

Recent publications

Frank Nielsen

2024

1 Edited proceedings

- Frank Nielsen and Frédéric Barbaresco, Proceedings of 6th International Conference on Geometric Science of Information, GSI 2023 (August-September, LNCS (Springer), Part I (LNCS 14071) and Part II (LNCS 14072).
- Frédéric Barbaresco, Ali Mohammad-Djafari, Frank Nielsen, and Martino Trassinelli, Post-even proceedings of the 41st International Workshop on Bayesian Inference and Maximum Entropy Methods in Science and Engineering, MaxEnt 2022, Phys. Sci. Forum, March 2023.

2 Journals

- Rob Brekelmans and Frank Nielsen, Variational representations of annealing paths: Bregman information under monotonic embedding. Information Geometry (Springer), February 2024.
- Divergences Induced by the Cumulant and Partition Functions of Exponential Families and Their Deformations Induced by Comparative Convexity, Entropy 26(3), February, 2024.
- Frank Nielsen and Kazuki Okamura, On the f -divergences between densities of a multivariate location or scale family Statistics and Computing (Springer)/A \mathcal{J} , 34(60), January 2024.
- Frank Nielsen, What is... an inductive mean?, Notices of the American Mathematical Society, December 2023.
- Frank Nielsen and Kazuki Okamura, On f -divergences between Cauchy distributions, IEEE Transactions on Information Theory, 69(5), 3150 - 3171, May 2023.
- Frank Nielsen, A Simple Approximation Method for the Fisher-Rao Distance between Multivariate Normal Distributions, Entropy 25(4), 654, April 2023.

3 Conferences

- Ehsan Amid, Frank Nielsen, Richard Nock and Manfred Warmuth, Optimal Transport with Tempered Exponential Measures, 38th Annual AAAI Conference on Artificial Intelligence (AAAI'24), February 2024.
- Wu Lin, Valentin Duruisseaux, Melvin Leok, Frank Nielsen, Mohammad Emtiyaz Khan, Mark Schmidt, Simplifying Momentum-based Positive-definite Submanifold Optimization with Applications to Deep Learning, 40th International Conference on Machine Learning, ICML'23, July 2023.
- Frank Nielsen, Quasi-arithmetic centers, quasi-arithmetic mixtures, and the Jensen-Shannon ∇ -divergences, 6th International Conference on Geometric Science of Information (GSI'23), August-September 2023.

- Frank Nielsen and Kazuki Okamura, On the f -divergences between hyperboloid and Poincaré distributions, 6th International Conference on Geometric Science of Information (GSI'23), August-September 2023.

4 Workshops

- Frank Nielsen, Fisher-Rao and pullback Hilbert cone distances on the multivariate Gaussian manifold with applications to simplification and quantization of mixtures, 2nd Annual Topology, Algebra, and Geometry in Machine Learning Workshop (ICML TAGML'23), July 2023.
- Frank Nielsen and Kè Sun, Non-linear Embeddings in Hilbert Simplex Geometry, 2nd Annual Topology, Algebra, and Geometry in Machine Learning Workshop (ICML TAGML'23), July 2023.