

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; currently 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, phylogenetic 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

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, L^AT_EX, git, Linux command line

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

Gaming Background

Roleplaying Games: D&D (17+ years), Warhammer Fantasy and 40k, Feng Shui, etc.

Card Games: MTG from (1997–2002), Shadowfist (2000–2014), Warlord, L5R

Board Games: familiar with Avalon Hill, Fantasy Flight Games, Z-Man Games, Rio Grande Games, etc.

Miniature Games: Warhammer 40k, HeroClix, MechWarrior: Dark Age