CURRICULUM VITÆ

Manu Mannattil

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Personal Information

Born on August 13, 1991 in Palakkad, Kerala; Indian citizen.

Education

Syracuse University, Syracuse, New York, USA; August 2017–.
Ph.D. in Physics, August 2023 (expected); GPA: 3.958/4.000.

Indian Institute of Technology Kanpur, Kanpur, Uttar Pradesh, India; July 2009–July 2014.
Integrated M.Sc. in Physics, February 2015.

Employment History

Research and/or Teaching Assistant, Department of Physics, Syracuse University; August 2017–.

Project Associate, Nonlinear Dynamical Systems Group, Indian Institute of Technology Kanpur; September 2014–October 2015.

Publications

Submissions and works in progress

1. Manu Mannattil and Christian D. Santangelo, "Geometry-induced Localization of Waves on Thin Elastic Materials", forthcoming (early 2023).

Refereed journal papers

5. Manu Mannattil, J. M. Schwarz, and Christian D. Santangelo, "Thermal Fluctuations of Singular Bar-Joint Mechanisms", Phys. Rev. Lett. **128**, 208005 (2022), arXiv:2112.04279 [cond-mat.soft].
4. Manu Mannattil, Ambrish Pandey, Mahendra K. Verma, and Sagar Chakraborty, "On the applicability of low-dimensional models for convective flow reversals at extreme Prandtl numbers", Eur. Phys. J. B **90**, 259 (2017), arXiv:1711.01510 [physics.flu-dyn].
3. Manu Mannattil, Himanshu Gupta, and Sagar Chakraborty, "Revisiting Evidence of Chaos in X-ray Light Curves: The Case of GRS 1915+105", Astrophys. J. **833**, 208 (2016), arXiv:1611.02264 [astro-ph.HE].
2. Aditya Tandon, Malte Schröder, Manu Mannattil, Marc Timme, and Sagar Chakraborty, "Synchronizing noisy nonidentical oscillators by transient uncoupling", Chaos **26**, 094817 (2016), arXiv:1611.02298 [nlin.CD].
1. Malte Schröder, Manu Mannattil, Debabrata Dutta, Sagar Chakraborty, and Marc Timme, "Transient Uncoupling Induces Synchronization", Phys. Rev. Lett. **115**, 054101 (2015), arXiv:1508.06545 [nlin.CD].

Scientific software

1. NoLiTSA is a Python module for nonlinear time series analysis that I developed between 2015 and 2017. It has now been used in over 15 scientific publications, and has over 100 stars on GitHub.

Awards and Honors

College of Arts & Sciences Award, Syracuse University, May 2020.

Fellowship from the Henry Levinstein fund, Department of Physics, Syracuse University, April 2018.

Kishore Vaigyanik Protsahan Yojana, Department of Science and Technology, Government of India, March 2011.

Talks and Posters

Thermal Fluctuations of Singular Bar-Joint Mechanisms: APS March Meetings ’21 and ’22; Simons Center for Geometry and Physics, Stony Brook University, May 2022.

Introduction to Nonlinear Time Series Analysis: Modelling and Simulation Lab, Indian Institute of Technology Kanpur, August 2015.

Service to Profession

Manuscript reviewer for *Physics of Fluids*.

Teaching Experience

Syracuse University

Instructor for PHY 212 (Electricity & Magnetism); Grader for PHY 731 (Graduate Statistical Mechanics); Teaching Assistant for PHY 215 (Honors Mechanics), PHY 211 (General Mechanics), PHY 222 (Electricity & Magnetism Lab), and AST 101 (Introductory Astronomy).

Miscellaneous

Languages.— English (fluent), Hindi (basic), and Malayalam (native).

Computer skills.— Experience writing well-documented and modular software in Python, C++, Wolfram Language, Vim script, AWK, and various shells (Bash, POSIX sh, etc.); seasoned user of Unix-like operating systems and related software.

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