Maria Tackett

Assistant Professor of the Practice
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Education

Ph.D. in Statistics   2013 - 2018
University of Virginia

- Dissertation: *Creating Fingerprint Databases and a Bayesian Approach to Quantify Dependencies in Evidence*
- Advisor: Dan Spitzner

M.S. in Statistics   2009 - 2010
University of Tennessee-Knoxville

B.S. in Mathematics   2005 - 2009
University of Tennessee-Knoxville

Academic Appointments

Assistant Professor of the Practice   2018 - present
Duke University, Department of Statistical Science

Teaching Experience

Duke University

- STA 199: Intro to Data Science   Fall 2020, Fall 2019, Spring 2019

- STA 210: Regression Analysis   Spring 2021, Fall 2020, Spring 2020,
  Fall 2019, Spring 2019, Fall 2018

University of Virginia

- STAT 1100: An Introduction to Statistics   Spring 2018, Fall 2017, Spring 2017,
  Fall 2016, Spring 2016, Fall 2015, Summer 2015
- STAT 2120: Introduction to Statistical Analysis   Summer 2017, Summer 2016

Virginia Commonwealth University

- SLWK 609: Foundations of Research in Social Work Practice   Spring 2017

University of Tennessee-Knoxville

- STAT 201: Introduction to Statistics   Fall 2010, Spring 2010

Invited Talks

1. *Telling stories with data.* Abraham Lincoln High School. Online (Philadelphia, PA). January 2021.

2. *Undergraduate research in statistics.* OURFA^{2}M^2 Conference. Online. December 2020.

3. *Thinking about lectures in an intro data science course.* Toronto Data Workshop. Online (University of Toronto Department of Statistical Sciences). December 2020.

4. *Women in Statistics and Computing.* FEMMES Hacks Conference. Online. October 2020. (Panelist)

5. *Opportunities in Statistics and Data Science: Lightning Talks (Academia, Government, & NonProfit).* StatFest. Online. September 2020. (Panelist)

6. *Who's Underrepresented? Modeling Undercounts in the U.S. Census.* Joint Statistical Meeting. Online. August 2020.

7. *Making remote lectures active and inclusive in a large undergraduate course.* Teaching and Learning Statistics Online Conference. Online (Royal Statistical Society (RSS) Teaching Statistics Special Interest Group). July 2020.

8. *You don't have to be an expert to create something meaningful.* rstudio::conf. San Francisco, CA. January 2020.

9. *Reproducible Research - Education and Practice.* Duke Center for Data and Visualization Sciences. Durham, NC. November 2019. (Panelist)

10. *My Journey in Statistics.* FEMMES Hacks Conference. Durham, NC. November 2019. (Keynote)

11. *Statistics in Practice.* FOCUS Cluster Dinner Series at Duke University: What if? Explaining the Past/Predicting the Future. Durham, NC. November 2019.

12. *Beyond the Buzzword: A Look at Data Science in Practice and How You Can Be a Part of It.* SAMSI Diversity in Data Science and Machine Learning Conference. Washington, DC. October 2019. (Plenary talk)

13. *Women in Machine Learning and Data Science.* Duke Machine Learning Day. Durham, NC. March 2019. (Panelist)

14. *Women in Industry.* Duke University Business Oriented Women Meeting. Durham, NC. September 2018. (Panelist)

Contributed Presentations

1. *You don't have to be an expert to create something meaningful.* Women in Statistics and Data Science Conference. Online. October 2020.

2. *Using GitHub and RStudio to Facilitate Authentic Learning Experiences in a Regression Analysis Course.* Women in Statistics and Data Science Conference. Bellevue, WA. October 2019.

3. *Using GitHub and RStudio to Facilitate Authentic Learning Experiences in a Regression Analysis Course.* Joint Statistical Meeting. Denver, CO. July 2019.

4. *Using GitHub and RStudio to Facilitate Authentic Learning Experiences in a Regression Analysis Course.* United States Conference on Teaching Statistics. State College, PA. May 2019. (Poster)

5. *Teaching Large Classes in Statistics Using Active Learning Spaces.* Innovation in Pedagogy Summit. Charlottesville, VA. May 2016. (Panelist)

6. *Clustering High-Dimensional Categorical Data Using a Bayesian Finite Mixture Model.* Quantitative Collaborative Fellows Poster Session. Charlottesville, VA. April 2017. (Poster)

7. *Understanding Variability Between Groups of Sequences Using a Bayesian Object-Oriented Data Model.* Joint Statistical Meeting. Seattle, WA. August 2016.

8. *Understanding Object-Oriented Data Using Optimal Matching.* Quantitative Collaborative Fellows Poster Session. Charlottesville, VA. April 2015. (Poster)

Grants & Fellowships

Duke University Bass Connections Brain & Society Grant. *Mental Health and the Justice System in Durham*, 2020 - 2022, Role: Co-PI, $14,200 each academic year.

Duke University Data+. *Mental Health and the Justice System in Durham.* 2021 - 2021, Role: Co-PI, $17,500 each year.

Duke University Trinity Research Enhancement Fund. *Toward a More Sustainable Culture of Undergraduate Research in Statistical Science*, 2019, $3,000.

Duke University Learning Innovation Jump Start Grant, 2019.

National Science Foundation. *Collaborative Research: Accelerating the Pace of Research and Implementation of Writing-to-Learn Pedagogies Across STEM Disciplines*, 2018 - 2020, Role: Key Faculty.

Duke University Learning Innovation Active Learning Fellows. 2019 - 2020. $1,000.

University of Virginia Course Design Institute Fellowship,2016.

Service to Profession

UT-Austin Dana Center Statistics Authoring Group, 2021

UT-Austin Dana Center Statistics Advisory Group, 2020

Howard Hughes Medical Institute Data Exploration Course Advisory Committee, 2020 - present

Journal of Statistics Education, Associate Editor, 2020 - present

ASA Section on Statistics and Data Science Education, Communications Officer, 2020 - present

CAUSE Undergraduate Statistics Project Competition Co-Chair, 2020 - present

Chance Magazine Statistics Education Column: Taking a Chance in the Classroom, Editor, 2019 - present

ASA DataFest Steering Committee, 2019 - present

CAUSE Undergraduate Statistics Project Competition Judge, 2019

ASA Section on Bayesian Statistical Science Student Paper Competition Review Committee, 2019

Journal Reviews: Journal of Statistics Education; Criminology, Criminal Justice, Law & Society; Technology Innovations in Statistics Education

Book Reviews: Chapman & Hall

University & Department Service

Statistical Science Anti-Racism Committee, 2021

Trinity Arts & Sciences Committee on Curriculum, 2019 - present

ASA DataFest@Duke Organizer, 2019 - present

Master in Interdisciplinary Data Science Admissions Committee, 2020

Statistical Science Undergraduate Curriculum Committee, 2019 - present

Statistical Science Master's Student Advisor, 2019 - present

Duke SPIRE Mentor, 2019 - present

Statistical Science Undergraduate Major Advisor, 2018 - present

Statistical Science Committee on Departmental Code of Conduct, 2019

Females Excelling More in Math, Engineering, & Science (FEMMES) Capstone, 2019

Statistical Science Master's Program Admissions Committee, 2019, 2021

Duke Datathon Judge, 2018

Publications

Peer Reviewed Papers

1. Dotson, M., Alvarez, V., Tackett, M., Asturias, G., Leon, I., Ramanujam, M. (2020) *Design Thinking-Based STEM Learning: Preliminary Results on Achieving Scale and Sustainability Through the IGNITE Model*, Frontiers in Education, 5: 14-24.

In-print Papers

1. Beckman, M., Çetinkaya-Rundel M., Horton, N., Rundel, C., Sullivan, A., Tackett, M. Implementing version control with Git as a learning objective in statistics courses. arxiv.org/abs/2001.01988.

Other

1. Tackett, M. (2020, January 14). *A flipped classroom sparks online engagement*. Duke Covid Diaries Series.

2. Tackett, M., Çetinkaya-Rundel M. (2020). *COVID-19 Data in the Classroom*, Chance Magazine Statistics Education Column, Taking a Chance in the Classroom, 33(3): 63 - 66.

3. Tackett, M. (2020, July 23). *Creating Interactive Web Apps for Statistics*. Duke Musings Blog.

4. Çetinkaya-Rundel M., Tackett, M. (2020). *From Drab to Fab: Teaching Visualization via Incremental Improvements*, Chance Magazine Statistics Education Column, Taking a Chance in the Classroom, 33(2): 31 - 41.

5. Banks, D., Tackett, M. (2020). Bayesian Methods and Forensic Evidence. In Banks, D., Kafadar, K., Kaye, D., Tackett, M. (Eds.), *Handbook of Forensic Statistics* (pp. 73 - 90), Chapman & Hall.

6. Banks, D., Kafadar, K., Kaye, D., Tackett, M. (Eds.), *Handbook of Forensic Statistics*, Chapman & Hall.

Professional Experience

Senior Statistician 2013
Capital One, Richmond, VA

Developed the first generation of statistical models to perform deposit forecasts for Capital One Bank.

Statistician 2011 - 2012
Capital One, Richmond, VA
Designed experiments for mail marketing campaigns in Capital One Bank.

Professional Affiliations

RStudio Certified Instructor, 2020 - present

American Statistical Association, 2017 - present

National Math Alliance, 2019 - present

Center for Statistics and Applications in Forensic Evidence, 2017 - 2019