Eric Lybrand | Curriculum Vitae

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Education

University of California, San Diego — **San Diego, CA**
Ph.D. Mathematics - Advised by Rayan Saab — *2015–2020*

University of Georgia — **Athens, GA**
B.Sc. Mathematics — *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 Senate Research Grant	*Spring 2017*
James B. Ax Graduate Fellowship	*2015-2016*
Coursera Machine Learning Statement of Accomplishment	*2015*
Presidential Scholar	*2014-2015*

Eagle Scout *2008*

Presentations

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