Andrew Cooper

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EDUCATION

Virginia Tech, Blacksburg, VA — January 2026
- GPA: 3.9
- Relevant Coursework: Predictability and Non-Linearity, Spatial Statistics, Measure Theory, Bayesian Econometrics

PhD in Statistical Science

Duke University, Durham, NC — May 2020

Master's in Statistical Science
- GPA: 3.82
- Relevant Coursework: Predictive Modeling, Statistical Programming in R, Decision Theory, Statistical Computation in Python, Machine Learning, Deep Learning, High Dimensional Data Analysis, Real Analysis, Computer Vision

Duke University, Durham, NC — May 2018

Bachelor of Science in Statistical Science, Bachelor of Science in Computer Science
- Relevant Coursework: Modeling in Economic and Social Sciences, Regression Analysis, Probability, Classical and Bayesian Inference, Social Networks, Discrete Math, Computer Architecture, Operating Systems, Algorithms, Databases

WORK AND LEADERSHIP EXPERIENCE

Los Alamos National Laboratory, Los Alamos, New Mexico — Summer 2024-Present
- Statistician, Computational and Computer Sciences division
  - Designed and executed laboratory experiments to explore stochastic properties of RFID signal propagation.
  - Developed a novel probabilistic machine learning algorithm for RFID tag localization to expedite lab operations.
  - Authored general open-source software in R for angular response modeling with Gaussian Processes.

NASA Langley Research Center, Hampton, Virginia — Summer 2023
- Statistician, Dynamic Systems and Control, Intelligent Flight Systems division
  - Evaluated wing designs capabilities mid-flight with large-scale aeroelastic simulators.
  - Implemented a Bayesian optimization framework for identifying robust designs under epistemic uncertainty.
  - Authored technical paper on applied data science in aeronautics for the AIAA Aviation Forum, translating complex statistical frameworks into actionable insights for the aerospace engineering community.

Aerospace Corporation, El Segundo, California — Summer - Spring 2022
- Statistician, Reliability and Statistics, Systems Engineering division
  - Developed Bayesian survival models to estimate reliability and project expected lifetimes for military and commercial satellite constellations.
  - Formulated novel strategies for uncertainty quantification in deep learning architectures to mitigate "black-box" risk in mission-critical deployments.
  - Acted as statistical consultant for interdepartmental systems engineering teams, translating probabilistic risk assessments into actionable recommendations.

Mu Sigma Rho, Blacksburg, Virginia — Fall 2023 - Spring 2025
- Vice president, Virginia Tech chapter
  - Organized events for graduate students in the Statistics department.
  - Led review sessions for first-year graduate students to prepare them for department qualifying exams.
  - Invited and arranged members of the statistics community to visit and speak at the department.

PUBLICATIONS AND AWARDS

- Cooper, et al. 2025. "Robust Wrapped Gaussian Process Inference for Noisy Angular Data." *Preprint*.
- Cooper, Andrew, Annie S. Booth, Robert B. Gramacy. 2025. "Modernizing Full Posterior Inference for Surrogate Modeling of Categorical-Output Simulation Experiments." *To appear in Quality Engineering*.
- Booth, Annie S., Andrew Cooper, Robert B. Gramacy. 2023. "Non-Stationary Gaussian Process Surrogates." *Preprint*.
- Booth, Annie S., Andrew Cooper, Robert B. Gramacy. 2023. "Vecchia-Approximated Deep Gaussian Processes for Computer Experiments." Journal of Computational and Graphical Statistics 32 (3): 824–37.
- Jean Gibbon's STAR Award, Virginia Tech Department of Statistics, 2023

SKILLS AND INTERESTS

Computer Languages

- R, Python, SAS, MATLAB, STATA, and JMP statistical software programs

Languages

- Spanish (moderate proficiency)