

Cody Carroll

Curriculum Vitae

Department of Statistics
University of California, Davis
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codycarroll.github.io

Education

- 2021 **PhD in Statistics**, *University of California, Davis*.
(expected) Advisor: Hans-Georg Müller
- 2017 **MS in Statistics**, *University of California, Davis*.
- 2014 **BS in Mathematics**, *University of Texas, Austin*.

Research Interests

Functional and longitudinal data analysis– time warping models for multivariate functional data; analysis of functional data subject to constraints; non-Euclidean data analysis

Publications and Preprints

* indicates co-first authorship

Published/In Press

- 2020 *Cross-component Registration for Multivariate Functional Data, with Application to Growth Curves*
C. Carroll, H.-G. Müller, and A. Kneip, *Biometrics* 2020, doi.org/10.1111/biom.13340.
- 2020 *Mountaineers in an extreme environment: an update on effects of age and sex on rates of success and death on Mount Everest*
R. B. Huey*, **C. Carroll***, R. Salisbury, J.-L. Wang, *PLoS One*, 2020, in press.

Under Review

- 2020+ *Time-Dynamics of COVID-19*
C. Carroll, S. Bhattacharjee, Y. Chen, P. Dubey, J. Fan, A. Gajardo, X. Zhou, H.-G. Müller, J.-L. Wang.
- 2020+ *Benchmarking DVH Prediction Accuracy Between Different Knowledge-Based Models*
B. Covele, **C. Carroll**, K. Moore
- 2020+ *Comparison of Diagnostic Predictors of Neonatal Survivability in Non-Domestic Caprinae*
T. N. Bliss, M. J. Marinkovich, R. E. Burns, **C. Carroll**, M. M. Clancy, and L. L. Howard.

Ongoing Projects

- 2020+ *Modeling Positive-Valued Multivariate Functional Data with Cross-Component Transports*
C. Carroll, H.-G. Müller
- 2020+ *Delay Differential Equations for Multivariate Stochastic Processes, With Application to the Evolution of COVID 19 in the United States*
P. Dubey, S. Bhattacharjee, **C. Carroll**, H. Chen, Y. Chen, A. Gajardo, Y. Zhou, H.-G. Müller

Software

- Maintainer *fdapace: Functional Data Analysis and Empirical Dynamics. R package.*
C. Carroll, A. Gajardo, Y. Chen, X. Dai, J. Fan, P. Z. Hadjipantelis, K. Han, et al.
<https://CRAN.R-project.org/package=fdapace>.

Presentations

Talks

- 2020 **Statistics Student-Led Seminar Series, UC Davis.**
Shift-Warping for Multivariate Functional Data
- 2019 **NSF RTG Statistics Workshop Series, UC Davis.**
Deception and Coin Flips: Statistical Intuition through Lies and Games
- 2018 **NSF RTG Symposium: Modern Tools for Statistics, UC Davis.**
An Introduction to Functional Data Analysis
- 2018 **Statistics Student-Led Seminar Series, UC Davis.**
Time Warping for Human Growth Curves

Teaching

Instructor of Record

- Summer 2019 **Brief Course in Mathematical Statistics II.**
UC Davis, Dept. of Statistics
- Spring 2019 **Applied Statistics for Biological Sciences.**
UC Davis, Dept. of Statistics
- Summer 2018 **Applied Statistics for Business and Economics.**
UC Davis, Dept. of Statistics/Dept. of Economics

Teaching Assistant

- *Applied Statistics for Biological Sciences* (Su17) UCD, Statistics
- *Applied Statistics for Business and Economics* (F19) UCD, Statistics/Economics
- *Applied Statistical Methods Regression Analysis* (F17) UCD, Statistics
- *Introduction to Probability Theory* (S18) UCD, Statistics
- *Survival Analysis* (F18) UCD, Biostatistics
- *Statistical Consulting* (W18, W19, W20) UCD, Statistics/Biostatistics

International Teaching

2014-2015 **ESL Teacher**, *Nishinomiya Imazu Senior High School*, Nishinomiya, Japan.

Mentoring Experience

2017-2020 **NSF Research Training Group**, *Dept. of Statistics, UC Davis*, Advising Undergraduate Research.

- *Sex-mediated trends in longevity of medflies*, with Joanne Xiong
- *Warping methods for wearable device data*, with Hainiu Xu
- *Functional regression for wearable device data*, with Phoebe Biying Li
- *Geographic trends for functional housing price data*, with Yunbai Zhang
- *Functional data analysis of global temperature extrema*, with Cynthia Lai

2020 **Mentor for Undergraduate Honors Thesis.**

Warping methods for wearable device data, by Hainiu Xu

Awards and Fellowships

2020 **Outstanding Graduate Teaching Award.**

Awarded to 10 graduate students university-wide, *Grad. Studies, UC Davis*

2020 **Excellence in Teaching Award.**

Awarded to one student in the department, *Dept. of Statistics, UC Davis*

2015-2020 **NSF Research Training Grant Recipient.**

2016-2019 **Summer Statistics Research Fellowship Award.**

Dept. of Statistics, UC Davis

2017-2018 **TA Recognition Award.**

Dept. of Statistics, UC Davis

2015-2018 **UC Davis Graduate Scholars Fellowship.**

Grad. Studies, UC Davis

Service and Leadership

UC Davis

- Graduate Student Representative, Dept. of Statistics

Reviewer

- Journal of the American Statistical Association
- Computational Statistics and Data Analysis

Technical skills

Advanced R, \LaTeX , git

Intermediate SQL, Python, Julia, Travis-CI