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## Publications

### Journals

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- A. E. Botha, M. Ansariara, S. Emadi, and M. R. Kolahchi, "Chimera patterns of synchrony in a frustrated array of Hebb synapses", *Front. Comput. Neurosci.*, Vol. 16, 2022
- Yu. M. Shukrinov, I. R. Rahmonov, A. Janalizadeh, and M. R. Kolahchi, "Anomalous Gilbert damping and Duffing features of the superconductor-ferromagnet-superconductor  $\phi$  0 Josephson junction", *Phys. Rev. B* , Vol. 104, 2021
- A Janalizade, MR Kolahchi, "Effect of Synchronization on the Fractal Basin Boundary of the Duffing Oscillator", 13th Chaotic Modeling and Simulation International Conference, Vol. 13, 2020
- M. Ansariara, S. Emadi, V. Adami, A. E. Botha, M. R. Kolahchi , "Signs of memory in a plastic frustrated Kuramoto model of neurons", *Nonlinear Dynamics* , Vol. 100, 2020
- André E. Botha & Mohammad R. Kolahchi , "Analysis of chimera states as drive-response systems", *Scientific Reports*, Vol. 8, 2018
- M. R. Kolahchi, A. E. Botha & Yu. M. Shukrinov , "Chimera States in an Intrinsically Coupled Stack of Josephson Junctions", *Journal of Superconductivity and Novel Magnetism* , Vol. 30, 2017



- AE Botha, Yu M Shukrinov, MR Kolahchi, "A Farey staircase from the two-extremum return map of a Josephson junction", *Nonlinear Dynamics*, Vol. 84, 2016
- AE Botha, Yu M Shukrinov, S Yu Medvedeva, MR Kolahchi, "Structured chaos in 1-d stacks of intrinsic Josephson junctions irradiated by electromagnetic waves", *Journal of Superconductivity and Novel Magnetism*, Vol. 28, 2015
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- A. Valizadeh, M. R. Kolahchi, and J. P. Straley, "Single phase-slip junction site can synchronize a parallel superconducting array of linearly coupled Josephson junctions", *Physical Review B* , Vol. 82, 2010
- A Valizadeh, Kh Jahanbani, MR Kolahchi, "Dynamics of a Bose-



Einstein condensate in a horizontally vibrating shallow optical lattice", *Physical Review A*, Vol. 81, 2010

- Yu. M. Shukrinov, M. Hamdipour, and M. R. Kolahchi, "Effect of interjunction coupling on superconducting current and charge correlations in intrinsic Josephson junctions", *PHYSICAL REVIEW B*, Vol. 80, 2009
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