Lucas K. Mentch

Associate Professor
Department of Statistics
University of Pittsburgh
1807 Wesley W. Posvar Hall
230 S Bouquet Street
Pittsburgh, PA 15260

✉ lkm31@pitt.edu ⌨ stat.pitt.edu/person/lucas-mentch ☎ (412) 624–8730
lucasmentch.com

Education

Ph.D., Statistical Science 2015
Cornell University, Ithaca, NY, USA
Advisor: Giles Hooker
Dissertation: Ensemble Trees and CLTs: Statistical Inference in Machine Learning.

M.S., Statistical Science 2013
Cornell University, Ithaca, NY, USA

B.S., Mathematics 2010
Bucknell University, Lewisburg, PA, USA

Professional Positions

Associate Professor, University of Pittsburgh	2023 - Present
Assistant Professor, University of Pittsburgh (On leave 2015 - 2016)	2015 - 2023
Postdoctoral Researcher, SAMSI/NC State	2015 - 2016
Research Assistant, Cornell University	2013 - 2015
Teaching Assistant, Cornell University	2011 - 2013

Research Interests

Statistical Learning Theory & Machine Learning, Predictive Inference, Random Forests and Ensemble Methods, Nonparametric Methods, Statistical Computing. Applications to Crime, Law, Forensic Science, and Sports

Publications

* *Graduate Student*
** *Undergraduate Student*

Ashley C. Griffin*, **Lucas Mentch**, Feng-Chang Lin, Arlene E. Chung. (2024) "mHealth Physical Activity and Patient-Reported Outcomes in Patients with Inflammatory Bowel Diseases: Cluster Analysis." *Journal of Medical Internet Research.* Just Accepted.

Wei Peng*, **Lucas Mentch**, and Len Stefanski. (2024) Bias, Consistency, and Alternative Perspectives of the Infinitesimal Jackknife. *Statistica Sinica*. Just Accepted.

Nick Kissel* and **Lucas Mentch**. (2024) Forward Stability and Model Path Selection. *Statistics and Computing.* Just Accepted.

Meredith Wallace, **Lucas Mentch**, Bradley J. Wheeler*, Amanda L. Tapia, Marc Richards*, Siyu Zhou*, Lixia Yi*, Susan Redline, Daniel J. Buysse. (2023) Use and Misuse of Machine Learning Variable Importance Metrics in Medicine: Demonstrations through Incident Stroke Prediction. *BMC Medical Research Methodology* 23, 144.

Lucas Mentch and Siyu Zhou*. (2022) Getting Better from Worse: Augmented Bagging and A Cautionary Tale of Variable Importance. *Journal of Machine Learning Research*. 23(224), 1-32.

Siyu Zhou* and **Lucas Mentch**. (2022) Trees, Forests, Chickens, and Eggs: When and Why to Prune Trees in a Random Forest. *Statistical Analysis and Data Mining*. Just Accepted.

Tim Coleman*, Wei Peng*, and **Lucas Mentch**. (2022) Scalable and Efficient Hypothesis Testing with Random Forests. *Journal of Machine Learning Research*. 23(170), 1-35.

Wei Peng*, Tim Coleman*, and **Lucas Mentch**. (2022) Rates of convergence for random forests via generalized U-statistics. *Electronic Journal of Statistics*. 16(1), 232-292.

Giles Hooker, **Lucas Mentch**, and Siyu Zhou*. (2021) Unrestricted Permutation forces Extrapolation: Variable Importance Requires at least One More Model, or There Is No Free Variable Importance. *Statistics and Computing*. 31(6), 1-16.

Zhengze Zhou, **Lucas Mentch**, and Giles Hooker. (2021) V-Statistics and Variance Estimation. *Journal of Machine Learning Research*. 22(287), 1-48.

Ashley Griffin*, Feng-Chang Lin, **Lucas Mentch**, and Arlene Chung. (2021) Precision VISSTA Study: mHealth Physical Activity Patterns and Patient-Reported Outcomes in Patients with Inflammatory Bowel Diseases. *AMIA 2021 Annual Symposium.*

Lucas Mentch and Giles Hooker. (2021) Bridging Breiman's Brook: From Algorithmic Modeling to Statistical Learning. *Observational Studies. Commentaries on the 20th anniversary of the publication of Leo Breiman's Statistical Modeling: The Two Cultures.* 7(1), 107-125.

Meredith Wallace ML, Tim Coleman, **Lucas Mentch**, Daniel Buysse, Jessica

Graves, Erika Hagen, Martica Hall, Katie Stone, Susan Redline, Paul Peppard. (2021) Physiological Sleep Measures Predict Time to 15-Year Mortality in Community Adults: Application of a Novel Machine Learning Framework. *Journal of Sleep Research.* e13386.

Tim Coleman*, Kimberly Kaufeld, Mary Frances Dorn, and **Lucas Mentch**. (2021) Forecasting Hurricane-Related Power Outages via Locally Optimized Random Forests. *Stat.* 10(1):e346, 2021.

Lucas Mentch and Siyu Zhou*. (2020) Randomization as Regularization: A Degrees-of-Freedom Explanation for Random Forest Success. *Journal of Machine Learning Research*, 21(171), 1-36.

Taehee Jung*, Dongyeop Kang, **Lucas Mentch**, Thomas Schaaf, and Hua Cheng. (2020) Posterior Calibrated Training on Sentence Classification Tasks. *2020 Annual Conference of the Association for Computational Linguistics.* 2020.acl-main.242, 2723–2730.

Timothy Coleman*, **Lucas Mentch**, Dan Fink, Frank La Sorte, David Winkler, Giles Hooker, and Wesley Hochachka. (2020) Statistical Inference on Tree Swallow Migration with Random Forests. *Journal of the Royal Statistical Society: Series C*, 69(4), 973-989.

Richard McAlexander and **Lucas Mentch**. (2020) Predictive Inference with Random Forests: A New Perspective on Classical Analyses. *Research and Politics*, 7(1), 2053168020905487.

Lucas Mentch. (2020) On Racial Disparities in Recent Fatal Police Shootings. *Statistics and Public Policy.* 7(1), 9-18.
#1 Most read article of 2020; Later Added to the Taylor & Francis Social Justice Collection: Scholarship Supporting the Fight Against Racism and Inequality.

Taehee Jung*, Dongyeop Kang, **Lucas Mentch**, and Eduard Hovy. (2019) Earlier Isn't Always Better: Studying Corpus Biases in Summarization. *Empirical Methods in Natural Language Processing (EMNLP) 2019.* D19-1327, 3324–333.

Tim Coleman*, **Lucas Mentch**, Kimberly Glass, David Gotz, Nils Gehlenborg, and Arlene Chung. (2019) Precision VISSTA: Machine Learning Prediction and Inference for Bring-Your-Own-Device (BYOD) mHealth Data. *AMIA 2019 Annual Symposium.*

Arlene Chung, Kimberly Glass, Jacob Leisey-Bartsch, **Lucas Mentch**, Nils Gehlenborg, and David Gotz. (2019) Precision VISSTA: a BYOD mHealth Cohort for Precision Health. *AMIA 2019 Annual Symposium.*

Robin Richter, Carsten Gottschlich, **Lucas Mentch**, Duy H. Thai, and Stephan

Huckemann. (2019) Smudge Noise for Quality Estimation of Fingerprints and Its Validation. *IEEE Transactions on Information Forensics & Security.* 14(8), 1963-1974.

Duy Hoang Thai and **Lucas Mentch**. (2018) Multiphase Segmentation for Simultaneously Homogeneous and Textural Images. *Applied Mathematics and Computation.* 335, 146-181.

Oliver Lindhiem, Isaac Petersen, **Lucas Mentch**, and Eric Youngstrom. (2018). The Importance of Calibration in Clinical Psychology. *Assessment.* 1073191117752055.

Giles Hooker and **Lucas Mentch**. (2018). Bootstrap bias corrections for ensemble methods. *Statistics and Computing*, 28(1), 77-86.

Lucas Mentch and Giles Hooker. (2017). Formal Hypothesis Tests for Additive Structure in Random Forests. *Journal of Computational and Graphical Statistics*, 26(3), 589-597.

Haim Bar and **Lucas Mentch**. (2017). R-CMap – An open-source software for concept mapping. *Evaluation and program planning, Special Issue: Concept Mapping at 25: Development, Applications, and Future Directions*, 60, 284-292.

Mahya Mehrmohamadi, **Lucas Mentch**, Andrew Clark, and Jason Locasale. (2016). Integrative modelling of tumour DNA methylation quantifies the contribution of metabolism. *Nature Communications*, 7, 13666.

Giles Hooker and **Lucas Mentch**. (2016). Comments on: A random forest guided tour. *Test*, 25(2), 254-260.

Lucas Mentch and Giles Hooker. (2016). Quantifying uncertainty in random forests via confidence intervals and hypothesis tests. *Journal of Machine Learning Research*, 17(1), 841-881.

Michael Frey, Amy Miller, **Lucas Mentch**, and Jeffrey Graham. (2010). Score operators of a qubit with applications. *Quantum Information Processing*, 9(5), 629-641.

Mike Frey, Laura Coffey, **Lucas Mentch**, Amy Miller, and Steve Rubin. (2010). Correlation identification in bipartite Pauli channels. *International Journal of Quantum Information*, 8(06), 979-990.

Mike Frey, Laura Coffey, **Lucas Mentch**, Amy Miller, and Steve Rubin. (2010). Pauli channels exhibit a transition effect in memory estimation above a parametric threshold. *Proceedings of SPIE, Quantum Information and Computation VIII* (Vol. 7702, p. 77020G). International Society for Optics and Photonics.

Book Chapters

Maria Cuellar, **Lucas Mentch**, and Cliff Spiegelman. Association does not Imply Discrimination: Clarifying when Matches are (and are not) Meaningful. *Handbook of Forensic Statistics.* Chapman & Hall / CRC Handbooks of Modern Statistical Methods. Eds David Banks, Karen Kafadar, and David Kaye.

Short Conference Abstracts/Papers, Technical Reports, & OpEds

---

Lucas Mentch. Don't Throw the Baby out with the Pandemic: A Comment on "Naive Probabilism" by Harry Crane. *Researchers.One*. February 23, 2021.

ML Wallace, E Hagan, Tim Coleman*, **Lucas Mentch**, DJ Buysse, MH Hall, S Redline, P Peppard. Self-report And Polysomnography Sleep And Mortality In Adults: A Machine Learning Replication Analysis. *SLEEP 2020, 34th Annual Meeting of the Associated Professional Sleep Societies, LLC (APSS).* Philadelphia, PA, June 17, 2020.

Siyu Zhou* and **Lucas Mentch**. Explaining the Practical Success of Random Forests. *2020 Symposium on Data Science & Statistics (SDSS).* Pittsburgh, PA, June 5, 2020. (*Virtual due to COVID-19*)

Tim Coleman* and **Lucas Mentch**. Locally Optimized Random Forests, a Solution to Forecasting Severe Hurricane Power Outages. *2020 Symposium on Data Science & Statistics (SDSS).* Pittsburgh, PA, June 5, 2020. (*Virtual due to COVID-19*)

Kim Beals, Karen A. Keenan, Nicholas J. Kissel**, **Lucas Mentch**, Wuxin Yang*, Bradley C. Nindl, and Qi Mi. Prediction of Lower Extremity Musculoskeletal Injuries for Naval Special Warfare Operators: A Machine Learning Approach. Medicine and Science in Sports and Exercise, Volume 50:5 Supplement. *World Congress on Exercise is Medicine and World Congress on the Basic Science of Muscle Hypertrophy and Atrophy of the American College of Sports Medicine.* Minneapolis, MN, June 1, 2018.

Nicholas J. Kissel** and **Lucas Mentch**. The Role of HbA1c in Hospital Readmission of Diabetic Patients. *ACC Meeting of the Minds Conference.* Boston College University, Chestnut Hill, MA, April 6-8, 2018.

Zachary Fulker**, Tyler Folta*, and **Lucas Mentch**. Investigation of Advanced NBA Metrics. *Carnegie Mellon University Sports Analytics Conference.* October 28, 2017.

William Thompson, **Lucas Mentch**, Maria Cuellar, and Cliff Spiegelman. Who should control Houston's crime lab? *OpEd, Houston Chronicle.* May 31, 2016.

Lucas Mentch, Maria Cuellar, William Thompson, and Cliff Spiegelman. The Next Page: Four experts explain why forensic analysis of crime scenes is not as reliable as you might think. *OpEd, Pittsburgh Post Gazette.* March 13, 2016.

Submitted / In Progress

Meredith Lotz Wallace; Nina Oryshkewych; Sanne Hoepel; Daniel J Buysse; Lucas Mentch; Meryl Butters; Katie L Stone; Kristine Yaffe; Lisa L Barnes; Andrew Lim; Kristine Ensrud; Misti Paudel; Annemarie Luik. "An Internatioanl Multi-Cohort Investigation of Self-Report Sleep and Future Depressive Symptoms in Older Adults." Under Review at *The Lancet Healthy Longevity.*

Lucas Mentch. "On Racial Bias and Fatal Police Shootings: Insights from Publicly Reported Data." Invited Chapter, Edited Volume on Gun Violence and Statistics.

Anthony R. Horner, Lucas Mentch, Stephen G. Weber. "An assessment of expressions for lnk in reversed phase liquid chromatography as a function of acetonitrile/water mobile phase composition and temperature."

Heqiao Ruan and Lucas Mentch. "Online Variable Importance under Covariate Shift or Concept Drift."

Lucas Mentch, Alex Dukart, Cameron O'neil, and Marc Richards. "Stability and Reliability of Statistics Graduate Programs in the U.S."

Ryan Cecil and Lucas Mentch. "Model Class Selection."

Lucas Mentch, Bradly Wheeler, Ryan Cecil, Alex Dukart, and Meredith Wallace. "Variable Importance and the Counterfactual: Inferential Problems, Ethical Implications, and Practical Solutions."

Meredith L Wallace, Nina Oryshkewych, Sanne Hoepel, Daniel J Buysse, Lucas Mentch, Meryl Butters, Katie Stone, Kristine Yaffe, Lisa Barnes, Andrew Lim, Kristine Ensrud, Misti Paudel, Annemarie Luik. "A Multi-Cohort Examination of Self-Reported Sleep Features that Predict Future Clinically Significant Depressive Symptoms in Older Adults."

Talks & Presentations

IMS International Conference on Statistics and Data Science (ICSDS), Seville, Spain	December 2025
CMStatistics, Kings College London, Invited Session	December 2025
University of Kentucky Department Seminar	April 2025
CMStatistics, Kings College London, Invited Session	December 2024

Invited Speaker, NISS (Virtual Webinar) AI, Statistics and Data Science Webinar Series	November 2024
Conf. on Stat. Learning and Data Science, Invited Talk Newport Beach, CA	November 2024
Joint Statistical Meetings, Topic Contributed Session	August 2024
Invited Speaker, MobiliT.AI Forum HEC Montreal	May 2024
Invited Speaker, Workshop on Gun Violence and Statistical Issues	May 2024
Keystone State Statistics Symposium Penn State University	October 2023
IMS International Conference on Statistics and Data Science (ICSDS), Florence, Italy	December 2022
CMStatistics, Kings College London, Invited Session	December 2022
Penn State University Department Seminar	October 2022
Joint Statistical Meetings, Invited Opening Session Poster	August 2022
University of Waterloo Department Seminar	March 2022
Auburn University Department Seminar	February 2022
Texas A&M University Department Seminar	January 2022
NC State University Department Seminar	January 2022
Joint Statistical Meetings, Invited Opening Session Poster	August 2021
Michigan State University Department Seminar	September 2021
Plenary Talk, German Statistical Society Annual Meeting	September 2021
Joint Statistical Meetings, Introductory Overview Lecture	July 2021
Joint Statistical Meetings, Invited Session	July 2021
Science Revealed Public Lecture Series *Safety in Numbers? The Use (and Misuse) of Data in Society*	April 2021
Invited AI Seminar, Cornell University	March 2021
Department of Computer Science, Wright State University	October 2020
International Indian Statistical Association, Invited Talk 2020 Conference, Chicago IL (*Postponed due to COVID-19*)	July 2020
Symposium on Data Science and Statistics, Invited Talk (*Virtual due to COVID-19*)	June 2020
Classification Society Annual Meeting, Invited Talk Bucknell University (*Postponed due to COVID-19*)	June 2020

AMS Eastern Section Meeting, Invited Talk Binghamton University	October 2019
Statistics and Machine Learning Research Group Carnegie Mellon University	October 2019
Joint Statistical Meetings, Invited Opening Session Poster	August 2019
Joint Statistical Meetings, Invited Session	August 2019
Invited Workshop on Random Forest Inference North Carolina State University	March 2019
CMStatistics, University of Pisa, Invited Session	December 2018
Joint Statistical Meetings, Invited Session	August 2018
Department of Mathematics, Indiana University of Pennsylvania	March 2018
Department of Biostatistics, University of Pittsburgh	March 2018
Banff International Research Station	January 2018
CMStatistics, University of London, Invited Session	December 2017
Department of Industrial Engineering, University of Pittsburgh	September 2017
Joint Statistical Meetings, Invited Session	August 2017
Department of Forensic and Investigative Sciences, West Virginia University	February 2017
Center for Statistics and Application in Forensic Evidence Carnegie Mellon University	November 2016
University of Pittsburgh Statistics Seminar	September 2016
Statistics and Machine Learning Research Group Carnegie Mellon University	September 2016
Joint Statistical Meetings, Topic Contributed Session	August 2016
IMS New Researchers Conference	July 2016
SAMSI Undergraduate Workshop	May 2016
SAMSI Transition Workshop	May 2016
SAMSI Postdoc Seminar	April 2016
SAMSI Undergraduate Workshop	February 2016
SAMSI Undergraduate Tutorial	February 2016
SAMSI Postdoc Seminar	October 2015
ENAR Spring Meeting, Invited Session	March 2015

NC State University Statistics Seminar	March 2015
University of Pittsburgh Statistics Seminar	February 2015
Kansas State University Statistics Seminar	February 2015
University of Central Florida Statistics Seminar	February 2015
College of William and Mary Statistics Seminar	January 2015
Wake Forest University Statistics Seminar	January 2015
University of Arkansas Statistics Seminar	December 2014
University of Michigan Statistics Seminar	November 2014
Artificial Intelligence Seminar, Cornell University	September 2014
Graduate Student Seminar, Cornell University	September 2014
Cornell Lab of Ornithology Seminar	September 2014
Joint Statistical Meetings 2014, Contributed Session	August 2014
Joint Statistical Meetings 2013, Contributed Session	August 2013
Graduate Student Seminar, Cornell University	April 2013
Biostatistics Research Group, Cornell University	March 2013

Grants & Contracts

co-I: NIH 2RF1 AG056331-04A1, 4/2021-3/2026: "Sleep Health Profiles and Prospective Health Outcomes in Older Adults: Extending Novel Statistical Methods in Multi-Cohort Applications", $1,968,065 ($212,785 Personal; $134,488 Direct). PI: Meredith Wallace, University of Pittsburgh.

PI: NSF DMS-2015400, 7/2020-6/2023: "Black-Box Science: Ideas and Insights for Learning-Based Statistical Inference", $160,000 ($105,120 Direct).

co-I: NIH R01EB025024, 9/2017-6/2020: "QuBBD: Statistical & Visualization Methods for PGHD to Enable Precision Medicine", $917,806 ($149,788 Personal; $101,694 Direct). PI: Arlene Chung, University of North Carolina at Chapel Hill.

PI: NSF DMS-1712041, 9/2017-8/2020: "Collaborative Research: Statistical Inference Using Random Forests and Related Methods", $335,078 ($119,802 Personal; $76,686 Direct). co-PI: Giles Hooker (Cornell University).

PI: dB-SERC Course Transformation Award, 8/2017-7/2018. "An Interdisciplinary Data Science Design for Undergraduate Students." $10,000 ($7,680 Direct).

Teaching

Primary Instructor
(Indicates a new course that was newly developed)*

STAT 1961 - Data Science Capstone* SP 24 - Present
University of Pittsburgh
Capstone course for data science majors involving a semester-long data science project.

HONORS 1510 - Data Jam: Using Big Data for Community Good SP 19
University of Pittsburgh
Undergraduate level course covering data analysis, visualization, ethics, mentorship, and community engagement. Students will mentor high school teams competing in Pittsburgh Data Jam. Co-taught with other Pitt faculty.

STAT 2270 - Data Mining FA 18 - 21
University of Pittsburgh
Graduate level course on statistical and machine learning intended primarily for PhD students in statistics and biostatistics.

STAT 1361/2360* - Statistical Learning and Data Science* SP 18 - Present
University of Pittsburgh
Upper-level undergraduate course designed to be a regular offering in the same vein as STAT 1291.

STAT 1291 - Statistics and Data Science* SP 17
University of Pittsburgh
Topics course designed to provide students a thorough overview of the emerging field of data science, focusing particularly on the development of statistical and machine learning procedures.

STAT 1151 - Introduction to Probability FA 16
University of Pittsburgh
Standard undergraduate calculus-based probability course.

ST 371 - Introduction to Probability SUM 16
North Carolina State University
Standard undergraduate calculus-based probability course.

Teaching Assistant

BTRY 3520 - Statistical Computing, Cornell University* SP 12, 13
Upper-level undergraduate statistical computing course using `R`. Topics included simulation, nonparametric density estimation and testing, optimization and root-finding, numerical integration, and MCMC.

ORIE 6700 - Statistical Principles, Cornell University FA 12
Mathematical statistics course required for first year Ph.D. students in statis-

tics and operations research. Frequentist and Bayesian estimation methods, types of convergence, and statistical inference are covered in detail, at the level of *Bickel and Doksum, Mathematical Statistics, 2006.*

ILRST 2100 - Introductory Statistics, Cornell University FA 11
A standard introductory statistics course designed for non-math majors.

Guest Lecturer

36-708: Statistical Methods for Machine Learning SP 20
Carnegie Mellon University

Software

- *SuRFIn: An R package to conduct statistical inference procedures via subsampled ensembles. Joint work with Sarah Tan, David Miller, and Giles Hooker.*
- *R-CMap: An R package to conduct and illustrate concept mapping procedures. Joint work with Haim Bar.*
- *Statistical Software:* `R` (expert); experience with SAS, SPSS, Minitab, JMP, STATA
- *Other Languages and Software:* Experience with JAVA, C, C++, Pascal, Matlab, Python, Maple, Mathematica, Microsoft Office

Professional Activities & Service

Editorial Positions:

- NISS Liaison, University of Pittsburgh: 2025 - Present
- Associate Editor, Computational Statistics and Data Analysis: 2024 - Present
- Associate Editor, Data Science in Science (new journal starting Fall 2021, Taylor & Francis): 2021 - Present
- Invited member: JMLR Editorial Board (2020 - Present)
- ACM SIGKDD Program Committee Member, Research Track (2016, 2018-2020)

Departmental Committees:

- Workload Committee Chair (2025 - Present)
- Seminar Committee Chair (2017 - 2019)
- Graduate Admissions Committee: University of Pittsburgh (2016 - Present)
- Faculty Hiring Committees:
  - Senior Faculty Positions, Department of Statistics, University of Pittsburgh (2017-18, 2018-19)

- Junior Faculty Positions, Department of Statistics, University of Pittsburgh (2018-19, 2019-20, 2022-23)
- Lecturer Positions, Department of Statistics, University of Pittsburgh (2016-17, 2018-19, 2019-20)
- Hiring Committee/Interviewer, Pitt Center for Research Computing (CRC) (2018)

University Committees:

- Dietrich School Tenure Council (2024 - Present)
- Tenure and Promotion Committee, Dietrich School of Arts and Sciences, University of Pittsburgh (Two Commitees) (2023)
- University Senate Benefits & Welfare Committee, University of Pittsburgh: Elected member (2019 - 2022)
- Data Science Major Planning Committee: with faculty from Departments of Mathematics, Computer Science, and Information Science (2018 - 2021)
- Planning and Budgeting Committee, Dietrich School of Arts and Sciences, University of Pittsburgh: Elected Natural Sciences representative (2018 - 2021)

Conference, Workshop, and Competition Organization:

- Invited Session Organizer, CMStatistics, 2025
- Panel Discussant, Keystone State Statistics Symposium (2024)
- Invited Session Organizer, CMStatistics, 2024
- Invited Session Organizer, Joint Statistical Meetings (2017, 2019, 2021, 2025)
- Student Paper Award Committee, Section on Statistical Learning and Data Science, Joint Statistical Meetings (2021)
- Pittsburgh Data Jam (local high school data science competition) Consultant and Co-Organizer (2018 - 2019)
- Workshop Organizer, Banff International Research Station for Mathematical Innovation and Discovery (BIRS), January 2018 (co-organizer with Giles Hooker, Gerard Biau, and Stefan Wager)
- Session Chair, Joint Statistical Meetings (2016, 2021, 2025)
- Research Competition Judge, Statistics in Sports Undergraduate Research Competition, Joint Statistical Meetings (2017)
- Panel Discussant, SAMSI Undergraduate Workshops (2015)

Grant & Workshop Panels and Review:

- Proposal Reviewer, German Research Foundation (DFG) (2023)
- Proposal Reviewer, University of Pittsburgh Momentum Funds (2020)
- NSF Grant Panel Member: Division of Mathematical Sciences (2018, 2019)

- Workshop Proposal Reviewer, Banff International Research Station (BIRS) (2019)
- NSF Grant Panel Member: Graduate Research Fellowship Program (2018)

Consulting and Advisory Boards:

- NISS Committee on Data Science and the Opioid Crisis, Founding Committee Member (2024-Present)
- NSA Special Action Group Panelist, (2022-Present)
- Statistics and Data Science Curriculum Consultant, Pitt Prison Education Project (PPEP), Spring 2021
- Advisory Board, Center for Advanced Computing, University of Pittsburgh (2019 - Present)

Miscellaneous:

- Tenure and Promotion Letter Writer (2024, 2025)
- Invited member: Pitt Cyber, Affiliate Scholar (2020-Present)
- Statistics and Machine Learning (StatML) Reading Group creator and leader: University of Pittsburgh (2018 - Present)
- Workshop on Random Forest Inference, NC State University (March 2019)
- Faculty Sponsor: DATAs Statistics and Machine Learning Club, University of Pittsburgh (2017 - Present)
- Delegate: NSF & NIH/BD2K Data Science Innovation Lab 2016: Mobile Health

Journal Reviewer:

- American Medical Informatics Association Annual Symposium, *American Political Science Review*, *The American Statistician*, *AMS Electronic Research Archive*, *Annals of Applied Statistics*, *Annals of Statistics*, *Biometrics*, *Biometrika*, *BMC Bioinformatics*, Chapman & Hall (CRC) Book Reviews, *Computational Statistics and Data Analysis*, *Data Science in Science*, *Data Mining and Knowledge Discovery*, *ESAIM Probability & Statistics*, Handbook of Forensic Statistics (Book Chapter Review), *Journal of Business and Economic Statistics*, *Journal of Computational and Graphical Statistics*, *Journal of Machine Learning Research*, *Journal of Multivariate Analysis*, *Journal of the American Statistical Association*, *Journal of the Royal Statistical Society*, *Machine Learning*, *Nature Communications*, *Patterns*, *Proceedings of the National Academy of Sciences*, *Sleep Health*, *Statistical Analysis and Data Mining*, *Statistics and Computing*, *Statistics and Public Policy*, *Statistics in Medicine*, *Statistical Science*, SIGKDD, *Technometrics*, *TEST*

Students * Denotes Expected Graduation Date

Role: Thesis Advisor (PhD)

Timothy Coleman University of Pittsburgh PhD Statistics 2020
First Position: Postdoc, Jacob Bien, USC

Wei Peng University of Pittsburgh PhD Statistics 2021
First Position: Data Scientist, Signature Diagnostics
2021 NFL Big Data Bowl Grand Champion
2022 NFL Big Data Bowl Finalist

Siyu Zhou University of Pittsburgh PhD Statistics 2022
First Position: Postdoc, Limin Peng, Emory University

Taehee Jung University of Pittsburgh PhD Statistics 2022
First Position: Data Scientist, Amazon

Lixia Yi University of Pittsburgh PhD Statistics 2023*
First Position: TBD

Marc Richards University of Pittsburgh PhD Statistics TBD*
First Position: Head of Analytics, Kansas City Chiefs (PhD Paused, 2022)
2021 NFL Big Data Bowl Grand Champion
2022 NFL Big Data Bowl Finalist

Ryan Cecil University of Pittsburgh PhD Statistics 2027*
First Position: TBD

Heqiao Ruan University of Pittsburgh PhD Statistics 2027*
First Position: TBD

Alexander Dukart University of Pittsburgh PhD Statistics 2027*
First Position: TBD

Marshall Honaker University of Pittsburgh PhD Statistics 2028*
First Position: TBD

Role: Committee Member (MS/PhD)

Madonna Nobel MS Forensic Science 2018
West Virginia University
First Position: Developer, Blockchain Technology Malaysia

Yotam Hechtlinger PhD Statistics 2019
Carnegie Mellon University
First Position: Founder, Stealth Startup

Ashley Griffin PhD Clinical Health Informatics 2021
University of North Carolina - Chapel Hill
First Position: Postdoc, Stanford University

Jiashen Lu PhD Statistics 2022
University of Pittsburgh
First Position: Senior Statistician, Johnson & Johnson

Nicholas Kissel PhD Statistics 2024*
Carnegie Mellon University
First Position: TBD

Kailyn Witonsky MD/PhD Neuroscience 2028*
University of Pittsburgh
First Position: TBD

Role: Research Advisor (BS/MS)

Tyler Folta MA Statistics 2018
University of Pittsburgh
Next Position: Medical Analyst, HVH Precision Analytics

Zachary Fulker BS Mathematics & Economics 2018
University of Pittsburgh
Next Position: Ph.D. Student, Network Science, Northeastern University

Nicholas Kissel BS/MS Statistics 2018/2019
University of Pittsburgh
Next Position: Ph.D. Student, Dept. of Statistics and Data Science, Carnegie Mellon University

Stephen Wargo BS Applied Mathematics 2022
University of Pittsburgh

Cameron O'Neill MS Statistics 2023
University of Pittsburgh
Next Position: Ph.D. Student, Dept. of Statistics, TBD

Awards, Fellowships, & Recognition

Interview/Article with Pittwire 2021
Pitt Teams Score in NFL Big Data Bowl

Interview/Article with The Pitt CRC 2019
Building Big Data Tools

Interview/Article with The University Times 2019
Teaching heroes: Mentch helping meld statistics and data science

Interview/Article with The Pitt Pride 2017
Mentoring the Future Gatekeepers of Science

SAMSI Postdoctoral Research Fellowship	2015
SUNY Graduate Fellowship	2010
Phi Beta Kappa *Bucknell University Chapter*	2010
Pi Mu Epsilon *Mathematics Honor Society, Bucknell University Chapter*	2008
William Bucknell Scholarship	2008
The President's Award for Distinguished Academic Achievement	2007
Alpha Lambda Delta *Freshman Honor Society, Bucknell University Chapter*	2006

Last Update May 24, 2025