

## PREPRINTS

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**Bittracher, A.**, Mollenhauer, M., Koltai, P., Schütte, C. (2021). Optimal Reaction Coordinates: Variational Characterization and Sparse Computation. *Submitted*. [arxiv.org/abs/2107.10158](https://arxiv.org/abs/2107.10158).

## PEER-REVIEWED ARTICLES

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**Bittracher, A.**, Moschner, J., Koks, B., Netz, R., Schütte, C. (2021). Exploring the Locking Stage of NFGAILS Amyloid Fibrillation via Transition Manifold Analysis. *The European Physical Journal B*, 94, 195. [doi.org/10.1140/epjb/s10051-021-00200-0](https://doi.org/10.1140/epjb/s10051-021-00200-0)

**Bittracher, A.**, Klus, S., Hamzi, B., Koltai, P., Schütte, C. (2021). Dimensionality Reduction of Complex Metastable Systems via Kernel Embeddings of Transition Manifolds. *Journal of Nonlinear Science*, 31, 3. [doi.org/10.1007/s00332-020-09668-z](https://doi.org/10.1007/s00332-020-09668-z)

**Bittracher, A.**, Schütte, C. (2020). A probabilistic algorithm for aggregating vastly undersampled large Markov chains. *Physica D: Nonlinear Phenomena*, 416, 132799. [doi.org/10.1016/j.physd.2020.132799](https://doi.org/10.1016/j.physd.2020.132799).

**Bittracher, A.**, Schütte, C. (2020). A Weak Characterization of Slow Variables in Stochastic Dynamical Systems. *Advances in Dynamics, Optimization and Computation*, 132-150. [doi.org/10.1007/978-3-030-51264-4\\_6](https://doi.org/10.1007/978-3-030-51264-4_6).

Banisch, R., Trstanova, Z., **Bittracher, A.**, Klus, S., Koltai, P. (2020). Diffusion maps tailored to arbitrary non-degenerate Itô processes. *Applied and Computational Harmonic Analysis*, 48(1), 242-265. [doi.org/10.1016/j.acha.2018.05.001](https://doi.org/10.1016/j.acha.2018.05.001)

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Klus, S., **Bittracher, A.**, Schuster, I., Schütte, C. (2018). A kernel-based approach to molecular conformation analysis. *The Journal of Chemical Physics*, 149, 244109. [doi.org/10.1063/1.5063533](https://doi.org/10.1063/1.5063533).

**Bittracher, A.**, Koltai, P., Klus, S., Banisch, R., Dellnitz, M., Schütte, C. (2017). Transition Manifolds of Complex Metastable Systems: Theory and Data-driven Computation of Effective Dynamics. *Journal of Nonlinear Science*, 28(2), 471-512. [doi.org/10.1007/s00332-017-9415-0](https://doi.org/10.1007/s00332-017-9415-0)

**Bittracher, A.**, Hartmann, C., Junge, O., Koltai, P. (2015). Pseudo generators for under-resolved molecular dynamics. *The European Physical Journal Special Topics*, 224, pages2463-2490. [doi.org/10.1140/epjst/e2015-02422-y](https://doi.org/10.1140/epjst/e2015-02422-y)

**Bittracher, A.**, Koltai, P., Junge, O. (2015). Pseudogenerators of spatial transfer operators. *SIAM Journal on Applied Dynamical Systems*, 14(3), 1478-1517. [doi.org/10.1137/14099872X](https://doi.org/10.1137/14099872X).

## THESES

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**Bittracher, A.** (2016). The generating structure of spatial conformation dynamics. *PhD Thesis, Technische Universität München*. <http://mediatum.ub.tum.de/?id=1302854>

**Bittracher, A.** (2011). Evaluation verschiedener Verfahren zur Metastabilitätsanalyse molekulardynamischer Systeme. *Diploma Thesis, Technische Universität München*.