



Dr. A. SHREE NIDHI

Assistant Professor

Contact information:

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Educational Qualification : M.Sc., Ph.D.

Research Interest:

Research area is Difference Equations. Published 5 research papers in reputed SCI/SCIE journals

Research Publications:

1. Boundary stabilization and state estimation of ODE-transport PDE with in-domain coupling, *Journal of the Franklin Institute*, 359 (2022) 1605-1625.
2. Observer and Boundary Output Feedback control for coupled ODE – Transport PDE, *Applied Mathematics and Computation*, 426 (2022) 127096.
3. Observer and output feedback control for nonlinear ODE coupled to an under actuated transport PDE, *International Journal of Robust and Nonlinear Control*, 32 (2022) 7074-7098.
4. Results on boundary control for parabolic systems using back-stepping method, *Mathematical Problems in Engineering*, 2022 (2022) Article No. 4720044.
5. Boundary state feedback control for semi-linear fractional-order reaction-diffusion systems, *Chaos, Solitons and Fractals: the interdisciplinary journal of Nonlinear Science, and Nonequilibrium and Complex phenomena*, 162 (2022) 112428.

Co- curricular activities:

1. Presented a paper entitled "*Output feedback boundary controller for an ODE coupled to a first order hyperbolic PDE*" in the International Conference on Advances in Differential Equations and Numerical Analysis, organized by Department of Mathematics, IIT-Guwahati during October 12-15, 2020.
2. Presented a paper entitled "*State feedback boundary control for hyperbolic PDE coupled with ODE*" in the 15th Biennial Conference of Indian Society of Industrial and Applied Mathematics, organized by Bharathiar University and Anna University, Coimbatore during December 5-7, 2019.
3. Presented a paper entitled "*State feedback boundary control for a coupled system*" in 2nd International Conference on Mathematical Modelling and Computational Methods in Science and Engineering, held at School of Mathematics, Alagappa University, Karaikudi during January 22-24, 2020.
4. Presented a paper entitled "Backstepping stabilization of a coupled ODE-transport PDE with in-domain coupling" in the 4th International Conference on Mathematical Modelling, Applied Analysis and Computation, Department of Mathematics, Faculty of Science, JECRC University, Jaipur during August 5-7, 2021.
5. Received the University Research Fellowship from Bharathiar University during her Ph.D. tenure.
6. Awarded "presentation of the meet" award for my presentation entitled "Math in Art, Architecture and Music" and highly appreciated for innovation in a symposium held at Sankara college of arts and science, Coimbatore in 2013
7. Active member of the Indian Society of Industrial and Applied Mathematics.