PUBLICATIONS AND PREPRINTS

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Journal Articles

1. **C. Liu**, Mean Li–Yorke chaos along sequences for amenable group actions, *Groups Geom. Dyn.*, accepted (2026).
2. **C. Liu** and Q. Zhang, On directional entropy dimension of $\mathbb{Z}^2$-measure preserving systems, *J. Math. Phys.* **67** (2026), 102707, DOI.
3. **C. Liu** and C. Wang, Sensitivity–chaos equivalence in linear cellular automata, *J. Stat. Phys.* **193** (2026), Article 149, DOI.
4. L. Haupt, T. Jäger and **C. Liu**, A note on multivariate diam mean equicontinuity and frequent stability, *Nonlinearity* (2026), DOI.
5. C. Feng, W. Huang, **C. Liu** and H. Zhao, Ergodicity and mixing of invariant capacities and applications, *Ann. Appl. Probab.* (2026), DOI.
6. **C. Liu**, R. Xiao, L. Xu and X. Zhou, Δ-weak mixing and asynchronous Li–Yorke chaos, *J. Differential Equations* (2026), DOI.
7. L. Backes, **C. Liu** and F. B. Rodrigues, Variational principles for metric mean dimension with potential of level sets, *J. Dynam. Control Syst.* (2026), DOI.
8. A. J. Becker, **C. Liu** and F. B. Rodrigues, Nonlinear metric mean dimension, *Discrete Contin. Dyn. Syst. Ser. S* (2026), DOI.
9. P. Debnath, S. Goswami and **C. Liu**, The interplay between additive and multiplicative central sets theorems, *Indag. Math. (N.S.)* (2026), DOI.
10. **C. Liu**, C. Wang and W. Wu, Relative sequence entropy for amenable group actions, *J. Differential Equations* (2025), DOI.
11. **C. Liu**, X. Wang and L. Xu, Sequence entropy and IT-tuples for minimal group actions, *Adv. Math.* (2025), DOI.
12. **C. Liu** and L. Xu, Directional Pinsker algebra and its applications, *J. Math. Phys.* (2024), DOI.
13. **C. Liu**, F. Tan and J. Zhang, Mean Li–Yorke chaos along any infinite sequence for infinite-dimensional random dynamical systems, *J. Differential Equations* (2024), DOI.
14. **C. Liu**, R. Xiao and L. Xu, Pinsker σ-algebra character and mean Li–Yorke chaos, *J. Dynam. Differential Equations* (2024), DOI.
15. **C. Liu** and F. B. Rodrigues, Metric mean dimension via preimage structures, *J. Stat. Phys.* (2024), DOI.
16. **C. Liu**, Directional weak mixing and applications, *Fund. Math.* (2024), DOI.
17. **C. Liu** and K. Yan, Sequence entropy for amenable group actions, *Phys. Scr.* (2023), DOI.
18. **C. Liu** and X. Liu, The irregular set for maps with almost weak specification property has full metric mean dimension, *J. Math. Anal. Appl.* (2023), DOI.

19. J. Li, **C. Liu**, S. Tu and T. Yu, Sequence entropy tuples and mean sensitive tuples, *Ergodic Theory Dynam. Systems* (2023), DOI.
20. **C. Liu** and X. Zhou, Directional entropy dimension of topological dynamical systems, *J. Differential Equations* (2022), DOI.
21. **C. Liu**, Positive density subsets in amenable groups, *J. Dynam. Differential Equations* (2022), DOI.
22. **C. Liu** and L. Xu, Directional Kronecker algebra for $\mathbb{Z}^q$-actions, *Ergodic Theory Dynam. Systems* (2022), DOI.

Preprints

1. **C. Liu**, K. Liu and T. Yu, Directional ergodic theorems, ergodicity, and weak mixing for $\mathbb{Z}^2$-actions, preprint (2026), arXiv:2611.10409.
2. X. Cheng, J. Hu and **C. Liu**, Mean-field coupled maps with L^1-kernels: propagation of chaos and exponential stability in a weighted Wiener algebra, preprint (2026), ResearchGate.
3. **C. Liu**, X. Ma and J. Wu, Groupoid strict comparison for ample groupoids: fiberwise supramenability and topological amenability, preprint (2026), arXiv:2610.08511.
4. Y. Gutman and **C. Liu**, Generic sharp shift embedding for amenable group actions with the uniform Rokhlin property and comparison, preprint (2026), arXiv:2609.31735.
5. E. Glasner and **C. Liu**, Comparison and almost finiteness for actions of amenable groups, preprint (2026), arXiv:2609.23702.
6. E. Glasner and **C. Liu**, Joint point-distality and structure theory for commuting actions, preprint (2026), arXiv:2609.06032.
7. S. Goswami and **C. Liu**, A uniform product-difference theorem for dense subsets of $\mathbb{Z}^2$, preprint (2026), arXiv:2609.06782.
8. **C. Liu**, Conditional topomorphic degree and multivariate mean equicontinuity for minimal amenable group actions, preprint (2026), arXiv:2607.27400.
9. **C. Liu**, Li–Yorke chaos along any infinite sequence: relative mixing, sofic and Rokhlin entropy, preprint (2026), arXiv:2607.20735.
10. T. Hauser and **C. Liu**, Mean equicontinuity and related properties in hyperspace and measure dynamics, preprint (2026), arXiv:2606.22658.
11. T. Downarowicz, Y. Gutman and **C. Liu**, Dynamical Cantor staircase functions and the small flow boundary property, preprint (2026), arXiv:2606.14337.
12. T. Amrutam, P. Dey, **C. Liu** and Monika, The Bishop–Phelps–Bollobás property for extremally disconnected ranges: separable and low-density domains, preprint (2026), arXiv:2606.12080.
13. **C. Liu**, G. Moreno and H. Shi, Classifying slice-regular polynomials via group actions on the twistor space, preprint (2026), arXiv:2605.22788.
14. T. Hauser and **C. Liu**, The maximal mean equicontinuous factor via regional mean sensitivity, preprint (2026), arXiv:2601.11814.
15. T. Amrutam and **C. Liu**, Rigidity of generalized Furstenberg boundaries and applications to intermediate crossed products, preprint (2026), arXiv:2601.03952.
16. G. Fuhrmann and **C. Liu**, Idempotents in the Ellis semigroup of Floyd–Auslander systems, preprint (2025), arXiv:2512.13341.
17. **C. Liu**, L. Xu and S. Zhang, Independence and mean sensitivity in minimal systems under group actions, preprint (2025), arXiv:2501.15622.

18. **C. Liu**, L. Xu and S. Zhang, Independence, sequence entropy and mean sensitivity for invariant measures, preprint (2025), arXiv:2501.08069.
19. W. Huang, **C. Liu**, S. Peng and B. Qu, Ergodicity and mixing of sublinear expectation system and applications, preprint (2024), arXiv:2411.03512.
20. C. Feng, W. Huang, **C. Liu** and H. Zhao, Finite ergodic components for upper probabilities, preprint (2024), arXiv:2411.02030.
21. **C. Liu**, B. Qu, J. Yao and Y. Zhi, Connecting orbits in cooperative McKean–Vlasov SDEs, preprint (2024; revised 2026), arXiv:2407.18853.
22. **C. Liu** and L. Xu, Directional bounded complexity, mean equicontinuity and discrete spectrum for $\mathbb{Z}^q$-actions, preprint (2021; revised 2022), arXiv:2105.03132.