Christopher Shriver

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Employment

University of Texas at Austin   Austin, TX

Instructor (Postdoctoral)   Fall 2021 – Present

Education

University of California, Los Angeles   Los Angeles, CA

Mathematics Ph.D.   June 2021
Advisor: Tim Austin

   Graduate Dean's Scholarship

Yale University   New Haven, CT

Mathematics (Intensive) B.S.   2016

   Distinction in the Major, Magna Cum Laude

Research Interests

Entropy and ergodic theory of nonamenable group actions, related models in statistical physics and computer science

Papers and preprints

Listed in order of first appearance. Dates refer to publication date, if there is one, and preprint date otherwise.

1. Christopher Shriver (Jan. 2017). *An Application of Markov Chain Analysis to Integer Complexity*. arXiv: `1511.07842` [math]

2. Christopher Shriver (Aug. 2022). "Concentration of Markov Chains Indexed by Trees". In: *Annales de l'Institut Henri Poincaré, Probabilités et Statistiques* 58.3. ISSN: 0246-0203. DOI: `10.1214/21-AIHP1224`. arXiv: `1908.08121`

3. Christopher Shriver (June 2023). "The Relative f-Invariant and Non-Uniform Random Sofic Approximations". In: *Ergodic Theory and Dynamical Systems* 43.6, pp. 2073–2110. ISSN: 0143-3857, 1469-4417. DOI: `10.1017/etds.2022.27`

4. Christopher Shriver (Nov. 2022). "Free Energy, Gibbs Measures, and Glauber Dynamics for Nearest-Neighbor Interactions". In: *Communications in Mathematical Physics*. ISSN: 0010-3616, 1432-0916. DOI: 10.1007/s00220-022-04537-0

5. Christopher Shriver (Mar. 2021). *Metastability and Maximal-Entropy Joinings of Gibbs Measures on Finitely-Generated Groups*. arXiv: 2103.04467 [math-ph]

6. Christopher Shriver (July 2023). *Equilibrium and Nonequilibrium Gibbs States on Sofic Groups*. arXiv: 2305.11803 [math-ph]

7. Christopher Shriver (Aug. 2023). *Typical Sofic Entropy and Local Limits for Free Group Shift Systems*. arXiv: 2308.08041 [math]

8. Tim Austin, Lewis Bowen, and Christopher Shriver (Dec. 2023). *Algebraic Dynamical Systems from LDPC Codes Satisfy a Strong Negation of the Weak Pinsker Property*. arXiv: 2312.17387 [math]

Talks

UC San Diego Group Actions Seminar	October 2023
University of Houston Dynamics Seminar	October 2023
UT Austin Groups and Dynamics Seminar	September 2023
South Eastern Logic Symposium (Univ. Florida)	March 2023
Texas A&M Groups and Dynamics Seminar	November 2022
UT Austin Groups and Dynamics Seminar	November 2021
MIT Probability Seminar	April 2021
UC San Diego Group Actions Seminar	November 2020
Northeast Probability Seminar	November 2020
Stanford Probability Seminar	November 2020
UCLA Participating Analysis Seminar	October 2020
UT Austin Groups and Dynamics Seminar	October 2020
UCLA Participating Analysis Seminar	November 2019

Teaching

At UT Austin, taught/will teach:

Differential and Integral Calculus (408K, 408L, 408D)
Applied Linear Algebra (346)
Probability I (362K)
Entropy and Ergodic Theory (Graduate topics class)

At UCLA, was teaching assistant for:

Graduate real analysis

Undergraduate courses:

Single- and multi-variable calculus
Linear algebra
Discrete mathematics
Probability
Real analysis

Mentored one undergraduate through UCLA math's Directed Reading Program.

Was TA for mini-course "Sofic entropy and orbit equivalence" in "Expanding Dynamics" summer school, June 2021

Participated in "Calculus Evolution Initiative" at UT Austin, Fall 2021

Service

Refereed for:

Annals of Probability, Ergodic Theory and Dynamical Systems, Journal of Statistical Physics, Transactions of the AMS

Co-organized:

UT Groups and Dynamics RTG Summer Directed Reading Program	Summer 2022
UT Groups and Dynamics Graduate Mini-school	July 2022
UT Groups and Dynamics Seminar	Fall 2022
UT Groups and Dynamics Graduate Mini-school	May 2023

Assisted with 2023 UT Undergraduate Groups and Dynamics Conference	Spring 2023