Basic Details:

- **Name:** Dr. R. Surendar

- **Designation**: Assistant Professor (OG)

- **Phone Number:** 9626298593

- **Email ID:** surendar1@srmist.edu.in

- **Area of Subject:** Computational Fluid Flow Control

- **Affiliation:** Department of Mathematics, SRM Institute of Science and Technology, Ramapuram.

- **Google Scholar Id:** https://scholar.google.com/citations?hl=en&user=KkL7jQEAAAAJ

- **ORCID Id:** https://orcid.org/0000-0002-5782-7522

Research Areas:

Nonlinear Dynamics, Fluid through porous medium, Stability theory, Time delay system, Fractional Calculus and Nonlinear control theory.

Educational Details:

- **Degree** – D. .El. Ed,, M. Sc., M. Phil, Ph. D.

- **Area of Subject** – Mathematics

Education at Universites

Ph. D. Mathematics – 2023, Bharathiar University, Coimbatore, Tamil Nadu.

M.Phil – 2019, Bharathiar University, Coimbatore, Tamil Nadu.

M.Sc. Mathematics – 2017, Bharathiar University, Coimbatore, Tamil Nadu.

B.Sc. Mathematics – 2015, Bharathiar University, Coimbatore, Tamil Nadu.

Research Experience:

- **Ph. D.** Thesis Title : "Hyper-chaos stabilization and synchronization of Darcy-Brinkman model for closed loop control". Supervisor : Dr. M. Muthtamilselvan, Associate Professor (Research), Bharathiar University, Tamil Nadu, India. (October 2019 – May 2023).

- **Projects Assistant** : "Department of Science and Technology (DST) - Promotion of University Research and Scientific Excellence (PURSE) Phase-II, Government of India, New Delhi." Memo No. BU/DST PURSE (II)/APPOINTMENT/448).

- **Master of Philosophy** Thesis Title : "Natural convection in a partially heated square cavity with an inner square black", Department of Mathematics, Bharathiar University, Tamil Nadu, India. (October-2017 to October-2018)

- National Centre for Mathematics on "Differential Equations-Theory, Methods and Applications", in the Department of Mathematics, Bharathiar University, Tamil Nadu, India.

LIST OF PUBLICATIONS

- **R. Surendar**, M. Muthtamilselvan, and R. Rakkiyappan, LMI based sampled-data controller for synchronization on the time-delay Darcy-Brinkman model, Journal of the Franklin Institute, vol. 359, no. 12, pp. 5865-5890, 2022.

- **R. Surendar**, M. Muthtamilselvan, Nonlinear system stabilization in an anisotropic porous medium with Oldroyd-B fluid based on an actuator and sensor array, Int. Journal of Modern Physics B, 2350132, 2022.

- **R. Surendar**, M. Muthtamilselvan, Non-linear system synthesis via a quasi-periodic sinusoidal modulation to suppress chaos in Ag-MgO/H2O hybrid nanofluid of actuator and sensor array, Journal of Archive mechanics, pp. 1-27, 2023.

- **R. Surendar**, M. Muthtamilselvan, Feedback control of chaotic motion in a anisotropic porous medium under magnetic effect, Journal of porous media, 2022. **DOI:** 10.1615/JPorMedia.2023039727

LIST OF CONFERENCE PROCEEDINGS

- **R. Surendar**, M. Muthtamilselvan, Bahaaeldin Abdalla, and Qasem M. Al-Mdallal. "Natural convection in a partially heated square cavity with an inner square block." In *AIP Conference Proceedings*, vol. 2261, no. 1, p. 030046. AIP Publishing LLC, 2020.

LIST OF REVISION SUBMITTED

- R. Surendar, M. Muthtamilselvan, Stochastic disturbance with finite-time chaos stabilization and synchronization for a fractional-order nonautonomous hybrid nonlinear complex system via a sliding mode control (Journal of chaos, solutions and fractols).
- R. Surendar, M. Muthtamilselvan, Helical force with a two-phase Cattaneo LTNE model on hyper-chaotic convection in presence of magnetic field (European Physical Journal Plus).

LIST OF SUBMITTED JOURNALS

- R. Surendar, M. Muthtamilselvan, LMI-based Sampled-Data Controller for Synchronization via Looped Lyapunov Functional Approach in an Ag-MgO/H2O Hybrid Nanofluid in a Time-delay Nonlinear System.
- R. Surendar, M. Muthtamilselvan, Stochastic disturbance with finite-time chaos control and synchronization for a fractional-order Cattaneo-Christov model.
- R. Surendar, M. Muthtamilselvan, Robust control on finite-time synchronization of uncertain new hyperchaotic mechanical 5D systems with external disturbance.

AWARDS, CONFERENCES AND WORKSHOPS:

- An International Conference on 65th Congress of the Indian Society of Theoretical and Applied Mechanics, December 9-11 at IIT Karagpuur, India (2020).
- An International Conference on 2th congress of the International Hazar Scientific Researches Conference, April 10-12 at Baku, Azerbaijan, Khazar University (2021).
- An International Conference on 1st congress of the IArcSAS International Architectural Sciences and Applications Symposium, October 27-29, / Isparta, Turkey (2021).
- An International Conference on , International Afghanistan Interdisciplinary Research Conference , August 19, Taj Institute of Higher Education / Mazar-i-Sharif, Afghanistan (2021).
- An International Conference on 65th Congress of the Indian Society of Theoretical and Applied Mechanics, December 3-5 at IIT Karagpuur, India (2021).
- International Conference on Nonlinear Dynamics and Applications, March 9 - 11, sikkim, India (2022).
- Research poster presented in the broad-field Mathematical Computational Sciences in the DST-PURSE Satellite Symposium held at BU, Sep-13-15, India (2022).
- An International Conference on Nonlinear Dynamics and Applications March 9-11 at SMIT Sikkim, India (2022) and so on.

Membership: Nil

Please send in your latest PASSPORT SIZE photograph.