Spencer Woody

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EDUCATION

Ph.D. in Statistics   Aug 2016 – Aug 2020
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

- Evan L Ray, Nutcha Wattanachit, Jarad Niemi, Abdul Hannan Kanji, Katie House, Estee Y Cramer, Johannes Bracher, Andrew Zheng, Teresa K Yamana, Xinyue Xiong, **Spencer Woody**, Yuanjia Wang, Lily Wang, Robert L Walraven, Vishal Tomar, Katharine Sherratt, Daniel Sheldon, Robert C Reiner Jr, B. Aditya Prakash, Dave Osthus, Michael Lingzhi Li, Elizabeth C Lee, Ugur Koyluoglu, Pinar Keskinocak, Youyang Gu, Quanquan Gu, Glover E. George, Guido España, Sabrina Corsetti, Jagpreet Chhatwal, Sean Cavany, Hannah Biegel, Michal Ben-Nun, Jo Walker, Rachel Slayton, Velma Lopez, Matthew Biggerstaff, Michael A Johansson, Nicholas G Reich *medRxiv 2020.08.19.20177493*;
doi: `https://doi.org/10.1101/2020.08.19.20177493`

- **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**, 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

- Johnson, K. E.[1], **Woody, S.**[1], Lachmann, M., Fox, S. J., Klima, J., Hines, T. S., and Meyers, L. A. "Real-time Projections of SARS-CoV-2 B. 1.1. 7 Variant in a University Setting, Texas, USA." *Emerging Infectious Diseases* 27.12.

- **Woody, S.**, O. H. M. Padilla, J. G. Scott. "Optimal post-selection inference for sparse signals: a nonparametric empirical Bayes approach", *Biometrika*, 2021;, asab014, `https://doi.org/10.1093/biomet/asab014`

- **Woody, Spencer**, Carlos M. Carvalho, and Jared S. Murray. "Model interpretation through lower-dimensional posterior summarization." *Journal of Computational and Graphical Statistics* 30.1 (2021): 144-161.

- 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* (to appear). (2020).

- 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

- "Interpreting treatment effect heterogeneity through posterior summarization." Contributed talk. Joint Statistical Meetings, Philadelphia, Pennsylvania. 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.

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[1]These authors contributed equally to this article.

EMPLOYMENT

Postdoctoral Researcher   Aug 2020 – present
Department of Integrative Biology
University of Texas at Austin Supervisor: Lauren Ancel Meyers

Research Assistant for Professor Carlos Carvalho   Aug 2018 – Aug 2020
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
Albuquerque, NM
Supervisor: Dr. Lauren Hund

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 & AWARDS

- Invited presentation at Joint Statistical Meeting (JSM) 2022.
- 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 Machine Learning Research*, *Journal of the American Statistical Association*, *Emerging Infectious Diseases*

SOFTWARE

- R package possum for model interpretation through *pos*terior *sum*marization.
  Available at github.com/spencerwoody/possum

- 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`