <https://doi.org/10.1137/130904624>.
- Charles, Z., M. Farber, C. Johnson, and **L. Kennedy-Shaffer**. Nonpositive eigenvalues of the adjacency matrix and lower bounds for Laplacian eigenvalues, *Discrete Mathematics*, Volume 313, Issue 13 (2013): 1441–1451. <https://doi.org/10.1016/j.disc.2013.03.010>.
- Charles, Z., M. Farber, C. Johnson, and **L. Kennedy-Shaffer**. The relation between the diagonal entries and the eigenvalues of a symmetric matrix, based upon the sign pattern of its off-diagonal entries, *Linear Algebra and its Applications*, Volume 438, Issue 3 (2013): 1427–1445.

<https://doi.org/10.1016/j.jaa.2012.09.014>.

Technical Reports

- **Kennedy-Shaffer, L.** and C. Shearer. *Understanding Medicaid Utilization for Children in New York State: A Chartbook*. New York: Medicaid Institute at United Hospital Fund, July 2016. <http://uhfnyc.org/publications/881143>.
- **Kennedy-Shaffer, L.** and C. Shearer. *Understanding Medicaid Utilization for Children in New York State: A Data Brief*. New York: Medicaid Institute at United Hospital Fund, July 2016. <http://uhfnyc.org/publications/881143>.
- Shearer, C., **L. Kennedy-Shaffer**, and N. Myers. *Performing Provider Systems: Tackling the Health Needs of Communities*. New York: Medicaid Institute at United Hospital Fund, January 2015. <http://uhfnyc.org/publications/881032>.
- **Kennedy-Shaffer, L.** and C. Shearer. *Medicaid Regional Data Compendium, 2014*. New York: Medicaid Institute at United Hospital Fund, November 2014. <http://uhfnyc.org/publications/881021>.

PRESENTATIONS

Conference Presentations

- “Two Novel Non-Parametric Methods for the Analysis of Stepped-Wedge Cluster Randomized Trials,” Contributed Paper, Joint Statistical Meetings, Denver, CO, July 2019.
- “Sample Size Estimation for Stratified Individual and Cluster Randomized Trials with Binary Outcomes,” Chalmers Scholarship Finalist Presentations, Society for Clinical Trials Annual Meeting, New Orleans, LA, May 2019.
- “Sample Size Estimation for Stratified Individual and Cluster Randomized Trials with Binary Outcomes,” Contributed Paper, ENAR Spring Meeting, Philadelphia, PA, March 2019.
- “Sample Size Estimation for Stratified Cluster Randomized Trials with Binary Outcomes,” Contributed Speed Talk and Poster Presentation, Joint Statistical Meetings, Vancouver, BC, August 2018.

University Seminars and Working Group Presentations

- “Sample Size Estimation for Stratified Individual and Cluster Randomized Trials with Binary Outcomes,” Harvard University Department of Biostatistics HIV Working Group, Boston, MA, March 2019.
- “50 Years of ORT,” Panel Moderator, Harvard T.H. Chan School of Public Health, Boston, MA, November 2018.
- “The Effects of Stratification on Sample Size Requirements for Cluster Randomized Trials,” Harvard University Department of Biostatistics, PhD Student Summer Presentations, Boston, MA, August 2017.

GRANTS

Principal Investigator

- National Institute of Allergy and Infectious Diseases, F31 Kirchstein Predoctoral Individual National Research Service Award, September 2019–present.
 - Award Number: 1F31 AI147745. Award Title: Biostatistical Methods for Infectious Disease Study Design.
 - Annual Funding: \$36,506.

Training Grant Fellow

- National Institute of Allergy and Infectious Diseases, T32 Kirchstein National Research Service Award Institutional Research Training Grant, August 2016–July 2019.
 - Award Number: 5T32 AI007358-28. Award Title: Biostatistics/Epidemiology Training Grant in AIDS. PI: Professor Marcello Pagano.

HONORS

- Certificate of Distinction in Teaching, Harvard College General Education Program, Fall 2019.
- Finalist, Society for Clinical Trials Thomas C. Chalmers Student Scholarship, May 2019.
- Third Place, JSM Biopharmaceutical Section Contributed Presentation Award, Summer 2018.
- Certificate of Distinction in Teaching, Harvard T.H. Chan School of Public Health Department of Biostatistics, Spring 2018.
- University of Washington Summer Institute in Statistics and Modeling in Infectious Diseases Scholarship, Summer 2017.
- Yale University, Summa Cum Laude, Spring 2013.
- Yale University, Phi Beta Kappa, Admitted Fall 2012.
- United States Presidential Scholar, 2009.
- National Merit Scholar, 2009.

SERVICE AND PROFESSIONAL INVOLVEMENT

Professional Society Membership and Leadership

- Program Chair-Elect, American Statistical Association History of Statistics Interest Group, January 2019–present
- Member, International Biometrics Society Eastern North American Region, September 2018–present
- Member, Institute for Mathematical Statistics, September 2018–present
- Member, Society for Clinical Trials, October 2017–present
- Member, American Statistical Association, February 2017–present

University and Department Service

- Bargaining Committee Member, Harvard Graduate Students Union—United Auto Workers Local 5118, September 2019–present
- Graduate Student Representative, Harvard University Department of Biostatistics Curriculum Committee, February 2019–present
- Coordinator, Harvard University Department of Biostatistics HIV Working Group, June 2018–June 2019
- Moderator, Harvard University Department of Biostatistics Faculty Lightning Talks, October 2017
- Graduate Student Representative, Harvard University Faculty of Arts and Sciences Standing Committee on the Library, September 2017–present
- Department Representative, Harvard Graduate Student Council, September 2017–present
- Moderator, Harvard University Department of Biostatistics PhD Student Summer Presentations, August 2017
- Member, Harvard University Department of Biostatistics HIV Working Group, August 2016–present

PREVIOUS EMPLOYMENT

United Hospital Fund, Research Assistant, Medicaid Institute, June 2014–June 2016;
Consultant, Medicaid Institute, July–December 2016

Cornerstone Research, Analyst, August 2013–June 2014;
Summer Analyst, June–August 2012

Yale University Mathematics Department, Course Grader, September 2010–May 2012

College of William and Mary REU, Mathematics Researcher, June–August 2011

Himes for Congress Campaign, Field Organizer, June–August 2010