Jordan Kemp Physics Ph.D Candidate, University of Chicago mobile: 610-603-6372
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Research Appointments

University of Chicago, Urban Science Lab/Murugan Lab *PhD Researcher* Aug 2020-Present
Social and evolutionary dynamics through the intersection of physics, neuroscience and information theory

Université de Lausanne, Departément des Operations *Visiting Scholar* Jun-Sep 2023
Bayesian modeling of dynamical principal agent problem

University of Chicago, Bernien Lab *MS. RA, Exper. and Computational Thry.* Oct 2018-Oct 2020
Founding graduate student in experimental atomic quantum computing lab

MIT, Metric Geometry and Gerrymandering Group *RA, Computational Thry.* Summer 2018
Mathematical modeling and data analysis of problems in congressional redistricting

Tufts University, Surface Physics Lab: *RA, Exper. and Computational Thry.* May 2016-May 2018
Theoretical and experimental characterization of surface scattering in thin-metal films

California Institute of Technology, LIGO: *RA, Exper. and Computational Thry.* Mar-Oct 2017
Experimental acoustic characterization of mirror material for LIGO Voyager upgrades

Academic Leadership

Equity, Diversity, and Inclusion Office, UChicago PSD: *Student Advisor* Feb 2018-Present
Speaking, recruitment at academic events. Administrative liaison, graduate mentor

Tufts Community Union: *Class of 2018 Senator* May 2017-May 2018
Budgeted student activities monies and advocated for STEM student interests

Society of Physics Students, Tufts University Chapter: *Vice President* May 2017 - May 2018
Coordinated research symposiums, talks by Tufts and external researchers, and community outreach events

Relevant Publications

Kemp, J. T., Kline, A. G., & Bettencourt, L. M. A. (2024). *Information Synergy Maximizes the Growth Rate of Heterogeneous Groups.* PNAS Nexus (Under review)

Kemp, J. T., Hongler, M. O., & Gallay, O. (2023). *Stochastic Pairwise Preference Convergence in Bayesian Agents.* arXiv preprint arXiv:2311.02899.

Kemp, J. T., & Bettencourt, L. M. A. (2023). *Learning increases growth and reduces inequality in shared noisy environments.* PNAS Nexus, 2(4), pgad093.

Kemp, J. T., & Bettencourt, L. M. A. (2022). *Statistical dynamics of wealth inequality in stochastic models of growth.* Physica A: Statistical Mechanics and its Applications, 607, 128180.

Singh, K., Anand, S., Pocklington, A., Kemp, J. T., & Bernien, H. (2022). *Dual-element, two-dimensional atom array with continuous-mode operation.* Physical Review X, 12(1), 011040.

Invited Talks

Network Inequality Group Seminar, *Complexity Sciences Hub Vienna* Jan 2024
Knowledge Lab Seminar, *The University of Chicago* Nov 2023
Quantitative Life Sciences Smnr., *The Abdus Salam International Centre for Theoretical Physics* Jul 2023
Masters in Computational Social Science Computation Workshop, *The University of Chicago* Mar 2023
Computational and Applied Math Seminar, *The University of Chicago* Mar 2023
Seminar, *London Mathematical Laboratory* Jun 2021
Materials Research Science and Engineering Center Seminar, *The University of Chicago* Feb 2020

Awards and Scholarships

ThinkSwiss Research Scholarship, Swiss Federal Government Jun 2023
National Science Foundation Graduate Research Fellowship (NSF GRFP) Apr 2020
Best Speaker in Photonics and Optical Physics, NSBP Annual Conference Nov 2019
The Class of 1911 Prize Scholarship, Tufts University Mar 2018
Carl Rouse Fellowship, Caltech LIGO, National Society of Black Physicists (NSBP) Jul 2017