Peter David Smits

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https://psmits.github.io/

Experience

- **University of Chicago** — Chicago, IL
  Doctoral Researcher — *Sept 2012 – June 2017*
  - Analyzed datasets of fossil occurrence information covering 65-250 million years of geologic time in both terrestrial and marine settings
  - Developed new hierarchical Bayesian models using Stan for describing species extinction risk and regional species ecological composition which resulted in 2 publications and 6 presentations
  - Mentored graduate and undergraduate students in statistics, Bayesian modeling, Stan, and R
- **Monash University** — Melbourne, AUS
  Postgraduate Researcher — *Sept 2010 – Aug 2012*
  - Collected and analyzed three-dimensional scans of mammals tooth kinematics using R, resulted in one paper
  - Analyzed crocodile feeding biomechanical data in R, resulted in one paper
- **Macquarie University** — Sydney, AUS
  Paleobiology Database Intensive Workshop in Quantitative Paleobiology — *July 2011 – Aug 2011*
  - 5 week intensive workshop on statistical and analytical methods and their applications in paleobiology
  - Trained in using R for birth-death modelling, basic Gaussian processes, exploratory multivariate data analysis, phylogentic comparative methods, and geometric morphometrics
- **American Museum of Natural History** — New York, NY
  NSF Research Experience for Undergraduates Internship — *June 2009 – Aug 2009*
  - Analyzed similarities in bat tooth shape in a phylogenetic context, resulted in one publication
- **University of Washington** — Seattle, WA
  Undergraduate Research Assistant — *Jan 2008 – June 2010*
  - Analyzed relationship between mammal tooth size and body size using linear regression in order to predict body sizes of extinct mammals, resulted in one publication

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 multivariate data analysis, clustering, machine learning techniques (e.g. random forests), measurement error/missing data modeling, model and variable selection

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

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