

LIST OF PUBLICATIONS

Books:

1. Soumitro Banerjee and George C. Verghese, (Editors) “Nonlinear Phenomena in Power Electronics: Attractors, Bifurcations, Chaos, and Nonlinear Control”, IEEE Press, New York, 2001.
2. Soumitro Banerjee, “Dynamics for Engineers,” John Wiley & Sons, London, 2005.
3. S. N. Bhadra, D. Kastha and S. Banerjee, “Wind Electrical Systems,” Oxford University Press, New Delhi, India, 2005.
4. Soumitro Banerjee, “A Brief History of Science”, Breakthrough Science Society, India, 2017.
5. Soumitro Banerjee, “Research Methodology for Natural Sciences”, IISc Press, Bengaluru, India, 2022, Second Edition: 2025.

Papers in Peer-Reviewed Journals:

2026

1. Ritam Bairagi, Debajyoti Guha and Soumitro Banerjee, “Novel methods to distinguish between quasiperiodicity and a high periodicity”, *Nonlinear Dynamics*, Vol. 114, no. 125, pp. 114–125 (2026). DoI: 10.1007/s11071-025-11985-5

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2. Tania Ghosh and Soumitro Banerjee, “Experimental verification of generalized synchronization”, *Physics Letters A*, Vol. 553, p. 130718, September 2025. DoI: 10.1016/j.physleta.2025.130718
3. Calvin Alvares and Soumitro Banerjee, “How Network Topology Affects the Strength of Dangerous Power Grid Perturbations”, *International Journal of Bifurcation and Chaos*, Vol.35, No.13, 2550160, 2025. DoI: 10.1142/S0218127425501603
4. Joydeb Bhattacharyya, Malay Banerjee and Soumitro Banerjee, “Intermittent Releases: A Modelling Approach for Sterile Insect Technique in Mosquito Control”, *Journal of Mathematical Biology*, vol.91, no.60, 2025. DoI: 10.1007/s00285-025-02300-2
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7. Gurpahul Singh, Ritesh K Singh and Soumitro Banerjee, “Embedding of a non-Hermitian Hamiltonian to emulate the von Neumann measurement scheme”, *Journal of Physics A: Mathematical and Theoretical*, vol. 57, p. 035301, 2024, DoI: <https://doi.org/10.1088/1751-8121/ad1431>
8. Joydeb Bhattacharyya and Soumitro Banerjee, “Modelling the efficacy of Wolbachia-based mosquito control: a population replacement approach,” *The European Physical Journal Plus*, vol.139, no.6, pp. 510, June 2024. <https://doi.org/10.1140/epjp/s13360-024-05332-7>
9. Calvin Alvares and Soumitro Banerjee, “A probabilistic distance-based stability quantifier for complex dynamical systems,” *Nonlinear Dynamics*, Vol.112, pp. 21869–21880, August 2024. <https://doi.org/10.1007/s11071-024-10176-y>
10. Debajyoti Guha and Soumitro Banerjee, “Spectral Signatures of Bifurcations,” *International Journal of Bifurcation and Chaos*, Vol. 34, No. 11, p.2450144, August 2024. <https://doi.org/10.1142/S021812742450144X>

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11. Arnab Acharya, Akhil Bhartiya, and Soumitro Banerjee, “Signatures of strange non-chaotic dynamics in a forced quantum system”, *Physical Review E*, vol. 107, p. 024207, February 2023. DOI: 10.1103/PhysRevE.107.024207
12. Arnab Acharya, Pratik Jeware, Soumitro Banerjee, “Objective Collapse Induced by a Macroscopic Object”, *Foundations of Physics*, vol.53, no.4, p.68, August 2023. DOI: 10.1007/s10701-023-00709-7
13. Sishu Shankar Muni and Soumitro Banerjee. “Bifurcations of mode-locked periodic orbits in three-dimensional maps”, *International Journal of Bifurcation and Chaos*, vol. 33, no. 10, p. 2330025, August 2023. DoI: 10.1142/S0218127423300252

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15. Vaibhav Ganatra and Soumitro Banerjee, “Sketching 1D Stable Manifolds of 2D Maps Without the Inverse”, *International Journal of Bifurcation and Chaos*, Vol.32, No.8, p. 2250111, 2022, DoI: 10.1142/S0218127422501115

16. Abhijit Bera and Soumitro Banerjee, “Extreme event statistics in a map with singularity”, *Chaos, Solitons & Fractals*, Vol. 164, p. 112686, 2022. DoI: 10.1016/j.chaos.2022.112686

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22. A. El Aroudi, K. Mandal, M. Al-Numay, D. Giaouris, and S. Banerjee, “Piecewise Quadratic Slope Compensation Technique for DC-DC Switching Converters”, *IEEE Transactions on Circuits and Systems I*, vol.67, no. 12, pp. 5574-5585, December 2020. DOI: 10.1109/TCSI.2020.2993793
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26. Indrava Roy, Mahashweta Patra, and Soumitro Banerjee, “Shilnikov-type Dynamics in Three-Dimensional Piecewise Smooth Maps”, *Chaos, Solitons & Fractals*, Vol.133, p. 109655, 2020. doi.org/10.1016/j.chaos.2020.109655

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