November 8, 2024

GARRITT L. PAGE

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Citizenship: USA

Education

Ph.D., Statistics, August, 2009; Iowa State University, Ames, Iowa
M.S., Statistics, August, 2005; Brigham Young University, Provo, Utah
B.S., Mathematics, May, 2002; Southern Utah University, Cedar City, Utah

Professional Experience

Full Professor, Brigham Young University, Department of Statistics, 2024-present
Associate Professor, Brigham Young University, Department of Statistics, 2019-2024
Fulbright Scholar, Università di Bologna, Dipartimento di Scienze Statistiche, Spring 2022
Visiting Fellow, Basque Center of Applied Mathematics, Statistics Group, Summer of 17, 18, 19
Assistant Professor, Brigham Young University, Department of Statistics, 2015-2019
Assistant Professor, Pontificia Universidad Católica de Chile, Department of Statistics, 2011-2015
Visiting Assistant Professor, Duke University, Department of Statistical Science, 2009-2011
Statistical Consultant, Iowa State University, Agriculture Experiment Station, 2008-2009
Instructor, Iowa State University, Department of Statistics, 2006-2007
Statistical Intern, Pfizer Inc., La Jolla California, Summer 2004
Teaching Assistant, Brigham Young University, Department of Statistics, 2003-2005
High School Math Teacher, Southwestern Academy, San Marino California, 2002-2003

Research Interests

Bayesian Hierarchical Modeling, Random Partition Models, Bayesian Nonparametrics, Spatial Statistics, Functional Data, Sports analytics, Statistics in Education

Awards

Excellence in Scholarship Award, Brigham Young University, Department of Statistics (2023)
Young Scholar Award, Brigham Young University, College of Physical and Math Sciences (2021)
Alvin C. Rencher Award, Brigham Young University, Department of Statistics (2020)
Kenneth L. Knight Award, Journal of Athletic Training (with J.T. Hopkins et al) (2019)

Faculty Heritage Fellowship, Brigham Young University, Department of Statistics (2019-2021)

Lindley Prize, International Society of Bayesian Analysis (with M. Carvahlo and B. Barney) (2018)

W. J. Youden Award, American Statistical Association (with D.B. Dunson) (2012)

CITAC Most Interesting/Important Papers on Metrology in Chemistry (With S.B. Vardeman)(2010)

Dan Mowrey Consulting Excellence Award, Iowa State University (2009)

University Teaching Excellence Award, Iowa State University (2007)

Publications

Refereed ★ denotes student advised or co-advised by GLP,
∗ denotes authors listed in alphabetical order

1. **Page, Garritt L.**; Fellingham, Gilbert W.; and Reese, C. Shane (2007) "Using Box-Scores to Determine a Position's Contribution to Winning Basketball Games," *Journal of Quantitative Analysis in Sports*, 3(4), 1-16

2. **Page, Garritt L.**; Vardeman, Stephen B. (2010) "Using Bayes methods and mixture models in inter-laboratory studies with outliers," *Accreditation and Quality Assurance* 15(7) 379-389 (**CITAC Most Interesting/Important Papers on Metrology in Chemistry Award**)

3. **Page, Garritt L.**; Dunson, David B. (2011) "Bayesian Local Contamination Models for Multivariate Outliers" *Technometrics* 53(2) 152-162 (**W. J. Youden Award in Interlaboratory Testing**)

4. **Page, Garritt L.**; Vardeman, Stephen B. (2012) "Bayesian Approach to Establishing a Reference Particle Size Distribution in the Presence of Outliers" *Mathematical Geosciences* 44(6) 721-737

5. **Page, Garritt L.**; Bhattacharya, Abhishek; Dunson, David B. (2013) "Classification via Bayesian Nonparametric Learning of Affine Subspaces" *Journal of the American Statistical Association* 108(1) 187-201

6. Leyva, Norma; **Page, Garritt L.**; Vardeman, Stephen B.; Wendelberger, Joanne R. (2013) "Bayes Statistical Analyses for Particle Sieving Studies" *Technometrics* 55(2) 224-231

7. **Page, Garritt L.**; Barney, Bradley J.; ★McGuire, Aaron T. (2013) "Effect of Position, Usage Rate, and Per Game Minutes Played on NBA Player Production Curves," *Journal of Quantitative Analysis in Sports*, 9(4) 337-345

8. **Page, Garritt L.**; Quintana, Fernando A. (2015) "Predictions Based on the Clustering of Heterogenous Functions via Shape and Subject-Specific Covariates" *Bayesian Analysis*, 10(2) 379-410

9. **Page, Garritt L.**; Quintana, Fernando A. (2016) "Spatial Product Partition Models" *Bayesian Analysis* 11(1) 265-298 (**Discussion paper with rejoinder**)

10. **Page, Garritt L.**; San Martín, Ernesto; ★Orellana, Javiera; Gonzalez, Jorge. (2017) "Exploring Complete School Effectiveness via Quantile Value-Added" *Journal of the Royal Statistical Society: Series A* 180(1) 315-340

11. **Page, Garritt L.**; Lui, Yajun; He, Zhuqiong; Sun, Dongchu. (2017) "Estimation and Prediction in the Presence of Spatial Confounding for Spatial Linear Models" *Scandinavian Journal of Statistics* 44(3) 780-797

12. ★Tsagbey, Sitsofe; de Carvalho, Miguel; **Page, Garritt L.** (2017) "All Data are Wrong, but Some are Useful? Advocating the Need for Data Auditing" *The American Statistician* 71(3) 231-235

13. ★Quinlan, José J.; **Page, Garritt L.**; Quintana, Fernando A. (2018) "Density Regression using Repulsive Distributions" *Journal of Statistical Computation and Simulation* 88(15) 2931-2947

14. **Page, Garritt L.**; Quintana, Fernando A. (2018) "Calibrating Covariate Informed Product Partition Models" *Statistics and Computing* 28(5) 1009-1031

15. Müller, Peter; Quintana, Fernando A.; **Page, Garritt L.** (2018) "Nonparametric Bayesian Inference in Applications" *Statistical Methods and Applications* 27(2) 175-206 (**Discussion paper**)

16. Mitchell, Ulrike H.; Stoneman, Paul D.; Larson, Robert; **Page, Garritt L.** (2018) "The Construction of Sham Dry Needles and their Validity" *Evidence-Based Complementary and Alternative Medicine* Volume 2018, Article ID 9567061, 6 pages

17. de Carvalho, Miguel; **Page, Garritt L.**; Barney, Bradley J. (2019) "On The Geometry of Bayesian Inference" *Bayesian Analysis* 14(4) 1013-1036 (**Lindley Prize for innovative research in Bayesian Statistics**)

18. Hopkins, Ty J.; Sun, Jun S.; Hyunsoo, Kim; **Page, Garritt L.**; Seeley, Matthew K. (2019) "Characterization of Multiple Movement Strategies in Participants with Chronic Ankle Instability" *Journal of Athletic Training* 54(6) 698-707 (**Kenneth L. Knight Award for Outstanding Research Manuscript**)

19. **Page, Garritt L.**; Rodríguez Álvarez, María Xosé; Lee, Dae-Jin (2020) "Bayesian Hierarchical Modeling of Growth Curve Derivatives via Sequences of Quotient Differences" *Journal of the Royal Statistical Society: Series C* 69(2) 459-481

20. de Carvalho, Miguel; Barney, Bradley J; **Page, Garritt L.** (2020) "Affinity-Based Measures of Biomarker Performance Evaluation" *Statistical Methods in Medical Research* 29(3) 837-853

21. **Page, Garritt L.**; Quintana, Fernando A.; Rosner, Gary L. (2021) "Discovering Interactions Using Covariate Informed Random Partition Models" *Annals of Applied Statistics* 15(1) 1-21

22. ★Quinlan, José J.; Quintana, Fernando A.; **Page, Garritt L.** (2021) "On a Class of Repulsive Mixture Models" *Test* 30(2) 445-461.

23. ★Horton, W. Zachary; **Page, Garritt L.**; Reese, C. Shane; Lepley, Lindsay; White, McKenzie (2021) "Template Priors in Bayesian Curve Registration" *Technometrics* 63(4) 487-499

24. Lee, Hyunwook; Han, Seunguk; **Page, Garritt L.**; Bruening, Dustin A.; Seeley, Matthew K.; Hopkins, J. Ty (2022) "Effects of Balance Training with Stroboscopic Glasses on Postural

Control in Chronic Ankle Instability Patients" *Scandinavian Journal of Medicine & Science in Sports* 32(3) 576-587

25. **Page, Garritt L.**; Quintana, Fernando A.; Müller, Peter (2022) "Clustering and Prediction with Variable Dimension Covariates" *Journal of Computational and Graphical Statistics* 31(2) 466-476

26. **Page, Garritt L.**; Quintana, Fernando A.; Dahl, David B. (2022) "Dependent Modeling of Temporal Sequences of Random Partitions" *Journal of Computational and Graphical Statistics* 31(2) 614-627

27. Barrientos, A. Felipe; Sen, Deborshee; **Page, Garritt L.**; Dunson, David B. (2023) "Bayesian Inferences on Uncertain Ranks and Orderings" *Bayesian Analysis* 18(3) 777-806

28. Guan, Yawen; **Page, Garritt L.**; Reich, Brian J.; Ventrucci, Massimo; Yang, Shu (2023) "A Spectral Adjustment for Spatial Confounding" *Biometrika* 110(3) 699-719

29. Quinlan, José J.; **Page, Garritt L.**; Castro, Luis M (2024) "Joint Random Partition Models for Multivariate Change Point Analysis" *Bayesian Analysis* 19(1) 21-48

30. Hay, Alexandra, M.; Rhoades, Madison J.; Bangerter, Stephanie; Ferguson, Seth A.; Lee, Hyunwook; Gill, Martha T.; **Page, Garritt L.**; ★Pope, Andrew; Measom, Gary J.; Hagar, Ronald L.; Seeley, Matthew K. (2024) "Serum Cartilage Oligomeric Matrix Protein Concentration Increases More After Running Than Swimming for Older People" *Sports Health* 16(4) 534–541

31. *__Page, Garritt L.__; San Martín, Ernesto.; Torres, David; Van Bellegem, Sébastien (2024) "Temporally Dynamic, Cohort-Varying, Value-Added Models" *Psychometrika* 89(3) 1074-1103.

32. Lee, Hyunwook; Clinger, Dallin; Oh, Minsub; Han, Seunguk; Allen, Steven P.; **Page, Garritt L.**; Bruening, Dustin A.; Hyldahl, Robert D.; Hopkins, J. Ty; Seeley, Matthew K. (2024) "Relationships Between Running Biomechanics and Femoral Articular Cartilage Thickness and Composition in Anterior Cruciate Ligament Reconstruction Patients" *Scandinavian Journal of Medicine & Science in Sport* 34(6) e14675

33. Müller, Peter; Quintana, Fernando A.; **Page, Garritt L.** (2024+) "Regression with Variable Dimension Covariates" *Sankhya A* accepted

34. Heiner, Matthew J.; **Page, Garritt L.**; Quintana, Fernando A. (2024) "A Projection Approach to Local Regression with Variable-Dimension Covariates" *Journal of Computational and Graphical Statistics* tentatively accepted

35. Barrientos, A. Felipe; **Page, Garritt L.**; Lin, Lifeng (2024) "Nonparametric Bayesian Approach to Multiple Treatment Comparisons in Network Meta-Analysis with Application to Comparisons of Antidepressants" *Journal of the Royal Statistical Society: Series C* accepted.

Submitted

★Jewell, Matthew; Page, Garritt L.; Reese, C. Shane "Assessing End-of-Season Performance as a Function of Average Minutes Played for NBA Players"

Page, Garritt L.; Ventrucci, Massimo; Franco-Villoria, Maria "Informed Bayesian Finite Mixture Models via Asymmetric Dirichlet Priors"

Paganin, Sally; Page, Garritt L.; Quintana, Fernando A; "Informed Random Partition Models with Temporal Dependence"

★Hawkins, Nathan; Fellingham, Gilbert W.; Page, Garritt L. "Play-by-Play Volleyball Win Probability Model"

Osabutey, Godwin; Richardson, Robert; Page, Garritt L; "Bayesian Inverse Ising Problem with Three-way Interactions"

★Ward, Tyler W; Page, Garritt L.; Fellingham, Gilbert W.; Jara, Alejandro "Using Shot Location Transitions to Discover Tennis Player Strategies"

In Preparation

Dahl, David B.; Page, Garritt L; Quintana, Fernando A.; "Bayesian Clustering for Big Data using Splinters"

Barney, Bradley J.; Page, Garritt L.; de Carvalho, Miguel; "JOBS: Joint Bayesian Smooth Centile Curves with Application to Postnatal Growth"

★Pope, Andrew; Page, Garritt L. "Functional Clustering Using Derivative Curves"

★Cannon, Andrew; Fisher, Jared D.; Fellingham, Gilbert W.; Page, Garritt L. "Measuring the Effect of NBA Head Coaches"

Book Chapters

Jo, Seongil; Lee, Jaeyong; **Page, Garritt L.**; Quintana, Fernando A.; Trippa, Lorenzo; Müller, Peter (2015). "Spatial Species Sampling and Product Partition Models". in *Nonparametric Bayesian Methods in Biostatistics and Bioinformatics*, Mitra, R. and Müller, P. (eds), Springer-Verlag, 359-375.

Quintana, Fernando A.; Loschi, Rosangela H,; **Page, Garritt L.**; (2019). "Bayesian Product Partition Models". in *Wiley StatsRef: Statistics Reference Online*, doi: , Ruggeri, F. (ed).

Book Reviews

Page, Garritt L. (2011) Review of *Introduction to WinBUGS for Ecologists* by Marc Kéry. *The American Statistician* 65(4) pg. 290-291

Page, Garritt L. (2010) Review of *Bayesian Methods for Measures of Agreement* by L.D. Broemeling. *Journal of the American Statistical Association* 105(3) pg. 438

Other Contributions to Refereed Journals

De Carvalho, M.; **Page, Garritt L.** (2013) Discussion of "How to Find an Appropriate Clustering for Mixed Type Variables with Application to Socio-Economic Stratification" by Hennig, C.; Liao, T. F. *Journal of the Royal Statistical Society: Series C* 62(3) 343-344

De Carvalho, M.; **Page, Garritt L.**; Barney, Bradley J. (2017) Discussion of "Random-Projection Ensemble Classification" by Cannings, Timothy I.; Samworth, Richard J. *Journal of the Royal Statistical Society: Series B* 79(4) 959-1035

Grants and External Funding

FONDECYT grant 11121131. 2012-2015. "Confounding in Spatial Regression Models" (P.I.) (≈ $100,000 USD)

CONICYT grant Soc 1107. 2012-2015. "Statistics for Educational Public Policy: The Analysis and Use of Observational Data" (Co-I) (≈ $800,000 USD)

NIH grant. 2018-2021. "Nonparametric Bayes Simultaneous Registration and Clustering of Functional Data" (P.I.) **Not Funded**

NSF grant. 2023-2025. "Novel Functional Clustering Methods to Study Effects of Biomechanics on Knee Joint Health" (co-P.I.) **Not Funded**

NSF grant. 2024-2026. "XTRIPODS: Robust Data Science by Clustering Curves using Phase Variability' (co-P.I.) **Not Funded**

Software

CBnetworkMA: (joint with F. Barrientos) R-package that fits BNP NMA models in

- Barrientos, A. F.; Page, G. L.; Lin, L. (2023)

HDCurves: R-package that fits hierarchical derivative curve models detailed in

- Page, G. L.; Rodríguez Álvarez, M. X.; Lee, D. J. (2020)

modernVA: R-package that fits value-added models detailed in

- Page, G. L.; San Martín, E.; Orellana, J.; Gonzalez, J. (2017) (quantile value-added)
- San Martín, E.; Page, G. L.; Torres, D (2023+) (temporal dependent value-added)

ppmSuite: (joint with J. Quinlan) R-package that fits product partition models detailed in

- Page, G. L.; Quintana, F. A. (2016) (spatial product partition models)
- Page, G. L.; Quintana, F. A. (2018) (calibrating the PPMx model)
- Page, G. L.; Quintana, F. A.; Rosner, G. L. (2021) (interaction discovery)
- Page, G. L.; Quintana, F. A.; Müller, P. (2022) (missing values in the PPMx)
- Quinlan, J. J.; Page, G. L.; Castro, L. M. (2023) (multivariate correlated change point)

eCAR: (joint with M. Ventrucci) R-package that fits eigendecomposed CAR models detail in

- Guan, Yawen; Page, Garritt L.; Reich, Brian J.; Ventrucci, Massimo; Yang, Shu; (2023)

Students Advised

Ph.D.

José Javier Quinlan Binelli, 2017, co-advisor with Fernando A. Quintana.

- Dissertation: "Repulsive Processes: Theory and Applications"
- Now an analyst at Ernst and Young Chile

M.S.

Sitsofe Tsagbey, 2013, co-advisor with Miguel de Carvalho.

- Thesis: "Using Benfords Law to audit tuna catch data from the Gulf of Guinea"
- Now at Banco Santander (after finishing her PhD at Universidade de São Paulo)

Javiera Orellana, 2014.

- Thesis: "Exploring Complete School Effectiveness via Quantile Value-Added"
- Now an analyst at MIDEUC at the Pontificia Universidad Católica de Chile

Carlos Cayumán Cofré, 2015.

- Thesis: "Avoiding Spatial Confounding by Modeling Covariate and Spatial Effect Jointly"
- Now an analyst at the Pontificia Universidad Católica de Chile

Kevin Hilton, 2017.

- Portfolio: "A Bayesian GLM to Improve Utah Jazz Shooting"
- Now a software engineer at The Trade Desk

Chris Dixon, 2018.

- Portfolio: "Building Professional Basketball League-to-League Performance Curves"
- Now a senior software engineer at Oracle

Zach Horton, 2019, co-advisor with C. Shane Reese.

- Project: "Template Priors In Bayesian Curve Registration"
- Now a PhD student at University of California at Santa Cruz

Dean Sobczak, 2020

- Project: "Euclidean Distance, Cointegration, and the Ornstein-Uhlenbeck Process: A Pairs Trading Approach"
- Now a data scientist at Trove

Angela Larkin, 2021

- Portfolio: "Assessing Missing Covariate Methods"
- Now an analyst at University of Utah

Tyler Ward, expected 2024

- Project: "Analyzing Shot Location in Tennis using Bayesian Modeling"
- Now machine learning scientist at STR

Andrew Pope, expected 2025

Sam Lee, expected 2026

B.S.

Aaron McGuire, 2011, co-advisor with Jerry Reiter.

- Thesis: "Effect of position, usage rate, and minutes played on NBA player production curves"
- Now an analyst at 2nd Order Solutions

Kevin Toney, 2018

- Project: "Finding factors that predict performance in professional basketball leagues"
- Now a data analyst at overstock.com (after completing MS at University of Nebraska)

Mitchell Pudel, 2019

- Project: "Exploring impact of weak instruments on bias of regression coefficients"
- Now a Masters in Data Science student at Carnegie Mellon University

Micah Scholes, 2019

- Project: "Predicting Successful Player Movement in European Basketball"
- Now a data analyst at Topcon Positioning Systems (after finishing MS at the University of Michigan)

Nicole Lant, 2020

- Project: "Characterizing Human Movement Patterns"
- Now a Software Development Manager at Entrata

Gideon Miller, 2022

- Project: "Identifying Markers that Inform Movement Initiation"
- Now a Masters in Statistics student at Purdue University

Matthew Jewell, 2022

- Project: "Assessing End of Season Performance as a Function of Average Minutes Played for NBA Players"
- Now associate program cost and schedule control analyst at Northrop Grumman

Andrew Pope, 2022

- Project: "Functional Clustering Using Derivative Curves"
- Now an Masters in Statistics student at BYU

Morgan Kurth, expected 2023

Teaching Experience

Brigham Young University, Department of Statistics

UNIV 101: BYU Foundations for Student Success (Fa 24)

STAT 121: Introduction to Statistics (Fa 19, 21)

STAT 123: Introduction to R Programming (Fa 15)

STAT 223: Advanced R Programming (Fa 15, 16, 17; Sp 18)

STAT 240: Probability and Inference 1 (Fa 23)

STAT 251: Introduction to Bayesian Statistics (Fa 18, 20; Sp 19, 20, 21, 23, 24)

STAT 281: Introduction to Analytics (Fa 16)

STAT 482: Data Science Capstone 1 (Fa 22)

STAT 483: Data Science Capstone 2 (Sp 23)

STAT 641: Probability Theory (graduate level, Fa 23, 24)

STAT 642: Statistical Inference (graduate level, Sp 16, 17, 18, 19, 20, 24)

Pontificia Universidad Católica de Chile, Departamento de Estadística
These courses were taught in Spanish

STAT 2805: Introduction to Bayesian Statistics (Fa 13, Fa 14)

STAT 3306: Applied Statistical Methods I (graduate level, Sp 12)

STAT 3316: Applied Statistical Methods II (graduate level, Fa 12)

STAT 3317: Statistical Inference (graduate level, Fa 14)

STAT 3318: Theory of Linear Models (graduate level, Fa 11)

STAT 3345: Spatial Statistics (graduate level, Sp 13, Sp 14, Sp 15)

Duke University, Department of Statistical Science

STAT 101: Data Analysis/Statistical Inference (Fa 09, Sp 10, Fa 10, Sp 11)

Iowa State University, Department of Statistics

STAT 101: Principles of Statistics (Sp 06)

STAT 226: Introduction to Business Statistics I (Su 06, Fa 06, Sp 07, Fa 07)

Southwestern Academy, High School Mathematics, 2002-2003

Algebra 1/2-2

Geometry

Trigonometry/Pre-Calculus

Presentations

Invited Short Courses

- "Introduction to Bayesian Nonparametric Modeling." Short Course at the Università di Bologna, 10-hour course, Bologna, Italy, March 2022
- "Introduction to Applied Bayesian Modeling." Short Course at the Basque Center for Applied Mathematics, 10-hour course, Bilbao, Spain, July 2018

Invited Talks

- "Dependent and Informed Random Partitions Models" *The Ohio State University*; Columbus, Ohio Oct 2024
- "Joint Random Partition Models for Multivariate Change Point Analysis" *Workshop on Statistical Modeling and Data Science UC 2024*; Santiago, Chile Aug 2024

- "Informed Random Partition Models with Temporal Dependence" *Interpretable Inference via Principled BNP Approaches in Biomedical Research and Beyond*; Singapore. July 2024
- "Informed Bayesian Finite Mixture Models via Asymmetric Dirichlet Priors" *ISBA World Meeting*; Venice, Italy July 2024
- "Informed Random Partition Models with Temporal Dependence" *International Symposium on Nonparametric Statistics*; Braga, Portugal. June 2024
- "Nonparametric Bayesian Approach to Treatment Ranking in Network Meta-Analysis with Application to Comparisons of Antidepressants" *Annual Conference of the Società Italiana di Statistiche*; Bari, Italy. June 2024
- "Informed Bayesian Finite Mixture Models via Asymmetric Dirichlet Priors" *La Universitá di Bergamo*; Bergamo, Italy June 2024 (seminar)
- "Informed Bayesian Finite Mixture Models via Asymmetric Dirichlet Priors" *Seminario Internacional de Estadística Aplicada*; Arequipa, Peru May. 2024 (virtual seminar)
- "Informed Bayesian Finite Mixture Models via Asymmetric Dirichlet Priors" *Pontificia Universidad Católica de Chile*; Santiago, Chile Apr. 2024 (seminar)
- "Informed Bayesian Finite Mixture Models via Asymmetric Dirichlet Priors" *Southern Methodist University*; Dallas, Texas Jan. 2024 (seminar)
- "Informed Bayesian Finite Mixture Models via Asymmetric Dirichlet Priors" *University of Arizona, Department of Biostatistics*; Tucson, AZ Oct. 2023 (virtual seminar)
- "Informed Bayesian Finite Mixture Models via Asymmetric Dirichlet Priors" *Iowa State University, Department of Statistics 75th Anniversary Conference*; Ames, IA Sept 2023
- "Joint Random Partition Models for Multivariate Change Point Analysis" *6th International Conference on Econometrics and Statistics*; Tokyo, Japan (delivered virtually) Aug 2023
- "Discovering Subpopulations Using Innovative Curve Clustering" *Università di Bologna, Istituto di Studi Avanzati*; Bologna, Italy June 2023 (university wide seminar)
- "A Marginalization Approach to Local Regression and Clustering with Variable-Dimension Covariates" (with M.J. Heiner and F. A. Quintana) *BNP Virtual Seminar Series*; Feb. 2023
- Discussion on "Finding Structures in Observations: Consistent(?) Clustering Analysis" by Clara Grazian *O'Bayes Biannual Meeting*; Santa Cruz, CA. Sept. 2022
- "Clustering and Prediction with Variable Dimension Covariates" *ISBA World Meeting*; Montreal, Canda. June. 2022
- "A Spectral Adjustment of Spatial Confounding" *Università di Bologna, Dipartimento di Scienze Statistiche*; Bologna, Italy. March. 2022 (seminar)
- "A Spectral Adjustment of Spatial Confounding" *Universitá degli Studi di Modena e Reggio Emilia, Dipartimento di Economia*; Modena, Italy. March. 2022 (seminar)
- "Using Dependent Random Partition Models for Flexible Change-Point Analysis in Multivariate Processes" *14th International Conference of the ERCIM WG on Computational and Methodological Statistics*; via Zoom. Dec. 2021
- "On The Geometry of Bayesian Inference" *Joint Statistical Meetings*; via Zoom. Aug. 2021
- "Far from Infinity: Parsimonious Hierarchical Modeling Using Repulsive Distributions" *ISBA World Meeting*; via Zoom. Jun. 2021

- "Brief Overview of Functional Data Analysis in Biomechanical Studies" *American College of Sports Medicine's 2021 Annual Meeting*; via Zoom. Jun. 2021
- "Bayesian Inferences on Uncertain Ranks and Orderings" *13th International Conference of the ERCIM WG on Computational and Methodological Statistics*; via Zoom. Dec. 2020
- "Template Priors in Bayesian Curve Registration" *UC Santa Cruz, Department of Statistics*; via Zoom. Oct. 2020 (seminar)
- "Dependent Random Partition Models" *Florida State University, Department of Statistics*; via Zoom. Oct. 2020 (seminar)
- "Exploring Complete School Effectiveness via Quantile Value-Added" *Escuela Profesional de Matemáticas, Universidad Nacional de San Agustín de Arequipa*; via Zoom. Sept. 2020
- "Spatio-Temporal Random Partition Models" *12th International Conference of the ERCIM WG on Computational and Methodological Statistics*; London, England. Dec. 2019
- "On a Class of Repulsive Mixture Models" *12th Scientific Meeting of Classification and Data Analysis Group*; Cassino, Italy. Sept. 2019
- "Exploring Complete School Effectiveness via Quantile Value-Added" *International Meeting of the Psychometric Society*; Santiago, Chile. July 2019
- "Estimating and Interpreting Regression Coefficients as a Function of Spatial Scale" *Annual Conference of the Società Italiana di Statistiche*; Milan, Italy. June 2019
- "Spatio-Temporal Random Partition Models" *Universidad del País Vasco, Departamento de Economía y Estadística*; Bilbao, Spain. June 2019 (seminar)
- "Hierarchical Modeling of Growth Curve Derivatives via Sequences of Quotient Differences" *11th International Conference of the ERCIM WG on Computational and Methodological Statistics*; Pisa, Italy. Dec. 2018
- "A Model for a Sequence of Random Partitions Evolving in Time and Space" *Università di Bologna, Dipartimento di Scienze Statistiche*; Bologna, Italy. Dec. 2018 (seminar)
- "Estimation and Prediction in the Presence of Spatial Confounding" *Conference on Small Area Estimation*; Shanghai, China. June 2018
- "Joint Modeling of a Sequence of Random Partitions" *Pontificia Universidad Católica de Chile, Departamento de Estadística*; Santiago, Chile. March 2018 (seminar)
- "Clustering and Prediction in the Presence of Missing Covariates" *10th International Conference of the ERCIM WG on Computational and Methodological Statistics*; London, England. Dec. 2017
- "Hierarchical Modeling of Growth Curve Derivatives via Sequences of Quotient Differences" *Workshop on P-splines*; Bilbao, Spain. Dec. 2017
- "Discovering Additive and Nonadditive Associations Using Covariate Informed Random Partition Models" *61st World Statistics Congress*; Marrekesh, Morroco July 2017
- "Estimation and Prediction in the Presence of Spatial Confounding" *Pontificia Universidad Católica de Chile, Departamento de Estadística*; Santiago, Chile. March 2017 (seminar)
- "Using Covariate Informed Partition Models to Identify Subpopulations via Curve Clustering" *9th International Conference of the ERCIM WG on Computational and Methodological Statistics*; Sevilla, Spain Dec. 2016

- "Estimation and Prediction in the Presence of Spatial Confounding" *Joint Statistical Meetings*; Chicago, IL Aug. 2016
- "Calibrated Covariate Informed Partition Models and Interaction Fishing" *ISBA World Meeting*; Sardinia, Italy July 2016
- "Spatial Product Partition Models" *Iowa State University, Department of Statistics*; Ames, IA April 2016 (seminar)
- "Spatial Product Partition Models" *University of Alabama ,Department of Applied Statistics*; Tuscaloosa, AL Feb 2016 (seminar)
- "Spatial Product Partition Models" *Universidade Federal de Minas Gerais, Department of Statistics*; Belo Horizonte, Brazil Sept 2015 (seminar)
- "On The Geometry of Bayes" *XI Congreso Latinoamericano de Sociedades de Estadística*; La Serena, Chile Oct 2014
- "Classification via Bayesian Nonparametric Learning of Affine Subspaces" *Brigham Young University, Department of Statistics*; Provo, UT March 2014 (seminar)
- "Clustering Heterogenous Functions via Shape and Subject-Specific Covariates" *III Escuela de Invierno en Estadística*; Concepción, Chile August 2013
- "Bayes Statistical Analyses for Particle Sieving Studies" *University of Alabama, Department of Applied Statistics*; Tuscaloosa, AL March 2013 (seminar)
- "Bayes Statistical Analyses for Particle Sieving Studies" *University of Nevada Las Vegas, Department of Mathematics and Statistics*; Las Vegas, NV Feb 2013 (seminar)
- "Classification via Bayesian Nonparametric Learning of Affine Subspaces" *MD Anderson Cancer Center*; Houston, TX July 2013 (seminar)
- "A Solution to Spatial Confounding" *Jornadas Nacionales de Bioestadística*; Santiago Chile Jan. 2012
- "Bayesian Local Contamination Models for Multivariate Outliers" *Northern Arizona University, Department of Mathematics and Statistics*; Flagstaff, AZ. March 2011 (seminar)
- "Bayesian Local Contamination Models for Multivariate Outliers" *California State Fullerton, Department of Mathematics*; Fullerton, CA. Feb 2011 (seminar)
- "The Effect of Spatial Confounding on Covariate Estimation" *SAMSI Spatial Program Transition Workshop*; Research Triangle Park, NC. Oct 2010
- "Bayesian Local Contamination Models for Multivariate Outliers" *Pontificia Universidad Católica de Chile, Departamento de Estadística*; Santiago, Chile. June 2010 (seminar)
- "Using Mixtures to Model Outliers in Inter-laboratory Studies" *North Dakota State University, Department of Statistics*; Fargo, ND. Nov 2009 (seminar)

Contributed Talks

- "Clustering anterior cruciate ligament reconstruction patients using functional walking biomechanics" *The 37th International Workshop on Statistical Modelling*; Dortmund, Germany. July 2023
- "Nonparametric Bayesian Approach to Treatment Ranking in Network Meta-Analysis with Application to Comparisons of Antidepressants" *13th Conference on Bayesian Nonparametrics*; Puerto Varas, Chile. Oct. 2022

- "Informed Finite Mixture Models" *6th Workshop on Models and Learning in Clustering and Classification*; Cantania, Italy. Sept. 2022
- "Joint Modeling of a Sequence of Random Partitions" *Joint Statistical Meetings*; Vancouver, Canada. Aug. 2018
- "Joint Modeling of a Sequence of Random Partitions" *ISBA World Meeting*; Edinburgh, Scotland. June. 2018
- "Bayesian Local Contamination Models for Multivariate Outliers" *Joint Statistical Meetings*; Seattle, WA. Aug. 2015
- "Exploring Complete School Effectiveness via Quantile Value-Added" *XXXV Congreso Nacional de Estadística e Investigación Operativa*; Pamplona, Spain May 2015
- "Estimating and Interpreting Regression Coefficients as a Function of Spatial Scale" *Joint Statistical Meetings*; Boston, MA Aug 2014
- "Spatial Product Partition Models" *ISBA World Meeting*; Cancun, Mexico July 2014
- "On The Geometry of Bayes" *Joint Statistical Meetings*; Montreal, Canada Aug. 2013
- "Bayes Statistical Analyses for Particle Sieving Studies" *Joint Statistical Meetings*; San Diego, CA Aug 2012
- "Bayesian Local Contamination Models for Multivariate Outliers" *3rd Latin American Meeting on Bayesian Statistics*; Pucon, Chile. Oct. 2011
- "The Effect of Spatial Confounding on Covariate Estimation" *Joint Statistical Meetings*; Vancouver Canada. Aug 2010
- "Using Mixtures to Model Outliers in Inter-laboratory Studies" *Joint Statistical Meetings*; Washington D.C. Aug 2009

Posters

- "Calibrating Covariate Informed Product Partition Models" *11th Conference on Bayesian Nonparametrics*; Paris, France June 2017
- "Spatial Product Partition Models" *10th Conference on Bayesian Nonparametrics*; Raleigh, NC June 2015
- "Clustering Heterogenous Functions via Shape and Subject-Specific Covariates" *MIT Sloan Sports Analytics Conference*; Boston, MA February 2015 (**One of eleven selected out of over 300 submissions**)
- "Clustering Heterogenous Functions via Shape and Subject-Specific Covariates" *9th Conference on Bayesian Nonparametrics*; Amsterdam, Holland June 2013
- "Classification via Bayesian Nonparametric Learning of Affine Subspaces" *8th Conference on Bayesian Nonparametrics*; Veracruz, Mexico June 2011
- "Classification via Bayesian Nonparametric Learning of Affine Subspaces" *MCMski III*; Park City, UT. Jan 2011
- "Bayesian Local Contamination Models for Multivariate Outliers" *Meeting of New Researchers in Statistics and Probability*; Vancouver, Canada. July 2010
- "Bayesian Local Contamination Models for Multivariate Outliers" *ISBA World Meeting*; Benidorm, Spain. June 2010

- "The Effect of Spatial Confounding on Covariate Estimation" *Frontiers of Statistical Decision Making and Bayesian Analysis*; San Antonio, TX. March 2010
- "Using Compartment Models to Evaluate the Fate of Sulfamethazine in Surface Water" *Conference on Applied Statistics in Agriculture*; Manhattan, KS. April 2009
- "Skill Importance by Basketball Position" *MCMski II Conference*; Bormio Italy. Jan 2008

Talks Given at Sponsoring Institution

- "A Model for a Sequence of Random Partitions Evolving in Time and Space" *Brigham Young University, Department of Statistics*; Provo, UT February 2019
- "Clustering Heterogenous Functions via Shape and Subject-Specific Covariates" *Brigham Young University, Department of Statistics*; Provo, UT Dec 2015
- "Clustering Heterogenous Functions via Shape and Subject-Specific Covariates" *Pontificia Universidad Católica de Chile, Departamento de Estadística*; Santiago, Chile May 2013
- "Using Mixtures to Model Outliers in Inter-laboratory Studies" *Ph.D. Dissertation Defense*; Ames, IA. July 2009
- "Using Mixtures to Model Outliers in Inter-laboratory Studies" *RTG Working Group Seminar*; Ames, IA. Sept 2008
- "Skill Importance by Basketball Position". *RTG Working Group Seminar*; Ames, IA. October 2007
- "Using Box-Scores To Determine a Position's Contribution To Winning Basketball Games" *M.S. Project Defense*; Provo, UT. Aug 2005
- "Finding Factors That Influence the Outcome of a Basketball Game by Position" *BYU Spring Research Conference*; Provo, UT. March 2005
- "Using Case Studies in the Analysis of QT Data". *Pfizer Intern Seminar*; La Jolla, CA. August 2004

Consulting Experience

Agriculture Experiment Station Consulting Group (ISU) Jan. 2008 - Aug. 2009

My role was to provide statistical expertise to researchers at Iowa State (graduate students, faculty) in the form of experimental design, statistical analysis (typically using `SAS` or `R`), and interpreting results. Occasionally, this required the development of novel statistical techniques. I was involved in studies based in the departments of agronomy, ecology, and food science to name a few.

Media Attention

Podcast: Episode 6 *eZcZ Sports Industry Insights.* Nov. 2 2020

Statistically speaking: BYU study shows assists, teamwork important to winning on court *Deseret News.* Nov. 11 2007

Travel Awards and Scholarships

- Travel award for the 8th Workshop on Bayesian Nonparametrics (2011)
- Travel award for MCMski III (2011)
- Travel award for the Meeting of New Researchers in Statistics and Probability (2010)
- Travel award for the ISBA World Meeting (2010)
- Travel award for Frontiers of Statistical Decision Making and Bayesian Analysis (2010)
- NSF Research and Training Grant(RTG) Graduate Fellowship (2007-2009)
- NSF Vertical Integration of Research and Education Graduate Fellowship (2005-2006)

Service

At Brigham Young University

- Rank and Status Committee (2022-2023, 2024-)
- Seminar Series Committee (2022-)
- Search Committee (2018-2021, 2023-)
- Curriculum Committee (2017-2019)
- Masters Qualifying Exam Committee (2016-2020, 2023-)

At Pontificia Universidad Católica de Chile

- Masters Qualifying Exam Committee (2011, 2015)
- Graduate Curriculum Committee (2011-2012)
- Undergraduate Curriculum Committee (2013-2015)
- Seminar organizer (2014-2015)

At Iowa State University

- RTG Student Seminar Chair (2008)
- Student Representative at ISU Faculty Meetings (2008)

Profession

- Associate Editor: Statistical Modeling (2023 -)
- Associate Editor: Journal of Quantitative Analysis in Sports (2023 -)
- ISBA BNP Section Chair (2024)
- ISBA BNP Section Chair Elect (2023)
- ASA Utah Chapter Treasurer (2015-2017)
- Chair of ASA W. J. Youden Award in Interlaboratory Testing (2018-2020)
- Member of ASA W. J. Youden Award in Interlaboratory Testing (2016-2017, 2021)
- Topic Contributed Session Organizer, Joint Statistical Meetings, Vancouver CA, (2010)
- Topic Contributed Session Organizer, Joint Statistical Meetings, Vancouver CA, (2018)
- Invited Session Organizer, Joint Statistical Meetings, Philadelphia PA (Virtual), (2020)
- Invited Session Organizer, Joint Statistical Meetings, Seattle WA (Virtual), (2021)
- Invited Session Organizer, ISBA, Kunming, China (Virtual), (2021)
- Manuscript Refereeing:

Advances in Statistical Analysis[1], *Annals of Applied Statistics*[3], *Bayesian Analysis*[12], *Biometrical Journal*[1], *Biometrics*[6], *Biometrika*[1], *Biostatistics*[1], *Chilean Journal of Statistics*[1], *Computational Statistics and Data Analysis*[5], *Entropy*[1], *Environmental and Ecological Statistics*[1], *Environmetrics*[1], *International Journal of Sport and Exercise Psychology*[1], *International Journal of Approximate Reasoning*[1], *International Statistical Review*[3], *Journal of Agricultural, Biological, and Environmental Statistics*[3], *Journal of Educational and Behavioral Statistics*[1], *Journal of the American Statistical Association*[5], *Journal of Classification*[1], *Journal of Machine Learning Research*[1], *Journal of Multivariate Analysis*[1], *Journal of Quantitative Analysis in Sports*[8], *Journal of Research on Educational Effectiveness*[1], *Journal of the Royal Statistical Society: Series A*[1], *Journal of the Royal Statistical Society: Series B*[1], *Journal of Statistical Computation and Simulation*[4], *Journal of Statistical Planning and Inference*[1], *Journal of Statistical Software*[1], *Scandinavian Journal of Statistics*[1], *Spatial Statistics*[1], *Stat*[1], *Statistics and Computing*[2], *Statistics and Probability Letters*[1], *Statistical Modeling*[4], *Statistical Science*[2], *Statistica Sinica*[1], *Stats*[1], *Technometrics*[1], *The American Statistician*[3], *WIREs Computational Statistics*[1]

- Grant Review: CONECYT (Chilean NSF)
- Grant Review: CINECA (Italian NSF)
- External PhD Thesis Evaluation
    - Universitá di Bocconi
    - Pontificia Universidad Católica de Chile
    - The University of Edinburgh
    - Universidad del Pais Vasco
    - Univeristá degli Studi di Bologna

Professional Membership

- American Statistical Association (ASA) (2004-2021)
- Institute of Mathematical Statistics (IMS) (2005-present)
- International Society for Bayesian Analysis (ISBA) (2007-present)
- Sociedad Chilena de Estadística (SOCHE) (2014-present)

Skills

- Computer: R, SAS, JMP, C (working knowledge), FORTRAN (working knowledge), LaTeX, Mac OS X, Unix/Linux
- Languages: English (*native*), Spanish (*fluent*), Italian (*Beginner*)
- Marathon: St. George, Utah (2016), 3:13:01; Huntsville, Utah (2018), 3:14:29; Huntsville, Utah (2021), 3:01:36