

Faculty Profile



Name: Dr. THOKALA SOLOMAN RAJU

Designation: Assistant Professor

Teaching Areas: Mechanics, Electrodynamics, Quantum mechanics, and Mathematical Physics

Research Interests: Theoretical Physics; Nonlinear Dynamics: - Nonlinear Fiber Optics; -Bose-Einstein condensates; Metamaterials; Quantum Computation; PINN for Machine learning; Computational methods

Education:

- Ph.D., University of Hyderabad, 2003
- M.Phil., University of Hyderabad, 1997
- M.Sc., Andhra University, Visakhapatnam, 1995
- B.Sc., D N R College, Bhimavaram, 1993

Research / Selected Publications:

1. **Thokala Soloman Raju**, *Asymmetric Dual-core Waveguides: Dynamics of Self-Similar Waves*, Springer Nature, Singapore (2023)
2. T. Shreecharan and **Thokala Soloman Raju**, *Time-dependent non-Abelian waves and their stochastic regimes for gauge fields coupled to external sources*, Physical Review D **107**, 056011 (2023).
3. **Thokala Soloman Raju**, T. Shreecharan, and S.S. Ranjani, *Dynamics of Nonautonomous Matter Waves in a Waveguide With an External Source*, IEEE Journal of Quantum Electronics **58**, 1-5 (2022).
4. **Thokala Soloman Raju**, *Nonlinear Lorentzian-type standing wave solutions of ac-driven sine-Gordon equation*, Physics Letters A**414**, 127623 (2021).
5. **Thokala Soloman Raju**, *Spatiotemporal optical similaritons in dual-core waveguide with an external source*, Communications in Nonlinear Science and Numerical Simulation **45**, 75-80 (2017).
6. **Thokala Soloman Raju**, T.A. Hegde, and C.N. Kumar, *Unbreakable PT symmetry of exact solitons in inhomogeneous nonlinear optical media*, J. Opt. Soc. Am. B **33**, 35 (2016).