Philip Andrew White

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Education

- Doctor of Philosophy: Statistical Science; Duke University; 2019
  - Dissertation: Topics in Bayesian Spatiotemporal Prediction of Environmental Exposure
  - Committee: Alan Gelfand (chair), Fan Li (co-chair), Colin Rundel, and Ben Goldstein
- Master of Science: Statistics; Brigham Young University; 2015
  - Thesis: Bayesian Gaussian Process Model for Antarctic Surface Mass Balance and Proposing New Field Measurements
  - Committee: C. Shane Reese (chair), William F. Christensen, and Shannon Tass
- Bachelor of Science: Applied Physics; Brigham Young University; 2014
  - Graduated *Magna Cum Laude*; speaker at college graduation
  - Senior Thesis: Bayesian Model for Antarctic Surface Mass Balance
  - Minors: Mathematics, Scandinavian Studies

Professional Experience

- Assistant Professor; Brigham Young University; 2019 – Present
- Data Science Intern: Disease Risk Modeling; The Climate Corporation; 2018

Peer-Reviewed Publications

- **P. White** and A. Gelfand (2020+), "Multivariate Functional Data Modeling with Time-varying Clustering," accepted at *TEST*. link
- **P. White** and A. Gelfand (2020+), "Generalized Evolutionary Point Processes: Model Specifications and Model Comparison," *Methodology and Computing in Applied Probability*. link.
- M. Gruen, **P. White**, and B. Hare (2020), "Do Dog Breeds Differ in Pain Sensitivity? Veterinarians and the Public Believe They Do," *PLoS ONE*, 15(3): e0230315. link.
- **P. White**, C.S. Reese, W. Christensen, and S. Rupper (2019), "A Model for Antarctic Surface Mass Balance and Ice Core Site Selection," *Environmetrics*, Volume 30, Issue 8, e2579. link.
- **P. White** and E. Porcu (2019), "Towards a Complete Picture of Stationary Covariance Functions on Spheres Cross Time," *Electronic Journal of Statistics*, Vol. 13, No. 2, 2566-2594. link.
- **P. White**, A. Gelfand, E. Rodrigues, and G. Tzintzun (2019), "Pollution State Modeling for Mexico City," *Journal of the Royal Statistical Society - Series A*, Volume 182, Issue 3, 1039-1060. link.
- **P. White** and E. Porcu (2019), "Nonseparable Covariance Models on Circles Cross Time: A Study of Mexico City Ozone," *Environmetrics*, Volume 30, Issue 5, e2558. link
- **P. White**, C. Berrett, S. Tass, and M. Findlay (2019), "Modeling Efficiency of Foreign Aid Allocation in Malawi," *The American Statistician*, Volume 30, Issue 5, 385-399. link
- **P. White**, A. Gelfand, and T. Utlaut (2017), "Prediction and model comparison for areal unit data," *Spatial Statistics*, Volume 22, Part 1, 89-106. link

- J. S. Colton, D. Meyer, K. Clark, D. Craft, J. Cutler, T. Park, and **P. White** (2012), "Long-Lived electron spins in a modulation doped (100) GaAs quantum well," *Journal of Applied Physics*, Volume 112, Issue 8, 084307. link

Submitted/Under Review/In Revisions

- **P. White**, D. Keeler, and S. Rupper, "Integrated Spatial Process Modeling of Monotone West Antarctic Snow Density Curves." link
- **P. White**, D. Keeler, D. Sheanshang[†], and S. Rupper, "Modeling Firn Density through Spatially Varying Smoothed Arrhenius Regression." link
- X. Emery, E. Porcu, and **P. White**, "Flexible Validity Conditions for the Multivariate Matérn Covariance in any Dimension and for any Number of Components."
- E. Porcu, G. Cleanthous, A. Georgiadis, **P. White**, and Alfredo Alegria, "Random Fields on the Hypertorus: Covariance Modeling, Regularities, and Approximations."
- [*]A. Alegría, P.G. Bissiri, G. Cleanthous, E. Porcu, and **P. White**, "Multivariate Isotropic Random Fields on Spheres: Nonparametric Bayesian Modeling and L^p-Fast Approximations."
- [*]G. Cleanthous, E. Porcu, and **P. White**, "Regularity and Approximation of Gaussian Random Fields Evolving Temporally over Two-Point Homogeneous Spaces."
- [*] *Under the request of coauthors, the authors are listed in alphabetical order.*
- [†] *Student co-author*

Other Publications

- P. White (2019), "Topics in Bayesian Spatiotemporal Prediction of Environmental Exposure," Ph.D. Dissertation, Duke University.
- P. White (2015), "Bayesian Gaussian Process Model for Antarctic Accumulation and Proposing New Field Measurement," Masters Project, Brigham Young University.
- P. White (2014), "ORCA final report," *2014 Journal of Undergraduate Research* [Online], Brigham Young University.
- P. White (2014), "Quantifying Climate Change: Bayesian Model for Antarctic Surface Mass Balance," Senior Thesis, Brigham Young University.

Posters and Presentations

- "Integrated Spatial Process Modeling of Monotone West Antarctic Snow Density Curves"
  - · Joint Statistical Meetings (2020) – Contributed Talk
- "Multivariate Functional Data Modeling with Time-varying Clustering"
  - · New England Statistics Symposium (2019) – Contributed Talk
  - · Joint Statistical Meetings (2019) – Contributed Talk
- "Pollution State Modeling for Mexico City"
  - · ASA ENVR Workshop - Statistics for the Environment: Research, Practice and Policy (2018) – Contributed Poster
- "Nonseparable Covariance Models on Circles Cross Time: A Study of Mexico City Ozone"
  - · Brigham Young University (2018) – Invited Talk
  - · RAND (2018) – Invited Talk
  - · Los Alamos National Labs (2018) – Invited Talk
  - · Facebook Research Labs (2018) – Invited Talk

- International Conference on Advances in Interdisciplinary Statistics and Combinatorics (AISC) (2018) – Contributed Talk
- "Prediction and Model Comparison for Areal Unit Data"
  - Society of Duke Fellows (2017) – Invited Talk
- "A Model for Antarctic Surface Mass Balance and Ice Core Site Selection,"
  - 2020 TIES Conference (2020), London, UK. – Invited Talk.
  - American Geophysical Union (2017), New Orleans, LA. – Contributed Poster
  - Conference on Data Analysis (2014), Poster, Santa Fe, NM. – Poster

Courses Taught

- Professor
  - Brigham Young University
    - Statistics 330 (Introduction to Regression): Winter 2020
    - Statistics 641 (Probability Theory & Mathematical Statistics 1): Fall 2019
    - Swedish 201: Winter 2012
    - Swedish 202: Fall 2011, Fall 2012
  - Duke University
    - Statistics 111 (Probability and Statistics): Summer I 2017
- Teaching Assistant
  - Duke University
    - Statistics 322/522 (Design of Surveys and Causal Studies): Spring 2019
    - Statistics 944 (Spatial Statistics): Fall 2018
    - Statistics 444/644 (Spatio-temporal Modeling): Spring 2018, Fall 2018
    - Statistics 532 (Theory of Inference): Fall 2017
    - Statistics 111 (Probability and Statistics): Spring 2017

Grant Submissions and Funding

- 2020-2021 (Funded). "The Role of Temperature Variation for Reconstructing the Advance and Retreat of Glacial Ice using Thermal and Radar Imaging," Brigham Young University Interdisciplinary Research (IDR) Origination Awards, 2020 (Role: Co-PI, Amount: $119,910).
- 2021-2023 (Submitted). "Atmospheric Drivers of West Antarctic Ice Sheet Surface Mass Balance," Submitted to the National Aeronautics and Space Administration, 2020 (Role: Co-PI, Amount: $249,289).
- 2020-2022 (Not funded). "Analysis Methods for Multivariate Point Patterns on Linear Networks," submitted to the National Science Foundation, 2019 (Role: Co-PI, Amount: $310,946).
- 2020-2022 (Not funded)'. 'Quantifying Snow and Glacier Response to Climate and Aerosol Forcings in High Mountain Asia," submitted to the National Aeronautics and Space Administration, 2019 (Role: PI for BYU portion; Amount: $256,328).

Fellowships, Scholarships, and Awards

- Professor
  - The 2020 Young Scholar Faculty Fellowship (Amount: $6,000)

- · 2019 Wiley-TIES Best Environmetrics Paper Award for "A model for Antarctic Surface mass balance and ice core site selection," (Amount: Travel award and $750).
    - · STATMOS Workshop - Young Researcher Travel Award, 2019 (Amount: $1,500)
- Student
    - · James B. Duke Fellowship Recipient, Duke University, 2015-2019 (Amount: $20,000)
    - · ENVR Workshop - Statistics for the Environment: Research, Practice and Policy, Student travel award, 2018 (Amount: $1,500)
    - · Department of Statistical Science TA of the Year, 2018 (Amount: $1,500)
    - · Conference on Data Analysis Student Travel Award, 2014 (Amount: $1,000)

Statistical Consulting Experience

- Department of Clinical Sciences, North Carolina State University, College of Veterinary Medicine; Raleigh, NC; 2019 – Present
- Arbinger Institute; Farmington, Utah; 2019 – 2020
- Hare Lab, Duke University, Department of Evolutionary Anthropology; Durham, NC; 2017 – 2019

Professional Service

- Student Mentoring

Year Graduated	Student	Role
2021	Daniel Sheanshang	MS Committee Chair
2021	Lynsie Warr	MS Committee Member
2021	Madeline Morris	MS Committee Member
2020	Maryanne Allen	BS Research Mentor
2020	Derik Mehl	BS Research Mentor
2020	Spencer Ebert	MS Committee Member
2020	Shelby Taylor	MS Committee Member

- Departmental Service
    - · Comprehensive Exam Committee (Aug 2019 - Present)
    - · Seminar Co-Coordinator (Jul 2019 - Present)
- Peer Review For:
    - · 2020: Electronic Journal of Statistics; Spatial Statistics; Spatial and Spatio-temporal Epidemiology; Statistics and Computing
    - · 2019: Environmetrics; Journal of Agricultural, Biological and Environmental Statistics; Spatial Statistics; Stochastic Environmental Research and Risk Assessment
    - · 2018: Environmetrics

Memberships

- American Statistical Association: 2014-Present
- International Society for Bayesian Analysis: 2017-Present
- American Geophysical Union: 2017-Present