Erik Davis

Contact Information

Department of Mathematics
The University of Arizona
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Research Interests

Calculus of Variations, Computational Harmonic Analysis, Convex Optimization, Probability, Optimal Transportation

Education

Department of Mathematics, The University of Arizona

Ph.D. Candidate, Mathematics (expected 2016)

- Dissertation Title: Consistency of Modularity Clustering on Random Geometric Graphs
- Advisor: Sunder Sethuraman

University of Texas at Austin

B.S. in Mathematics, May 2009

Publications

E. Davis and S. Sethuraman, *Consistency of Modularity Clustering on Random Geometric Graphs,* preprint available upon request.

E. Davis and B. Dong, *Convergence of Wavelet Frame Regularizations in Image Restoration,* in preparation.

Talks

Introduction to Wavelets,
Graduate Student Colloquium, University of Arizona. (Fall 2013)

From Sudoku to Compressed Sensing,
Graduate Student Colloquium, University of Arizona. (Spring 2015)

Introduction to Modularity Clustering,
Modeling and Computation Seminar, University of Arizona. (Fall 2015)

Consistency of Modularity Clustering,
Mathematical Physics Seminar, University of Arizona. (Fall 2015)

Consistency of Modularity Clustering on Random Geometric Graphs,
Mathematical Physics Seminar, University of Arizona. (Spring 2016)

Consistency of Modularity Clustering on Random Geometric Graphs,
Frontier Probability Days, Salt Lake City, UT. (Spring 2016)

Consistency of Modularity Clustering on Random Geometric Graphs,
First Workshop on Interdisciplinary Statistics, CIMAT, Guanajuato. (Summer 2016)

Teaching Experience

College Algebra
Precalculus
Calculus I
Calculus II
Introduction to Biostatistics
Probability and Statistics for Engineers
Analysis Qualifying Exam Review Sessions

Honors and Awards

2010–2011	NSF Vigre Fellowship
2016	UofA College of Science Scholarship Award, in Mathematics
2016	Bartlett Fellowship

Graduate Coursework

- ❑ Algebra
- ❑ Real Analysis
- ❑ Banach and Hilbert Spaces
- ❑ Complex Analysis
- ❑ Topology-Geometry
- ❑ Global Differential Geometry
- ❑ Probability Theory
- ❑ Partial Differential Equations
- ❑ Classical Mechanics
- ❑ Statistical Machine Learning
- ❑ Digital Communication Systems
- ❑ Topics in Applied Mathematics

References

Sunder Sethuraman, Professor,
Department of Mathematics, The University of Arizona,
(520) 621-1774, `sethuram@math.arizona.edu`

Shankar Venkataramani, Professor,
Department of Mathematics, The University of Arizona,
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Leonid Friedlander, Professor,
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