Trent Gaugler

Lafayette College
Department of Mathematics
224 Pardee Hall
Easton, PA 18042

Email: gauglert@lafayette.edu
Phone: 610.330.5328

Education

Ph.D. Statistics, The Pennsylvania State University, 2008

B.S. Mathematics, Bucknell University, 2003, *Magna Cum Laude*

Employment

Associate Professor of Mathematics — July 2020 - present
Lafayette College, Easton, PA

Assistant Professor of Mathematics — July 2014 - June 2020
Lafayette College, Easton, PA

Visiting Assistant Professor of Statistics — August 2011 - June 2014
Carnegie Mellon University, Pittsburgh, PA

Assistant Professor of Statistics — August 2008 - June 2011
The Pennsylvania State University, University Park, PA

Publications

Wenze, S. J., C. L. Battle, E. D. Huntley, **T. L. Gaugler**, and D. Kats. (2023). "Ecological Momentary Assessment of Postpartum Outcomes in Mothers of Multiples: Lower Maternal-Infant Bonding, Higher Stress, and More Disrupted Sleep," *Archives of Women's Mental Health*, **26**, pp. 361-378, DOI: 10.1007/s00737-023-01317-0

Richter, C. K., A. C. Skulas-Ray, **T. L. Gaugler**, S. Meily, K. S. Petersen, and P. M. Kris-Etherton. (2023). "Randomized Double-Blind Controlled Trial of Freeze-Dried Strawberry Powder Supplementation in Adults with Overweight or Obesity and Elevated Cholesterol," *Journal of the American Nutrition Association*, **42(2)**, pp. 148-158, https://doi.org/10.1080/07315724.2021.2014369.

Richter, C. K., A. C. Skulas-Ray, **T. L. Gaugler**, S. Meily, K. S. Petersen, and P. M. Kris-Etherton. (2021). "Effects of Cranberry Juice Supplementation on Cardiovascular Disease Risk Factors in Adults with Elevated Blood Pressure: A Randomized Controlled Trial," *Nutrients*, **13(8)**, https://doi.org/10.3390/nu13082618.

McCullough, H. M. and **T. Gaugler**. (2021). "Generational differences in work ethic among speech-language pathologists," *Perspectives of the ASHA Special Interest Groups*, **6(2)**, pp. 434-443, https://pubs.asha.org/doi/abs/10.1044/2021-PERSP-20-00161.

Zhang, C. Q., C. Gogal, **T. Gaugler**, and S. Blome-Eberwein. (2020). "A six-year experience of laser treatments for burn scars in a regional burn center – safety, efficacy and quality improvement," *Journal of Burn Care & Research*, **iraa118**, pp. 74-81, https://doi.org/10.1093/jbcr/iraa118.

Page, J. A., K. K. Hodgdon, R. P. Hunte, D. E. Davis, **T. L. Gaugler**, R. Downs, R. A. Cowart, D. J. Maglieri, C. Hobbs, G. Baker, M. Collmar, K. A. Bradley, B. Sonak, D. Crom, and C. Cutler. (2020). "Quiet supersonic flights 2018 (QSF18) test: Galveston, Texas, risk reduction for future community testing with a low-boom flight demonstration vehicle," *NASA/CR-2020-220589*, Vol. I (click here) and Vol. II (click here), May 2020.

Rothenberger, M., A. Armstrong, **T. Gaugler**, S. Massaro, W. Pfadenhauer, and J. Ventresca. (2020). "Bridging information domains to improve ecological understanding of biological invasions in a marine ecosystem," *Conservation Biology*, **34**, pp. 1560-1570, https://doi.org/10.1111/cobi.13504.

Bookwala, J. and **T. Gaugler**. (2020). "Relationship quality and 5-year mortality risk," *Health Psychology*, **39(8)**, pp. 633-641, http://dx.doi.org/10.1037/hea0000883.

Varga, N. L., **T. Gaugler**, and J. M. Talarico. (2019). "Are mnemonic failures and benefits two sides of the same coin?: Investigating the real-world consequences of individual differences in memory integration," *Memory & Cognition*, **2019**, pp. 496-510, https://doi.org/10.3758/s13421-018-0887-4.

Wenze, S. J., **T. L. Gaugler**, E. S. Sheets, and J. M. DeCicco. (2018). "Momentary experiential avoidance: Within-person correlates, antecedents, and consequences and between-person moderators," *Behaviour Research and Therapy*, **107**, pp. 45-52, https://doi.org/10.1016/j.brat.2018.05.011

Basow, S. and **T. Gaugler**. (2017). "Predicting Adjustment of U.S. College Students Studying Abroad: Beyond the Multicultural Personality," *The International Journal of Intercultural Relations*, **56**, pp. 39-51, http://dx.doi.org/10.1016/j.ijintrel.2016.12.001.

Richter, C. K., A. C. Skulas-Ray, **T. L. Gaugler**, J. D. Lambert, D. N. Proctor, and P. M. Kris-Etherton. (2017). "Incorporating Freeze Dried Strawberry Powder into a High-fat Meal Does Not Alter Postprandial Vascular Function or Blood Markers of Cardiovascular Risk: A Randomized Controlled Trial," *The American Journal of Clinical Nutrition*, **105**:2, pp. 313-322, http://dx.doi.org/10.3945/ajcn.116.141804.

Bookwala, J. and **T. Gaugler**. (2016). "Prevalence of Health Confidants among Older Adults," *The International Journal of Aging and Society*, **7**:1, pp. 47-60.

McCrea, C. E., S. G. West, P. M. Kris-Etherton, J. D. Lambert, **T. L. Gaugler**, D. L. Teeter, K. A. Sauder, Y. Gu, S. L. Glisan, and A. C. Skulas-Ray. (2015). "Effects of Culinary Spices and Psychological Stress on Postprandial Lipemia and Lipase Activity: Results of a Randomized Crossover Study and *in vitro* Experiments," *Journal of Translational Medicine*, **13**:7, http://dx.doi.org/10.1186/s12967-014-0360-5.

Gaugler, T., L. Klei, S. J. Sanders, C. A. Bodea, A. P. Goldberg, A. B. Lee, M. Mahajan, D. Manaa, Y. Pawitan, J. Reichert, S. Ripke, S. Sandin, P. Sklar, O. Svantesson, A. Reichenberg, C. M. Hultman, B. Devlin, K. Roeder and J. D. Buxbaum. (2014). "Most genetic risk for autism resides with common variation," *Nature Genetics*, **46**, pp. 881-885, http://dx.doi.org/10.1038/ng.3039.

Flock, M. R., A. C. Skulas-Ray, W. S. Harris, **T. L. Gaugler**, J. A. Fleming, and P. M. Kris-Etherton. (2014). "Effects of Supplemental Long-chain Omega-3 Fatty Acids and Erythrocyte Membrane Fatty Acid Content on Circulating Inflammatory Markers in a Randomized Controlled Trial of Healthy Adults ," *Prostaglandins, Leukotrienes and Essential Fatty Acids*, **91**, pp. 161-168, http://dx.doi.org/10.1016/j.plefa.2014.07.006.

Roussell, M. A., A. M. Hill, **T. L. Gaugler**, S. G. West, J. S. Ulbrecht, J. P. Vanden Heuvel, P. J. Gillies, and P. M. Kris-Etherton. (2014). "Effects of a DASH-like Diet Containing Lean Beef on Vascular Health," *Journal of Human Hypertension*, **2014**, pp. 1-6.

Hodgdon, K. K., J. Page, **T. Gaugler**, D. Phillips, D. Shumway, and J. Rosenberger. (2013). "Statistical Analysis of Community Response to Low Amplitude Sonic Boom Noise," *Proceedings of Meetings on Acoustics*, **19**, pp. 040046, 9 pages, DOI:10.1121/1.4799797.

Nykaza, E. T., K. K. Hodgdon, **T. Gaugler**, P. Krecker, and G. Luz. (2013). "On the Relationship Between Blast Noise Complaints and Community Annoyance," *Journal of the Acoustical Society of America*, **133**, pp. 2690-2698.

Gaugler, T. and M. G. Akritas. (2013). "Testing for Main Random Effects in Two-Way Random and Mixed Effects Models: Modifying the F Statistic," *Journal of Probability and Statistics*, **vol. 2013**, Article ID 708540, 11 pages, 2013. DOI: 10.1155/2013/708540.

Gaugler, T. and M. G. Akritas. (2012). "Mixed Effects Designs: The Symmetry Assumption and Missing Data," *Journal of the American Statistical Association*, **107**, pp. 1230-1238.

Roussell, M. A., A. M. Hill, **T. L. Gaugler**, S. G. West, J. P. Vanden Heuvel, P. Alaupovic, P. J. Gillies, and P. M. Kris-Etherton. (2012). "Beef in an Optimal Lean Diet Study: Effects on Lipids, Lipoproteins, and Apolipoproteins," *The American Journal of Clinical Nutrition*, **95**, pp. 9-16.

Valente, D., E. T. Nykaza, K. K. Hodgdon, **T. Gaugler**, P. Krecker, B. MacAllister, and G. Luz. (2011). "Assessing the Impact of Blast Noise on Communities Near U.S. Army Installations," *Proceedings of the Institute of Acoustics*, **33**:2, pp. 862-868.

Gaugler, T. and M. G. Akritas. (2011). "Testing for Interaction in Two-Way Random and Mixed Effects Models: The Fully Nonparametric Approach," *Biometrics*, **67**, pp. 1314-1320.

Gaugler, T., S. Liao and D. Kim. (2007). "Comparing Two Survival Time Distributions: An Investigation of Several Weight Functions for the Weighted Logrank Statistic," *Communications in Statistics: Simulation and Computation*, **36**, pp. 423-435.

Software

Liu, D. and **T. Gaugler** (2012) "treelet: Treelets - an adaptive multi-scale basis for high-dimensional, sparse and unordered data," R package version 1.0, http://CRAN.R-project.org/package=treelet

Textbooks

Gaugler T. (2022) "Learning Statistics with R," Cengage Learning.

Teaching Experience

Lafayette College

FYS 057: Politics and Polling	Fall 2020, Fall 2024
MATH 110: Statistical Concepts	Fall 2016, Spring 2024
MATH 186: Applied Statistics	Fall 2014; Fall 2015; Spring, Fall 2016; Spring 2017; Fall 2018; Fall 2019; Spring 2020; Spring, Fall 2021; Fall 2022
MATH 286: Introduction to Probability and Mathematical Statistics	Spring 2016, Spring 2019, Spring 2020, Spring 2021, Spring 2024

MATH 287: Introduction to Data Modeling	Fall 2020, Fall 2022
MATH 335: Probability	Fall 2014, Spring 2015, Spring 2017, Spring 2019, Fall 2021, Fall 2023
MATH 336: Mathematical Statistics	Spring 2015, Fall 2017, Fall 2018, Spring 2023
MATH 338: Advanced Regression Analysis	Fall 2019, Fall 2023
MATH 375: Applied Fixed and Mixed Effects Models	Fall 2015

Carnegie Mellon University

36-303: Sampling, Surveys and Society	Spring 2013, Spring 2014
36-309: Experimental Design for Behavioral and Social Sciences	Summer 2013
36-617: Applied Linear Models	Fall 2011, Fall 2012, Fall 2013
36-726: Statistical Practice	Spring 2012, Spring 2013, Spring 2014
Short Course on Linear Models/HLM - PIER Program	Summer 2012

The Pennsylvania State University - World Campus

STAT 480: Introduction to SAS	Summer, Fall 2009; Spring, Summer, Fall 2010; Spring 2011
STAT 481: Intermediate SAS	Fall 2009; Spring, Fall 2010
STAT 497C: Advanced Topics in SAS	Fall 2009, Spring 2010
STAT 500: Applied Statistics	Spring 2009

The Pennsylvania State University

STAT 200: Elementary Statistics	Summer 2007, Spring 2008
STAT 401: Experimental Methods I	Spring, Summer, Fall 2005; Spring, Summer 2006; Spring, Fall 2007; Summer, Fall 2008; Spring, Fall 2009; Spring, Fall 2010
STAT 500: Applied Statistics	Spring 2011
STAT 580/581: Graduate Consulting Practicum	Fall 2008; Spring, Summer, Fall 2009; Spring, Summer, Fall 2010; Spring, Summer 2011
STAT 597C: Intro. to Computing Environments	Fall 2010

Thesis/Research Advising

Lafayette College

REU Program

A Monte Carlo Investigation of the Behavior of Information Criteria for Model Selection in Repeated Measures Models (with students Matthew Decker, Zoë Gray, and Sophia Palcic)	Summer 2022
Applying the Kelly Criterion to College Football Betting (with student Keri D'Angelo, Quyen Do, Jamie Kunzmann, Joshua Radack)	Summer 2017

EXCEL Scholars

Rongman Xu	Summer 2023 - Fall 2023
Matthew Decker	Fall 2022
Sorawit Roongruengratanakul	Fall 2019 - Fall 2020
Zikun "Stella" Dong	Summer 2019 - Fall 2019
Ran Cao	Fall 2018-Spring 2019
Cameron Zurmuhl	Winter 2018-2019
Benjamin Draves	Summer 2016
Joshua Arfin	Summer 2015

Senior Honors Theses

Evan Flint, Environmental Science/Mathematics (Co-Advisor)	2022-2023
Ben Fuller, Computer Science (Committee Member)	2020-2021
Ryan Barnett, Mathematics and Economics (Committee Member)	2019-2020
Parastou Bahrami Taghanaki, Civil Engineering (Committee Member)	2019-2020
Claire Grunewald, International Affairs (Committee Member)	2019-2020
Joseph D'Elia, Physics (Committee Member)	2019-2020
M.E. Shelton, Policy Studies (Committee Member)	Fall 2018

Donovan Rasamoelison, Economics (Committee Member)	2018-2019
Becca Webster, Geology (Committee Member)	2018-2019
Michelle Foley, Mathematics-Economics (Co-Advisor)	2018-2019
Benjamin Draves, Mathematics (Advisor)	2016-2017
Joshua Arfin, Mathematics (Advisor)	2016-2017
Daniel Crowley, Economics (Committee Member)	2016-2017
Patrick Pozzi, Mathematics (Advisor)	2014-2015
Katherine Cherney, Economics (Committee Member)	2014-2015

The Pennsylvania State University

M.S. Students

Amanda Tomlinson, Statistics (Advisor)	Completed Spring 2011

Ph.D. Students

Michael Flock, Nutrition (Committee Member)	Completed Spring 2014
Michael A. Roussell, Nutrition (Committee Member)	Completed Fall 2010

Presentations

Small Sample Behavior of the Bootstrap Distribution for U-Statistics, NIST, Boulder, CO, July 2019.

Revisiting Nature vs. Nurture: Some Modern Approaches to the Heritability Calculation. Ursinus College, Spring 2014.

Resampling Methods: Why the Bootstrap and Jackknife Are Your Friends. Delivered at Muhlenberg College (Fall 2013) and Lafayette College (Spring 2014).

Estimating Heritability of Autism. Poster Presentation/Short Expository Talk, IMS New Researchers Conference, Montreal, QC Canada, Summer 2013

Why is statistician the sexy job of the next ten years? Bucknell University, Invited Seminar, Department of Mathematics, Fall 2012.

Reflections on the Divide Between Applied and Theoretical Statistics from a Consultant/Researcher. Carnegie Mellon University, Student Organized Seminar, Department of Statistics, Fall 2011.

Fully Nonparametric Mixed Effects Models: Testing for the Fixed Main Effect. Delivered at Carnegie Mellon University, West Chester University, and Penn State - Harrisburg, Spring 2011.

A New Nonparametric Model for the Two-Way Mixed Effects Design. The Pennsylvania State University, Undergraduate Statistics Club, Spring 2008.

Comparing Two Survival Time Distributions: An Investigation of Several Weight Functions for the Weighted Logrank Statistic. STAT 590: Colloquium Presentations, The Pennsylvania State University, Spring 2006.

Service

Lafayette College Mathematics Department

Member, linear algebra curriculum committee, Fall 2023

Member, VAP search committee, Spring 2021

Member, departmental prize committee, 2019-2021,2023

Member, tenure-track search committee, 2015-2016, 2019-2020, 2022-2023

Member, Statistics curriculum committee, Spring 2016-present

Member, Assessment committee for joint Mathematics/Economics major, 2016-2017

Co-coordinator, individual Barge mathematics contest, Fall 2016

Advisor, Statistics LLC House, 2015-2016

Subcommittee on curricular issues, response to departmental external review, Fall 2014

Lafayette College

Member, Faculty Affairs and Resources Committee, Fall 2023-present

Program Chair, Data Science Program, Fall 2023-present

Member, Psychology Dept. tenure-track search committee, Fall 2023

Member, Computer Science Dept. tenure-track search committee, Fall 2023

Representative, Q requirement assessment, Spring 2022-present

Member, Computer Science Dept. tenure-track search committee, Fall 2021

Member, Chemical Engineering Dept. VAP search committee, Spring 2020 (suspended)

Member, HPC systems administrator search committee, Fall 2019

Member, Data Science program advisory committee, Fall 2019-Spring 2022

Member, DSDS academic planning group/steering committee, Fall 2018-Spring 2021

Member, Faculty Compensation Committee, Fall 2018-Spring 2021

Member, Carnegie Classification committee, Fall 2018-Spring 2019

Faculty Mentor, Women's basketball team, Fall 2018-present

Member, Biology Dept. tenure-track search committee, Fall 2018

Member, Dyer Center advisory board, Spring 2018-present

Member, Computer Science Dept. lab coordinator search committee, Fall 2017

Panelist, Discussion on experiences of first-generation college students, Spring 2016, Fall 2016

Panelist, New faculty orientation discussion on teaching at Lafayette, Fall 2016

Member, Child care committee, Fall 2016-Spring 2019

Goldwater Scholarship selection committee, Fall 2014, Fall 2016

Professional

Reader, AP Statistics examination, Summer 2016

Article Editor, *SAGE Open*

Reviewer, *Journal of Statistics and Data Science Education*, *Communications in Statistics: Simulation and Computation*, *Statistics in Medicine*, *Journal of Statistical Planning and Inference*, *Biometrics*, *Journal of Multivariate Analysis*, *Statistical Papers*, *International Journal of Aging and Society*, *Economic Modelling*, *Journal of Statistics Education*

Judge, Pittsburgh ASA Chapter Award, 2013 Pittsburgh Regional Science and Engineering Fair