

RESEARCH INTERESTS Applied spatial statistics with a focus on biological and ecological systems, Bayesian statistics, computational methods, statistics and computing education and pedagogy.

EDUCATION University of California, Los Angeles, Department of Statistics
 Ph.D. in Statistics, 2012
 M.S. in Statistics, 2008
 Dissertation Topic: Bayesian Methods for Spatial Assignment of Migratory Birds
 Advisors: Jan de Leeuw and John Novembre

California Institute of Technology
 B.S. in Biology, 2003

EMPLOYMENT Assistant Professor of the Practice June 2015 - Present
 Department of Statistical Science, Duke University

Lecturer in Statistics and Data Science May 2019 - May 2021
 School of Mathematics, University of Edinburgh

Visiting Assistant Professor / Lecturer January 2012 - May 2015
 Department of Statistical Science, Duke University

Postdoctoral Associate July 2012 - April 2014
 Department of Statistical Science, Duke University

Graduate Student Researcher September 2010 - December 2011
 Novembre Lab, UCLA

Senior Statistical Consultant March 2009 - December 2011
 Statistical Consulting Center, UCLA

Graduate Teaching Assistant September 2006 - July 2010
 Dept. of Ecology and Evolutionary Biology, Dept. of Statistics, UCLA

TEACHING Duke University
 Sta 30 - Statistics and Quantitative Literacy - [Fa 12](#)
 Sta 102 - Introductory Biostatistics - [Sp 13](#), [Sp 14](#), [Fa 14](#), [Sp 15](#), [Fa 15](#), [Sp 16](#), [Su 16](#)
 Sta 111 - Probability and Statistical Inference - [Su 14](#)
 Sta 112 - Better Living through Data Science - [Fa 16](#)
 Sta 230 - Probability - [Fa 12](#), [Sp 14](#)
 Sta 323 - Statistical Computing - [Sp 16](#), [Sp 17](#), [Sp 18](#), [Sp 19](#), [Sp 22](#)
 Sta 444 / 644 - Spatio-Temporal Modeling - [Sp 17](#), [Sp 18](#), [Fa 18](#)
 Sta 523 - Statistical Programming - [Fa 14](#), [Fa 15](#), [Fa 16](#), [Fa 17](#), [Fa 18](#), [Fa 21](#)
 Sta 663 - Statistical Computing and Computation - [Sp 22](#)
 Sta 790 - Advanced Statistical Computing - [Sp 19](#)

University of Edinburgh
 Math 08068 - Facets of Mathematics - Regression Modeling Theme - [Fa 19](#)
 Math 11176 - Statistical Programming - [Fa 19](#), [Fa 20](#)
 Math 11205 - Machine Learning in Python - [Sp 20](#), [Sp 21](#)

ONLINE TEACHING Coursera - [Statistics with R Specialization](#)
[Bayesian Statistics](#)
[Statistics with R Capstone](#)

PUBLICATIONS Çetinkaya-Rundel, M., Hardin, J., Baumer, B. S., McNamara, A., Horton, N. J., Rundel, C. (2021). *An educator's perspective of the tidyverse*. Technology Innovations in Statistics Education (in revision), arXiv preprint [arXiv:2108.03510](#).

Poulsen, J., Beirne, C., Rundel, C., Baldino, M., Kim, S., Knorr, J., Minich, T., Jin, L., Núñez, C., Xiao, S., Mbamy, W., Obiang, G., Masseloux, J., Nkoghe, T., Ebanega, M., Clark, C., Fay, M., Morkel, P., Okouyi, J., White, L., Wright, J. (2021). *Long distance seed dispersal by forest elephants*. Frontiers in Ecology And Evolution. 9, 962. [DOI](#).

Beckman M., Çetinkaya-Rundel M., Horton N., Rundel C., Sullivan A., Tackett M. (2020) *Implementing Version Control With Git and GitHub as a Learning Objective in Statistics and Data Science Courses*. Journal of Statistics Education. 29 (Sup 1), 132 - 144. [DOI](#).

Johnson A., Rundel C., Hu J., Ross K., Rossman A. (2020) *Teaching an Undergraduate Course in Bayesian Statistics: A Panel Discussion*. Journal of Statistics Education. 28 (3), 251 - 261. [DOI](#).

Beirne C., Núñez C., Baldino M., Kim S., Knorr J., Minich T., Jin L., Xiao S., Mbamy W., Obiang G., Masseloux J., Nkoghe T., Ebanega M., Rundel C., Wright J., Poulsen J. (2019) *Estimation of gut passage time of wild, free roaming forest elephants*. Wildlife Biology. 2019 (1).

Cetinkaya-Rundel M., Rundel C.W. (2017) *Infrastructure and tools for teaching computing throughout the statistical curriculum*. The American Statistician. 72 (1), 58 - 65.

Rundel C.W., Schliep E.M., Holland D., Gelfand A. (2015) *A data fusion approach for spatial analysis of speciated PM_{2.5} across time*. Environmetrics. 26 (8), 515 - 525.

Rundel C.W., Wunder M., Alvarado A.H., Ruegg K., Harrigan R., Schuh A., Jeffrey K., Siegel R., DeSante D.F., Smith T.B., Novembre J. (2013) *Novel statistical methods for integrating genetic and stable isotope data to infer individual-level migratory connectivity*. Molecular Ecology. 22 (16), 4163 - 4176.

de Bocanegra H.T., Rostovsteva D., Çetinkaya M., Rundel C.W., Lewis C. (2011). *Quality of reproductive health services to limited English proficient patients*. Journal of Health Care for the Poor and Underserved, 22 (4), 1167 - 1178.

Walker D.W., Muffat J, Rundel C.W., Benzer S. (2006). *Overexpression of a Drosophila Homolog of Apolipoprotein D Leads to Increased Stress Resistance and Extended Lifespan*. Current Biology, 16 (7), 674 - 679.

MAGAZINES Rundel, C.W., Cetinkaya-Rundel M. (2016) La Quinta is Spanish for next to Denny's, Chance 29 (2), 53 - 57

Rundel C.W. (2002) *Genes, Aging, and the Future of Longevity* Engineering & Science, 65 (4), 36 - 40.

TALKS & WORKSHOPS	RStudio Conf 2022 (Workshop)	July 2022
	Introduction to Shiny	
	ISI Short Course 2021 (Workshop)	June 2021
	Teaching Data Science	
	RStudio Global 2021	January 2021
	parsermd - parsing R Markdown for fun and profit	
	TLMSCO	September 2020
	Teaching computing using git and GitHub	
	JSM 2020 (Invited)	August 2020
	Computation Infrastructure for Teaching Bayesian Modeling	
	Teaching Statistics and Data Science Online (Online Workshop)	July 2020
	Workshop 1: Teaching R online with RStudio Cloud	
	Workshop 2: Building interactive tutorials in R	
	Workshop 3: Teaching computing with Git and GitHub	
	RStudioConf 2020	January 2020
	livecode: broadcast your live coding sessions from and to RStudio	
	JSM 2019	August 2019
	ghclass: an R package for managing classes with GitHub	
	JSM 2019 (Workshop)	July 2019
	Reproducible Computing	
	UseR! 2019	July 2019
	ghclass: an R package for managing classes with GitHub	
	SDSS 2019 (Invited)	May 2019
	Using Rocker containers and CI for teaching R-based courses	
	ICOTS10 2018 (Workshop)	July 2018
	Teaching Data Science, Reproducibly	
	ISBA World Meeting 2018 (Short Course)	June 2018
	Reproducible Computing	
	Joint Statistical Meetings 2017 (Invited)	August 2017
	Moving Away from Ad Hoc Statistical Computing Education	
	UseR! 2017 (Tutorial)	July 2017
	Data Carpentry: Open and Reproducible Research with R	
	Joint Statistical Meetings 2016 (Invited)	August 2016
	Statistical Computing as an Introduction to Data Science	
	UseR! 2016	July 2016
	Continuous Integration and Teaching Statistical Computing with R	
	Joint Statistical Meetings 2015	August 2015
	Teaching statistical computing leveraging the github ecosystem	
	UseR! 2015	July 2015
	Teaching R using the github ecosystem	
	Data Analytics in Business and Social Science Seminar, Duke SSRI	April 2015
	Geospatial data and the R ecosystem	
	Joint Statistical Meetings 2014	August 2014
	A Data Fusion Approach for Space-Time Analysis of Speciated PM_{2.5}	
	Duke Dept of Statistical Science Seminar	February 2014
	Using GPUs to improve the computational efficiency of Gaussian process models	
	Joint Statistical Meetings 2013	August 2013
	GPUs, linear algebra, and efficient computing for Gaussian process models	
	UseR! 2013	July 2013

	Leveraging GPU libraries for efficient computation of Gaussian process models in R	
	Joint Statistical Meetings 2012	August 2012
	Leveraging GPU Libraries for Efficient Computation of Bayesian Spatial Assignment Models in R	
	UseR! 2012	June 2012
	rgeos: spatial geometry predicates and topology operations in R	
	Joint Statistical Meetings 2011	August 2011
	Spatial Models for Bird Origin Assignment Using Genetic and Isotopic Data	
SERVICE	Guest Associate Editor, Journal of Statistics and Data Science Education	Fall 2021
	Special Issue on Teaching Reproducibility and Responsible Workflow	
	DSS Master's Advisory Committee	Fall 2017 - Spring 2019
	Duke's Information Technology Advisory Council	Fall 2017 - present
	DSS Computing Committee	Summer 2014 - Spring 2019, Fall 2021 - present
	Chair, Spring 2017 - Spring 2019, Fall 2021 - present	
	ASA DataFest @ Duke	Fall 2011 - Spring 2019
	Co-organizer	
	Bayes Impact at Duke	Fall 2014 - Spring 2016
	Scientific Registry of Transplant Recipients	
	Motion Math	
SOFTWARE	md4r : R wrapper of the md4c markdown parsing library.	
	checklist : Tools for automating checking of R projects, with a focus on automated feedback via CI tooling like GitHub actions.	
	parsermd : Tools for parsing and programmatically interacting with R Markdown documents.	
	learnrhash : Tools for recording student results for questions and exercises in learnr documents.	
	livecode : Library for broadcasting source files during live coding sessions.	
	ghclass : Library for managing classroom and assignment related tasks on github.	
	rgeos : R interface to the Geometry Engine, Open Source (GEOS) library.	
	isoscatR : R package for smoothed and continuous assignment testing (SCAT) of genetic samples	
	timezone : A small R package for finding timezone names from geographic coordinates	
	RcppGP : Tools for efficiently working with Gaussian Processes in R / C++	
	mapnik : parser and generator for the carto map style language.	
MEMBERSHIPS	American Statistical Association	
	International Society for Bayesian Analysis	