

# Maria Tackett

Assistant Professor of the Practice

Duke University

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## Education

**Ph.D. in Statistics** 2018  
University of Virginia

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

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

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## Academic Appointments

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

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## Teaching Experience

### *Duke University*

STA 199: Intro to Data Science Fall 2021, Fall 2020, Fall 2019, Spring 2019

STA 210: Regression Analysis Fall 2021, 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

### *Workshops*

Strengthening Conceptual Understanding in Introductory Statistics: Incorporating active and inclusive teaching and learning strategies for in-person and virtual settings (6 session series). UT Austin Dana Center. June - July 2021.

Introduction to R. ENAR Fostering Diversity in Biostatistics Workshop. March 2021.

## Invited Talks

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1. *Women in Industry and Academia*. FEMMES+ Hacks Conference. Online. October 2021. (Panelist)
2. *What a tap class has taught me about teaching statistics*. USCOTS. Online. June 2021.
3. *Building Websites in RStudio*. RLadies Baltimore. Online. April 2021.
4. *Building Websites in RStudio*. RLadies Amherst. Online. March 2021.
5. *Telling stories with data*. Abraham Lincoln High School. Online (Philadelphia, PA). January 2021.
6. *Undergraduate research in statistics*. OURFA<sup>2</sup>M<sup>2</sup> Conference. Online. December 2020.
7. *Thinking about lectures in an intro data science course*. Toronto Data Workshop. Online (University of Toronto Department of Statistical Sciences). December 2020.
8. *Women in Statistics and Computing*. FEMMES Hacks Conference. Online. October 2020. (Panelist)
9. *Opportunities in Statistics and Data Science: Lightning Talks (Academia, Government, & NonProfit)*. StatFest. Online. September 2020. (Panelist)
10. *Who's Underrepresented? Modeling Undercounts in the U.S. Census*. Joint Statistical Meeting. Online. August 2020.
11. *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.
12. *You don't have to be an expert to create something meaningful*. rstudio::conf. San Francisco, CA. January 2020.
13. *Reproducible Research - Education and Practice*. Duke Center for Data and Visualization Sciences. Durham, NC. November 2019. (Panelist)
14. *My Journey in Statistics*. FEMMES Hacks Conference. Durham, NC. November 2019. (Keynote)
15. *Statistics in Practice*. FOCUS Cluster Dinner Series at Duke University: What if? Explaining the Past/Predicting the Future. Durham, NC. November 2019.
16. *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)
17. *Women in Machine Learning and Data Science*. Duke Machine Learning Day. Durham, NC. March 2019. (Panelist)
18. *Women in Industry*. Duke University Business Oriented Women Meeting. Durham, NC. September 2018. (Panelist)

## Contributed Presentations

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1. *Version control as a learning objective in statistics and data science courses*. 63rd World Statistics Congress. Online. July 2021.
2. *GitHub and intro stats: technology to support group and project-based learning*. USCOTS. Online. July 2021. (Poster)
3. *Developing Interactive Statistics Apps: A look at the project and student experience*. USCOTS. Online. July 2021. (Poster)

4. *You don't have to be an expert to create something meaningful*. Women in Statistics and Data Science Conference. Online. October 2020.
5. *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.
6. *Using GitHub and RStudio to Facilitate Authentic Learning Experiences in a Regression Analysis Course*. Joint Statistical Meeting. Denver, CO. July 2019.
7. *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)
8. *Teaching Large Classes in Statistics Using Active Learning Spaces*. Innovation in Pedagogy Summit. Charlottesville, VA. May 2016. (Panelist)
9. *Clustering High-Dimensional Categorical Data Using a Bayesian Finite Mixture Model*. Quantitative Collaborative Fellows Poster Session. Charlottesville, VA. April 2017. (Poster)
10. *Understanding Variability Between Groups of Sequences Using a Bayesian Object-Oriented Data Model*. Joint Statistical Meeting. Seattle, WA. August 2016.
11. *Understanding Object-Oriented Data Using Optimal Matching*. Quantitative Collaborative Fellows Poster Session. Charlottesville, VA. April 2015. (Poster)

## Grants & Fellowships

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Duke Learning Innovation's Carry the Innovation Forward Fund. *Building Community and Self-Efficacy Through Inclusive Teaching Practices*, 2021 - 2023. \$4,616.

Duke Trinity Research Enhancement Fund. *Toward a More Sustainable Culture of Undergraduate Research in Statistical Science*, 2021 - 2022, \$11,000.

Duke Bass Connections - Brain & Society. *Mental Health and the Justice System in Durham*, 2020 - 2023, Role: Co-PI, \$14,200 each academic year.

Duke Data+. *Mental Health and the Justice System in Durham*. 2020 - 2022, Role: Co-PI, \$17,500 each year.

Duke Trinity Research Enhancement Fund. *Toward a More Sustainable Culture of Undergraduate Research in Statistical Science*, 2020 - 2021, \$3,000.

Duke 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

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*Curriculum development*

UT-Austin Dana Center Statistics Curriculum Authoring Group, 2021

UT-Austin Dana Center Statistics Curriculum Advisory Group, 2020

Howard Hughes Medical Institute Data Exploration Course Advisory Committee, 2020 - 2021

### *Editorial service*

Journal of Statistics Education, Associate Editor, 2020 - present

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

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

Book Reviews: Chapman & Hall

### *ASA & Statistics Education*

Symposium on Statistics & Data Science Program Committee, Poster Chair, 2021 - 2022

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

CAUSE Undergraduate Statistics Project Competition Co-Chair, 2020 - 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

## **University & Department Service**

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Women in Research House Course, Faculty Advisor, 2021

Library Council, 2021 - present

A.B. Duke Scholars Program Interviewer, 2021

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 & 2021

## **Publications**

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### *Peer Reviewed Papers*

1. Beckman, M. D., Çetinkaya-Rundel, M., Horton, N. J., Rundel, C. W., Sullivan, A. J., & Tackett, M. (2020). *Implementing version control with Git and GitHub as a learning objective in statistics and data science courses*. Journal of Statistics Education, 1-35.

- 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 IG-NITE Model*. *Frontiers in Education*, 5: 14-24.

#### *In-Review Papers*

- Schramm-Sapyta, N., Ralph, M., Huynh, L., Tang, B., Tackett, M., Easter, M., Larsen, I. (2021) *Role of substance use and mental illness diagnosis in rearrest in a county detention facility*.
- Easter, M., Schramm-Sapyta, N., Tackett, M., Larsen, I., Tang, B., Ralph, M., Huynh, L. (2021) *Emergency department utilization by people ever detained in a county jail*.

#### *Other*

- Tackett, M., Burbank, K., Canner, J., & Çetinkaya-Rundel, M. (2021). Teaching Courses Focused on Social Good. *Chance*, 34(3), 69-72.
- Tackett, M. (2021, January 14). [A flipped classroom sparks online engagement](#). Duke Covid Diaries Series.
- Tackett, M., & Çetinkaya-Rundel, M. (2020). COVID-19 Data in the Classroom. *CHANCE*, 33(3), 63-66.
- Tackett, M. (2020, July 23). [Creating Interactive Web Apps for Statistics](#). Duke Musings Blog.
- Çetinkaya-Rundel, M., & Tackett, M. (2020). From drab to fab: Teaching visualization via incremental improvements. *CHANCE*, 33(2), 31-41.
- 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.
- Banks, D., Kafadar, K., Kaye, D., Tackett, M. (Eds.), *Handbook of Forensic Statistics*, Chapman & Hall.

## Advising

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#### *Undergraduate thesis committee*

Malavi Ravindran, 2021

Ben Feder, 2019

Michael Model, 2020

Srini Sunil, 2019

Daniel Levine, 2019

#### *Doctoral thesis committee*

Meng Xie, 2021

#### *Independent study*

Steven Herrera, 2020

Caroline Levenson, 2019

#### *Other supervised research*

Brianna Cellini, 2021 - 2022

John Liakos, 2021 - 2022

William Feng, 2021 - 2022

Sean Li, 2021

Maya Pandey, 2021 - 2022

Emmanuel Mokel, 2021

Shari Tian, 2021

Joe Choo, 2020

Matthew Ralph, 2020 - 2022

Abbey List, 2020

Isabella Larson, 2020 - 2022

Glenn Morgenstern, 2020

Liz Huynh, 2020 - 2022

Samantha Owusu-Antwi, 2020

## Professional Experience

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### 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

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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