

Taylor R. Brown

The University of Virginia
Department of Statistics
Halsey Hall
P.O. Box 400135
Charlottesville, VA 22904-4135

Email: trb5me@virginia.edu
Homepage: <http://www.people.virginia.edu/~trb5me>

Education

- Ph.D. Statistics, The University of Virginia, 2018.
M.S. Statistics, The University of Connecticut, 2013.
B.A. Mathematics & Economics, The University of Connecticut, 2010.

Employment

- Assistant Professor of Statistics, General Faculty, Department of Statistics, University of Virginia 2021–.
Lecturer of Statistics, Department of Statistics, University of Virginia 2018-2021.

Articles and Papers

A Case-Study of Sample-Based Bayesian Forecasting Algorithms, 2022.
[arXiv:2208.02968 \[stat.AP\]](https://arxiv.org/abs/2208.02968)

The Most Difference in Means: A Statistic for Null and Near-Zero Results, 2022.
[arXiv:2201.01239 \[stat.ME\]](https://arxiv.org/abs/2201.01239)

A Short Introduction to PF: A c++ Library for Particle Filtering, 2020.
[The Journal of Open Source Software](https://joss.joss.theoj.org/papers/2020.15396)

Approximating Posterior Predictive Distributions by Averaging Output From Many Particle Filters, 2020.
[arXiv:2006.15396 \[stat.ME\]](https://arxiv.org/abs/2006.15396)

PF: A C++ Library for Fast Particle Filtering, 2020.
[arXiv:2001.10451 \[stat.CO\]](https://arxiv.org/abs/2001.10451)

A Pseudo-Marginal Metropolis-Hastings Algorithm for Estimating Generalized Linear Models in the Presence of Missing Data, 2019.
[arXiv:1907.09090 \[stat.ME\]](https://arxiv.org/abs/1907.09090)

A Markov-Switching Factor Stochastic Volatility Model, 2018.
[arXiv:1903.01841v1 \[stat.AP\]](https://arxiv.org/abs/1903.01841v1)

Brown, Taylor. *Factor Stochastic Volatility Models for Portfolio Construction*. University of Virginia, Department of Statistics, PHD (Doctor of Philosophy), 2018, <https://doi.org/10.18130/V3ZW18R9V>

Books

An Introduction to R and Python For Data Analysis: A Side By Side Approach, 2021
CRC Press Taylor & Francis Group

Public Software

pf: a C++ library for fast particle filtering.
<https://github.com/tbrown122387/pf>

pfr: Interface to the C++ Library pf
<https://cran.r-project.org/web/packages/pfr/index.html>

gradeR: helps grade R script assignment submissions!
<https://cran.r-project.org/web/packages/gradeR/index.html>

cPseudoMaRg: Constructs a Correlated Pseudo-Marginal Sampler
<https://cran.r-project.org/web/packages/cPseudoMaRg/index.html>

ssme: a c++ static library for state space model forecasting and estimation.
<https://github.com/tbrown122387/ssme>

Teaching

University of Virginia

DS 6040: Bayesian Machine Learning

STAT 8120: Topics in Statistics (particle filtering)

STAT 7510: Advanced Topics in Statistical Inference

STAT 7620: Advanced Topics in Probability

STAT 7200: Introduction to Advanced Probability

STAT 6440: Introduction to Bayesian Methods

STAT 6021: Linear Models for Data Science

STAT 5430: Statistical Computing with SAS/Python and R

STAT 5170: Applied Time Series

STAT 4993: Independent Study

STAT 4170: Financial Time Series and Forecasting

STAT 4160: Experimental Design

STAT 3250: Data Analysis With Python

STAT 3080: From Data To Knowledge
STAT 3120: Introduction to Mathematical Statistics
STAT 2120: Introduction to Statistical Analysis
STAT 1602: Introduction to Data Science with Python
STAT 1601: Introduction to Data Science with Python

University of Connecticut

STAT 1000 Introduction to Statistics

Departmental Service

University of Virginia

Computing Committee (Chair from Spring 2025-Present)
Undergraduate Committee (Member from Fall 2021-Present)
Computer Skills Confirmation Test (formerly the Computer Language Exam) (2018-Present)
Undergraduate Major Advisor (Fall 2021-Present)
Tyler Ashoff's PhD Committee (2025-2026)
Tianyuan Zhou's PhD Committee (2022-2023)
Lecturer Hiring Committee (Summer 2022)
Graduate Committee (Fall 2020-Spring 2022)

Honors and awards

2021: Learning Technology Incubator Grant
2016: Summer Fellowship U.Va. Department of Statistics
2015: Summer Fellowship U.Va. Department of Statistics
2014: Summer Fellowship U.Va. Department of Statistics
2014: U.Va. Jefferson Trust Big Data Fellowship pre-proposal award
2014: U.Va. Graduate Statistics Seminar Committee Co-Chair
2013: UConn Ross D. MacKinnon Graduate Fellowship

Memberships

American Statistical Association