

# 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

Lecturer of Statistics, University of Virginia 2018–.

## Articles and Papers

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](#) [[stat.ME](#)]

PF: A C++ Library for Fast Particle Filtering, 2020.  
[arXiv: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](#) [[stat.ME](#)]

A Markov-Switching Factor Stochastic Volatility Model, 2018.  
[arXiv: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>

## Public Software

pf: a C++ library for fast particle filtering.

<https://github.com/tbrown122387/pf>

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 the estimation of state space models.

<https://github.com/tbrown122387/ssme>

## Teaching

### *University of Virginia*

STAT 8120: Topics in Statistics (particle filtering)

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 and R

STAT 5170: Applied Time Series

STAT 4170: Financial Time Series and Forecasting

STAT 3120: Introduction to Mathematical Statistics

STAT 2120: Introduction to Statistical Analysis

STAT 1602: Introduction to Data Science with Python

### *University of Connecticut*

STAT 1000 Introduction to Statistics

## Departmental Service

### *University of Virginia*

Computer Skills Confirmation Test (formerly the Computer Language Exam) (2018-2020)

Graduate Committee (Fall 2020-Spring 2021)

## 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
- International Society for Bayesian Analysis
- Institute of Mathematical Statistics