

Allison E. Hainline

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RESEARCH INTERESTS Statistical Analysis of Diffusion MRI, Likelihood Paradigm, Statistical Computing, Cancer Biostatistics

EDUCATION **Vanderbilt University**, Nashville, TN

Ph.D., Biostatistics, *Expected*: Summer 2018

- Advisor: Hakmook Kang, Ph.D

Baylor University, Waco, TX

B.S., Statistics (Biology minor), May 2013

- *Summa Cum Laude, Phi Beta Kappa*
- Honors Thesis: *Frequentist and Bayesian Modeling in the Presence of Unmeasured Confounding*

RESEARCH EXPERIENCE **Research Assistant** January 2015 to present
Department of Biostatistics,
Vanderbilt University
Supervisor: Hakmook Kang, Ph.D

Research Assistant June/July 2012
Statistical Genetics Undergraduate Research Program,
Dordt University, Sioux Center, IA
Supervisors: Nathan Tintle, Ph.D

PUBLICATIONS

1. **Allison E. Hainline**, Vishwesh Nath, Prasanna Parvathaneni, Justin A. Blaber, Kurt G. Schilling, Adam W. Anderson, Hakmook Kang, Bennett A. Landman. “Empirical Single Sample Quantification of Bias and Variance in Q-ball? In Magnetic Resonance in Medicine. (Under review)
2. **Allison E. Hainline**, Vishwesh Nath, Prasanna Parvathaneni, Justin Blaber, Baxter Rogers, Allen Newton, Jeffrey Luci, Heidi Edmonson, Hakmook Kang and Bennett A. Landman. “Evaluation of Inter-site Bias and Variance in Diffusion-Weighted MRI” In SPIE Medical Imaging, International Society for Optics and Photonics, 2018. (In press)
3. Vishwesh Nath, Kurt G. Schilling, **Allison E. Hainline**, Prasanna Parvathaneni, Justin A. Blaber, Ilwoo Lyu, Adam W. Anderson, Hakmook Kang, Allen T. Newton, Baxter P. Rogers and Bennett A. Landman. “SHARD: Spherical Harmonic based Robust Outlier Detection for HARDI Methods” In SPIE Medical Imaging, International Society for Optics and Photonics, 2018. (In press)
4. Lakomkin, N., **Hainline, A.**, Kang, H., Hutson, M. S., Arteaga, C., Abramson, R. “The Attenuation Distribution Across the Long Axis of Breast Cancer Liver Metastases at CT: A Quantitative Biomarker for Predicting Overall Survival.” *Am J Roentgenol.* 2017. doi: 10.2214/AJR.17.18249 [Epub ahead of print]
5. Kang, H., **Hainline, A.**, Arlinghaus, L., Elderidge, S., Abramson, V., Chakravarthy, A., Abramson, R., Bingham, B., Yankeelov, T. “Combining multi-parametric MRI with receptor information to optimize prediction of pathologic response to neoadjuvant therapy in breast cancer: Preliminary results” (Under review)

6. Virostko, J., **Hainline, A.**, Kang, H., Arlinghaus, L., Abramson, R., Barnes, S., Blume, J., Avery, S., Patt, D., Goodgame, B., Yankeelov, T., Sorace, A. “Dynamic Contrast-Enhanced MRI and Diffusion-Weighted MRI for Predicting the Response of Locally Advanced Breast Cancer to Neoadjuvant Therapy: A Meta-analysis” (In press)
7. Prasanna Parvathaneni; Vishwesh Nath; Justin A Blaber; Kurt G Schilling; **Allison E Hainline**; Ed Mojahed; Adam W Anderson; Bennett A Landman. “Empirical Reproducibility, Sensitivity, and Optimization of Acquisition Protocol, for Neurite Orientation Dispersion and Density Imaging using AMICO” In Magnetic Resonance Imaging. (Submitted)
8. Greco, B., **Hainline, A.**, Arbet, J., Grinde, K., Benitez, A., Tintle, N. (2016) “A general approach for combining diverse rare variant association tests provides improved robustness across a wider range of genetic architectures.” *Eur J Hum Genet*, 24(5):767-773.
9. **Hainline, A.**, Alvarez, C., Luedtke, A., Greco, B., Beck, A., Tintle, N. (2014) “Evaluation of the power and type I error of recently proposed family-based tests of association for rare variants.” *BMC Proceedings*, 8(Suppl 1), S36.
10. Greco, B., Luedtke, A., **Hainline, A.**, Alvarez, C., Beck, A., Tintle, N. L. (2014). “Application of family-based tests of association for rare variants to pathways.” *BMC Proceedings*, 8(Suppl 1), S105.

HONORS &
AWARDS

Student Awards — Baylor University

- Dean’s List 2009-2013
- Robert C. Byrd Scholar
- Henry H. Arnold Education Grant Recipient

FORMAL POSTERS
& PRESENTATIONS

1. Hainline, A., Greco, B., Zawistowski, M., Tintle, N. *A Variable Threshold Odds Ratio Weighted Sum Test*. 2012. 1000 Genomes Project Community Meeting. July 13, 2012. Ann Arbor, MI.
2. Hainline, A., Alvarez, C., Luedtke, A., Greco, B., Beck, A., Tintle, N. *Evaluation of the power and type I error of recently proposed family-based tests of association for rare variants*. 2012. Genetic Analysis Workshop 18. October 15, 2012. Stevenson, WA.
3. Hainline, A. *A Likelihood-based approach to model selection: AIC*. Biostatistics Departmental Seminar. October 26, 2016. Nashville, TN. (internal presentation)

TEACHING
EXPERIENCE

Teaching Assistant BIOS 7345 - Advanced Regression Analysis I Instructor: Hakmook Kang, Ph.D Department of Biostatistics, Vanderbilt University	Fall 2015, Fall 2016
Teaching Assistant BIOS 6321 - Clinical Trials and Experimental Design Instructor: Tatsuki Koyama, Ph.D Department of Biostatistics, Vanderbilt University	Spring 2016
Teaching Assistant BIOS 7346 - Advanced Regression Analysis II Instructor: Jonathan Schildcrout, Ph.D Department of Biostatistics, Vanderbilt University	Spring 2017