

# Cody Carroll

## Curriculum Vitae

Department of Statistics  
University of California, Davis  
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[codycarroll.github.io](https://codycarroll.github.io)

### Education

- Ongoing **PhD in Statistics**, *University of California, Davis*.  
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* (to appear).
- 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* (to appear).
- 2020 *fdapace: Functional Data Analysis and Empirical Dynamics. R package versions 0.5.3-0.5.5*.  
**C. Carroll**, A. Gajardo, Y. Chen, X. Dai, J. Fan, P. Z. Hadjipantelis, K. Han, et al.  
<https://CRAN.R-project.org/package=fdapace>

#### Under Review

- 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, *Journal of Zoo and Wildlife Medicine*.
- 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, *Scientific Reports*.

## Ongoing Projects

- 2020+ *Modeling Positive-Valued Multivariate Functional Data with Cross-Component Transports*  
**C. Carroll**, H.-G. Müller
- 2020+ *KPB DVH Predictions for Orbit Radiation Treatments*  
B. Covele, **C. Carroll**, K. Moore.
- 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, *Journal of Mathematical Analysis and Applications*.

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## 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

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## Teaching

### Instructor of Record

- Summer 2019 **STA 130B: Brief Course in Mathematical Statistics II**, (class size: 50).
- Spring 2019 **STA 100: Applied Statistics for Biological Sciences**, (class size: 200).
- Summer 2018 **STA 103: Applied Statistics for Business and Economics**, (class size: 50).

### Teaching Assistant

- *STA 100: Applied Statistics for Biological Sciences* (Su17)
- *STA 103: Applied Statistics for Business and Economics* (F19)
- *STA 108: Applied Statistical Methods Regression Analysis* (F17)
- *STA 131A: Introduction to Probability Theory* (S18)
- *STA 222: Survival Analysis* (F18)
- *STA 260: Statistical Consulting* (W18, W19, W20)

### International Teaching

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

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## Mentoring Experience

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

- *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 (*Grad. Studies, UC Davis*)
- 2019 Excellence in Teaching Award (*Dept. of Statistics, UC Davis*)
- 2017-2018 TA Recognition Award (*Dept. of Statistics, UC Davis*)
- 2016-2019 Summer Statistics Research Fellowship Award
- 2015-2020 NSF Research Training Grant Recipient
- 2015-2018 UC Davis Graduate Scholars Fellowship

## 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