

Eric Lybrand | Curriculum Vitae

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Education

University of California, San Diego
Ph.D. Mathematics - Advised by [Rayan Saab](#)

San Diego, CA
2015–2020

University of Georgia
B.Sc. Mathematics

Athens, GA
2011–2015

Previous Employment

University of California, San Diego

San Diego, CA

Academic Student Employee

October 2015–Present

Senior Teaching Assistant

2018–2019

Graduate Teaching Assistant

2015–2018

Integral Calculus, Differential Calculus, Honors Multivariable Mathematics with Manifolds,
Linear Algebra, Vector Calculus.

Junior Teaching Assistant

2017–2018

[CURE](#) Graduate Research Assistant

Summer 2017

Served as research mentor for 6 UCSD undergraduates on a NSF funded random matrix theory project. Researched empirical spectral distributions of matrices with independent diagonals.

Graduate Student Researcher

Summer 2016

NSF funded research in compressed sensing for extreme points of free spectrahedra under the guidance of Bill Helton.

[IPAM](#) & NEC Corporation

Sendai, Japan

Graduate Student Researcher

Summer 2018

Designed a new path loss model for indoor localization using wireless received signal strength.

Improved localization error by 1m in some cases.

Technical Skills

Programming Languages: Python, Matlab, Mathematica, LaTeX

Other: Proficient Spanish speaker.

Professional Activities

UCSD Graduate Student Association

2017–2018

Finance Committee

Reviewer

2018

IEEE Statistical Signal Processing Workshop

Awards and Honors

UCSD Math Department Annual TA Award

2018

UCSD Senate Research Grant

Spring 2017

James B. Ax Graduate Fellowship

2015–2016

Coursera Machine Learning Statement of Accomplishment

2015

Presidential Scholar
Eagle Scout

2014-2015
2008

Presentations

<i>Compressed Sensing and Blind Deconvolution.</i> IPAM GRIPS - Sendai, Japan	June 2018
<i>Poster Presentation.</i> UCSD Mathematics Colloquium	May 2018
<i>Poster Presentation.</i> Seventh International Conference on Computational Harmonic Analysis	May 2018
<i>Compressed Sensing and Random Matrices.</i> UCSD Graduate Student Seminar	January 2018
<i>Deterministic Models for Topoisomerase II.</i> UCSD Graduate Student Seminar	February 2017
<i>An Introduction to the Calculus of Variations.</i> UGA Undergraduate Student Seminar	April 2014
<i>Understanding Topology via Differential Forms.</i> UGA Undergraduate Student Seminar	January 2014

Publications

- [1] H. Huang, T. Kemp, Y. Ling, X. Luo, E. Lybrand, R. Smith, and J. Wang. Random Matrices with Independent Diagonals. *preprint*.
- [2] E. Lybrand and R. Saab. Quantization for Low-Rank Matrix Recovery. *Information and Inference*, 2018.