

# Taylor R. Brown

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## 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](https://arxiv.org/abs/2208.02968) [[stat.AP](#)]

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

A Short Introduction to PF: A c++ Library for Particle Filtering, 2020.  
[The Journal of Open Source Software](#)

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

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

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

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

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