

# Spencer Woody

University of Texas at Austin  
Department of Statistics and Data Sciences  
2317 Speedway D9800  
Austin, TX 78712

Office: GDC 6.818C  
Email: [spencer.woody@utexas.edu](mailto:spencer.woody@utexas.edu)  
Website: [spencerwoody.github.io](https://spencerwoody.github.io)  
Mobile: +1 (512) 992-5592

## EDUCATION

*Ph.D. in Statistics* Aug 2016 – Aug 2020  
University of Texas at Austin

Dissertation: “Bayesian approaches for inference after selection and model fitting”  
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, P. Richard Hahn, and Jared S. Murray. “Estimating heterogeneous effects of continuous exposures using Bayesian tree ensembles: revisiting the impact of abortion rates on crime” *arXiv preprint. arXiv:2007.09845* (2020).
- **Woody, Spencer**, Mauricio Garcia Tec, Maytal Dahan, Kelly Gaither, Spencer Fox, Lauren Ancel Meyers, and James G. Scott. “Projections for first-wave COVID-19 deaths across the US using social-distancing measures derived from mobile phones” *medRxiv* 2020.04.16.20068163; doi: <https://doi.org/10.1101/2020.04.16.20068163>
- Yeager, David S., Jamie M. Carroll, Jenny Buontempo, Andrei Cimpian, **Spencer Woody**, Robert Crosnoe, Chandra Muller, Jared Murray, Pratik Mhatre, Nicole Kersting, Christopher Hulleman, Molly Kudym, Mary Murphy, Angela Duckworth, Gregory Walton, and Carol S. Dweck. “Teacher Mindsets Help Explain Where a Growth Mindset Intervention Does and Doesn’t Work.” Under review. 2020.
- **Woody, Spencer**, Oscar Hernan Madrid Padilla, and James G. Scott. “Optimal post-selection inference for sparse signals: a nonparametric empirical-Bayes approach.” *arXiv preprint. arXiv:1810.11042* (2020). Under revision for publication at *Biometrika*.
- **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).

## PEER-REVIEWED JOURNAL ARTICLES

- **Woody, Spencer**, Carlos M. Carvalho, and Jared S. Murray. “Model interpretation through lower-dimensional posterior summarization.” *Journal of Computational and Graphical Statistics*. 2020 (to appear).  
<https://doi.org/10.1080/10618600.2020.1796684>
- Shen, C. Y., **S. Woody**, S. Fuller, L. K. Grange, K. D. Tran, J. G. Lee, D. O. Kikkawa, and J. E. Lee. “Elevated intraocular pressure in burn patients undergoing fluid resuscitation: an opportunity to avoid orbital compartment syndrome.” *Journal of Academic Ophthalmology* 12, no. 02 (2020): e87-e91.
- 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). DOI:10.1038/s41598-019-51853-y
- 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.  
DOI: 10.1073/pnas.1911333116ba
- 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

- “Estimating heterogeneous effects of continuous exposures with BART.” Contributed talk. Society in Bayesian Inference in Econometrics and Statistics (virtual). Aug 2020.
- “Interpreting treatment effect heterogeneity through posterior summarization.” Contributed talk. Joint Statistical Meetings (virtual). Aug 2020.
- “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

<i>Postdoctoral Fellow</i> Supervisor: Professor Lauren Ancel Meyers Department of Integrative Biology University of Texas at Austin	Sep 2020 – present
<i>Research Assistant for Professor Lauren Ancel Meyers</i> Department of Integrative Biology University of Texas at Austin	May 2020 – Aug 2020
<i>Research Assistant for Professor Carlos Carvalho</i> Department of Information, Risk, and Operations Management University of Texas at Austin McCombs School of Business	Aug 2018 – May 2020
<i>Research Intern for Sandia National Laboratories</i> Albuquerque, NM Supervisor: Dr. Lauren Hund	Jun 2018 – Aug 2018
<i>Research Assistant for Eberlin Research Group</i> Department of Chemistry University of Texas at Austin	Aug 2017 – Jun 2018
<i>Research Assistant for Professor Mike Daniels</i> Department of Statistics and Data Sciences University of Texas at Austin	Jan 2017 – May 2017

## HONORS & AWARDS

- 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, Biostatistics, PLOS Computational Biology, Journal of the American Statistical Association*

## 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 non-parametric empirical-Bayes approach.” *arXiv:1810.11042*. Available at [github.com/spencerwoody/saFAB](https://github.com/spencerwoody/saFAB)