Colin Rundel

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

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

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

Sta 444 / 644 - Spatio-Temporal Modeling - Sp 17, Sp 18

Sta 523 - Statistical Programming - Fa 14, Fa 15, Fa 16, Fa 17

ONLINE TEACHING	Coursera - Statistics with R Specialization
	Bayesian Statistics
	Statistics with R Capstone

PUBLICATIONS

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

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   DSS Master's Advisory Committee   Fall 2017 - present

                 Duke's Information Technology Advisory Council   Fall 2017 - present

                 DSS Computing Committee   Summer 2014 - present
                    Chair, Spring 2017 - present

                 ASA DataFest   Fall 2011 - present
                    Co-organizer

                 Bayes Impact at Duke   Fall 2014 - Spring 2016
                    Scientific Registry of Transplant Recipients
                    Motion Math

SOFTWARE   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