

# Spencer Woody

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## EDUCATION

*Ph.D. in Statistics* Aug 2016 – May 2021 (expected)  
University of Texas at Austin  
Dissertation Committee: James G. Scott (co-advisor), Jared S. Murray (co-advisor),  
Carlos M. Carvalho, Corwin Zigler, and Peter Hoff

*B.S. in Economics and Statistical Science (dual major)* Aug 2011 – May 2015  
Duke University, Durham, NC

## PRE-PRINTS & PAPERS UNDER REVIEW

- **Woody, Spencer**, Carlos M. Carvalho, and Jared S. Murray. "Bayesian inference for treatment effects under nested subsets of controls." *arXiv preprint. arXiv:2001.07256* (2020).
- **Woody, Spencer**, Novin Ghaffari, and Lauren Hund. "Bayesian Model Calibration for Extrapolative Prediction via Gibbs Posteriors." *arXiv preprint. arXiv:1909.05428* (2019).
- **Woody, Spencer**, Carlos M. Carvalho, and Jared S. Murray. "Model interpretation through lower-dimensional posterior summarization." *arXiv. preprint arXiv:1905.07103* (2019). Under revision for publication at *Journal of Computational and Graphical Statistics*.
- **Woody, Spencer**, and James G. Scott. "Optimal post-selection inference for sparse signals: a non-parametric empirical-Bayes approach." *arXiv preprint. arXiv:1810.11042* (2018).

## PEER-REVIEWED JOURNAL ARTICLES

- Feider, Clara L., **Spencer Woody**, Suzanne Ledet, Jialing Zhang, Katherine Sebastian, Michael T. Breen, and Livia S. Eberlin. "Molecular Imaging of Endometriosis Tissues using Desorption Electrospray Ionization Mass Spectrometry." *Scientific Reports* **9**, 15690 (2019).
- DeHoog, Rachel J., Jialing Zhang, Elizabeth Alore, John Q. Lin, Wendong Yu, **Spencer Woody**, Christopher Almendariz, Monica Lin, Anton F. Engelsman, Stan B. Sidhu, Robert Tibshirani, James Suliburk, and Livia S. Eberlin. "Preoperative metabolic classification of thyroid nodules using mass spectrometry imaging of fine-needle aspiration biopsies." *Proceedings of the National Academy of Sciences* Oct 2019, **116** (43) 21401–21408.
- Carvalho, Carlos, Avi Feller, Jared Murray, **Spencer Woody**, and David Yeager. "Assessing Treatment Effect Variation in Observational Studies: Results from a Data Challenge." *Observational Studies*, **5** 21–35 (2019).

## TALKS & PRESENTATIONS

- “Model Interpretation through Posterior Summarization.” SDS Seminar Series, University of Texas at Austin. Oct 2019.
- “Posterior Summarization for the Causal Linear Model.” Poster presentation. Atlantic Causal Inference Conference, McGill University, Montreal, Canada. May 2019.
- “Bayesian model calibration using preposterior generalized cross-validation.” Invited talk. Uncertainty Quantification Mini Workshop, University of Texas at Austin. Sep 2018.
- “Bayes-optimal post-selection inference in spatial modeling.” Contributed talk. World Meeting of the International Society of Bayesian Analysis, University of Edinburgh, United Kingdom. Jun 2018.

## EMPLOYMENT

*Research Assistant for Professor Carlos Carvalho* Aug 2018 – present  
Department of Information, Risk, and Operations Management  
University of Texas at Austin McCombs School of Business

*Research Intern for Sandia National Laboratories* Aug 2017 – Jun 2018  
University of Texas at Austin  
Sandia National Laboratories (Albuquerque, NM)

*Research Assistant for Eberlin Research Group* Aug 2017 – Jun 2018  
Department of Chemistry  
University of Texas at Austin

*Research Assistant for Professor Mike Daniels* Jan 2017 – May 2017  
Department of Statistics and Data Sciences  
University of Texas at Austin

## HONORS

- University Graduate Continuing Fellowship (2020 – 2021), The University of Texas at Austin

## PROFESSIONAL MEMBERSHIPS

- American Statistical Association, since 2016
- International Society for Bayesian Analysis, since 2017

## PROFESSIONAL SERVICE

Reviewer for:

- *Journal of Computational and Graphical Statistics, Annals of Applied Statistics*

## **SOFTWARE**

R package saFAB for Bayes-optimal selection-adjusted confidence sets. Companion R package to the paper by Woody & Scott (2018), "Optimal post-selection inference for sparse signals: a nonparametric empirical-Bayes approach." *arXiv:1810.11042*. Available at [github.com/spencerwoody/saFAB](https://github.com/spencerwoody/saFAB)