

Stanford



Justus Alfred Kromer

Postdoctoral Research Fellow, Neurosurgery

Bio

PROFESSIONAL EDUCATION

- Diplom, Technische Universität Berlin , Physics (2012)
- Dr. rer. nat, Humboldt-Universität zu Berlin , Theoretical Physics (2016)

Research & Scholarship

LAB AFFILIATIONS

- Peter Tass (9/1/2017)

Publications

PUBLICATIONS

- **Chemokinetic Scattering, Trapping, and Avoidance of Active Brownian Particles** *PHYSICAL REVIEW LETTERS*
Kromer, J. A., de la Cruz, N., Friedrich, B. M.
2020; 124 (11)
- **Long-lasting desynchronization by decoupling stimulation** *PHYSICAL REVIEW RESEARCH*
Kromer, J. A., Tass, P. A.
2020; 2 (3)
- **Impact of number of stimulation sites on long-lasting desynchronization effects of coordinated reset stimulation** *CHAOS*
Kromer, J. A., Khaledi-Nasab, A., Tass, P. A.
2020; 30
- **Variability of collective dynamics in random tree networks of strongly coupled stochastic excitable elements** *PHYSICAL REVIEW E*
Khaledi-Nasab, A., Kromer, J. A., Schimansky-Geier, L., Neiman, A. B.
2018; 98 (5)
- **General solution of the chemical master equation and modality of marginal distributions for hierarchic first-order reaction networks** *JOURNAL OF MATHEMATICAL BIOLOGY*
Reis, M., Kromer, J. A., Klipp, E.
2018; 77 (2): 377–419
- **Decision making improves sperm chemotaxis in the presence of noise** *PLOS COMPUTATIONAL BIOLOGY*
Kromer, J. A., Maercker, S., Lange, S., Baier, C., Friedrich, B. M.
2018; 14 (4): e1006109
- **Emergent stochastic oscillations and signal detection in tree networks of excitable elements** *SCIENTIFIC REPORTS*
Kromer, J., Khaledi-Nasab, A., Schimansky-Geier, L., Neiman, A. B.

2017; 7: 3956

- **Emergence and coherence of oscillations in star networks of stochastic excitable elements** *PHYSICAL REVIEW E*
Kromer, J. A., Schimansky-Geier, L., Neiman, A. B.
2016; 93 (4): 042406
- **Noise-controlled bistability in an excitable system with positive feedback** *EPL*
Kromer, J. A., Pinto, R. D., Lindner, B., Schimansky-Geier, L.
2014; 108 (2)
- **Event-triggered feedback in noise-driven phase oscillators** *PHYSICAL REVIEW E*
Kromer, J. A., Lindner, B., Schimansky-Geier, L.
2014; 89 (3): 032138
- **Weighted-ensemble Brownian dynamics simulation: Sampling of rare events in nonequilibrium systems** *PHYSICAL REVIEW E*
Kromer, J. A., Schimansky-Geier, L., Toral, R.
2013; 87 (6): 063311
- **Phason-induced dynamics of colloidal particles on quasicrystalline substrates** *EUROPEAN PHYSICAL JOURNAL E*
Kromer, J. A., Schmiedeberg, M., Roth, J., Stark, H.
2013; 36 (3): 25
- **What Phasons Look Like: Particle Trajectories in a Quasicrystalline Potential** *PHYSICAL REVIEW LETTERS*
Kromer, J. A., Schmiedeberg, M., Roth, J., Stark, H.
2012; 108 (21): 218301