# Michael Jauch ✉ mjauch@fsu.edu michaeljauch.github.io


## Employment

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|---|---|
| 2022 - Now | Assistant Professor<br>Department of Statistics<br>Florida State University |
| 2019 - 2022 | Postdoctoral Associate<br>Center for Applied Mathematics<br>Cornell University<br>Adviser: David Matteson |
| 2012 - 2014 | Data Scientist<br>Civitas Learning, Inc. |

## Education

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|---|---|
| 2014 - 2019 | PhD in Statistical Science<br>Duke University<br>Advisers: Peter Hoff and David Dunson |
| 2011 - 2012 | Graduate Study in Mathematics<br>Central European University |
| 2007 - 2011 | BA in Mathematics<br>Rice University |

## Research interests

Bayesian statistics, multivariate data, computational methods, time series, changepoint analysis, inference under shape or stochastic order constraints, scientific applications

## Publications

Phillip A. Jang, **Michael Jauch**, and David S. Matteson (2022). Functional Stochastic Volatility in Financial Option Surfaces. *Data Science in Science*. Vol. 1, No. 1, 6-19. [journal]

**Michael Jauch**, Peter D. Hoff, and David B. Dunson (2021). Monte Carlo Simulation on the Stiefel Manifold via Polar Expansion. *Journal of Computational and Graphical Statistics*. Vol. 30, No. 3, 622-631. [journal] [arxiv] [code]

**Michael Jauch**, Peter D. Hoff, and David B. Dunson (2020). Random orthogonal matrices and the Cayley transform. *Bernoulli*. Vol. 26, No. 2, 1560–1586. [journal] [arxiv] [code]

**Michael Jauch**, Paolo Giordani, and David B. Dunson (2017). A Bayesian oblique factor model with extension to tensor data. *Proceedings of the Conference of the Italian Statistical Society*.

**Michael Jauch** and Víctor Peña (2016). Bayesian optimization with shape constraints. *NeurIPS Workshop on Bayesian Optimization*. [arxiv]

Yan Digilov, Leobardo Rosales, Anand Shah, Michael Wolf, William Eggert, Robert Hardt, James Hart, **Michael Jauch**, Rob Lewis, Conor Loftis, Aneesh Mehta, and Hector Perez. (2010) Energy-minimizing unit vector fields. *Involve*. Vol. 3, No. 4, 435–45. [journal]

## Preprints

Andrew M. Thomas, **Michael Jauch**, and David S. Matteson (2024+). Bayesian changepoint detection via logistic regression and the topological analysis of image series. Submitted. [arxiv]

Víctor Peña and **Michael Jauch** (2024+). Two new mixture representations for the generalized inverse Gaussian distribution and their applications. Submitted. [arxiv]

**Michael Jauch**, Andrés F. Barrientos, Víctor Peña, and David S. Matteson (2024+). Mixture representations and Bayesian nonparametric inference for likelihood ratio ordered distributions. Submitted. [arxiv] [code]

James Losey, Adithya Polasa, **Michael Jauch**, Axel Cortes-Cubero, Haoxuan Wu, Roberto Rivera, David S. Matteson, and Mahmoud Moradi (2024+). Simulating Freely-diffusing Single-molecule FRET Data with Consideration of Protein Conformational Dynamics. Submitted. [biorxiv]

## Teaching

Instructor at Florida State University:

STA 4202/5206 Analysis of Variance and Design of Experiments. Spring 2023, 2024.

STA 4102: Computational Methods in Statistics I. Fall 2022, 2023.

Instructor at Cornell University:

STSCI 4550: Applied Time Series Analysis. Spring 2020, Spring 2021, Spring 2022.

Teaching assistant at Duke University:

STA 623: Statistical Decision Theory with David Dunson. Fall 2018.

STA 642: Time Series and Dynamic Models with Mike West. Fall 2017.

STA 832: Multivariate Statistical Analysis with Peter Hoff. Spring 2017.

STA 360/601: Bayesian Methods and Modern Statistics with Rebecca Steorts. Spring 2016.

STA 360/601: Bayesian Methods and Modern Statistics with David Dunson. Fall 2015.

STA 101: Data Analysis and Statistical Inference with Mine Çetinkaya-Rundel. Fall 2014.

## Invited Talks

Joint Statistical Meetings in Toronto. August 2023.

Statistics Seminar at University of Massachusetts Amherst. May 2023.

CMStatistics via Zoom. December 2022.

Statistics and Data Science Seminar at Cornell University. February 2022.

ACMS Colloquium at the University of Notre Dame. January 2022.

Statistics Seminar at University of Wisconsin - Madison via Zoom. January 2022.

Statistics Colloquium at Florida State University via Zoom. January 2022.

Statistics Seminar at Baruch College via Zoom. December 2021.

CMStatistics via Zoom. December 2021.

BayesComp in Gainesville. January 2020.

Statistics and Data Science Seminar at Cornell University. March 2019.

ISBA World Meeting in Edinburgh. June 2018.

Conference of the Italian Statistical Society in Florence. June 2017.

## Contributed Talks

Conference for Ruey Tsay at the University of Chicago Booth School of Business. May 2023.

Joint Statistical Meetings via Zoom. August 2021.

Joint Statistical Meetings in Vancouver. August 2018.

## Poster Presentations

ISBA World Meeting in Montreal. June 2022.

Joint Statistical Meetings in Denver. July 2019.

Joint Statistical Meetings in Baltimore. August 2017.

NeurIPS Workshop on Bayesian Optimization in Barcelona. December 2016.

ISBA World Meeting in Sardinia. June 2016.

## Service

Doctoral Supervisory Committee member for Tianyuan Cheng and Junge Li

Referee for Bayesian Analysis, Data Science in Science, Journal of the American Statistical Association, Journal of Applied Statistics, Journal of Econometrics, and Scandinavian Journal of Statistics

Associate editor for the new journal Data Science in Science [webpage]

Duke Statistical Science GCC representative (2015-2016)

## Awards

ISBA Student Travel Award, 2018

Duke Graduate School Travel Award

Duke Statistical Science Fellowship, 2014-2015

Central European University Full Fellowship, 2011-2012

National Merit Scholarship, 2007-2011

## Miscellanea

David Kil, Jorgen Harmse, Michael Jauch, et al. US Patent Application No. 14/592,821. 2015.