Peter David Smits

ph: 609-933-7042; add: 1661 Hopkins St, Berkeley, CA 94707

peterdavidsmits@gmail.com
https://psmits.github.io/

Experience

- **University of California – Berkeley** — Berkeley, CA
  Post-Doctoral Scholar — *Sept 2017 – present*
  - Developed multilevel discrete-time survival model allowing for multiple sources of correlation for predicting species extinction
  - Analyzed predictive relationship between discrete occurrences and compositional data using a multilevel mixture model allowing for temporal autocorrelation between the
  - Instructor for graduate course on applied statistics and Bayesian modeling in R and Stan
- **University of Chicago** — Chicago, IL
  Doctoral Researcher — *Sept 2012 – June 2017*
  - Analyzed cohort/longitudinal survival data by developing a hierarchical cohort survival model allowing for multiple sources of autocorrelation
  - Developed Bayesian models in Stan for a discrete-time hidden Markov state-space model where all transition probabilities were modeled as independent hierarchical time series
  - Mentored and taught graduate and undergraduate students in statistics, Bayesian modeling, Stan, R, and teaching

Education

- **University of Chicago** — Chicago, IL
  Ph.D. in Evolutionary Biology — *Sept 2012 – June 2017*
- **Monash University** — Melbourne, AUS
  M.Sc. in Biological Sciences — *Sept 2010 – Aug 2012*
  - Vice-Chancellor's Commendation for Master's Thesis Excellence
- **University of Washington** — Seattle, WA
  B.S. in Evolutionary and Ecological Biology — *Sept 2006 – June 2010*

Technical Skills

Statistical/Analytical: Bayesian data analysis, multilevel/hierarchical/mixed-effects models, generalized linear models, time-series analysis, survival analysis, longitudinal and cross-sectional data, discrete-time hidden Markov models, network analysis/graph theory, exploratory data analysis, clustering, machine learning techniques (e.g. random forests), measurement error/missing data modeling, variable selection, etc.

Technologies: R (tidyverse, ggplot2, knitr, parallel, caret, igraph), Stan, JAGS, LaTeX, git, Linux command line

Other: near-fluency French, dual US–Australian citizen, radio experience