Natalia Kravtsova

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Education

The Ohio State University — 2019 – current
PhD program in Mathematics (theoretical track)
Advisor: Professor Adriana Dawes

The Ohio State University — 2009 – 2014, 2015 – 2018
BS and MMS in Mathematics (biomathematics track), MS in Statistics

Moscow Conservatory — 2008
Diploma in Music Theory and History

Research (in preparation/submitted/published)

Kravtsova, N. *Asymptotic inference for Multimarginal Optimal Transport cost.* In preparation

Kravtsova, N., Chamberlin, H. M. & Dawes, A. T. *Efficient parameter generation for constrained models using MCMC.* Scientific Reports **13**, 16285

Kravtsova, N, McGee II, R. L., & Dawes, A. T. *Scalable Gromov-Wasserstein based comparison of biological time series.* Bulletin of Mathematical Biology **85**, 77

Ignacio, D. P., Kravtsova, N., Henry, J., Palomares, R. H., & Dawes, A. T. (2022). *Dynein localization and pronuclear movement in the C. elegans zygote*. Cytoskeleton, 79(12), 133–143.

Dawes, A. T., Wu, D., Mahalak, K. K., Zitnik, E. M., Kravtsova, N., Su, H., & Chamberlin, H. M. (2017). *A computational model predicts genetic nodes that allow switching between species-specific responses in a conserved signaling network*. Integrative Biology, 9(2), 156-166.

Kravtsova, N., & Dawes, A. T. (2014). *Actomyosin regulation and symmetry breaking in a model of polarization in the early Caenorhabditis elegans embryo: symmetry breaking in cell polarization*. Bulletin of Mathematical Biology, 76, 2426-2448.

Conference presentations

2023 SIAM Great Lakes Section Meeting (GLSIAM23)
Scalable Gromov-Wasserstein based comparison of biological time series (contributed talk)

Society for Mathematical Biology 2023 Annual Meeting
Scalable Gromov-Wasserstein based comparison of biological time series (minisymposium talk)

Third Graduate Student Conference: Geometry and Topology meet Data Analysis and Machine Learning (GTDAML2023)
Scalable Gromov-Wasserstein based comparison of biological time series (talk)

Society for Mathematical Biology 2019 Annual Meeting
Efficient identification of parameter space structure with Modified Metropolis-Hastings algorithm (poster)

Teaching

Columbus State Community College, Department of Mathematics
Instructor of Record: Calculus I, pre-algebra, intermediate algebra, business mathematics

The Ohio State University, Department of Mathematics
Teaching Assistant: Calculus (I, II, III), college algebra

The Ohio State University, Department of Statistics
Teaching Assistant: elementary statistics, business statistics, statistics for life sciences

Programming skills

C++, Python, R, Matlab