



Dr. Gokul Palanisamy

Assistant Professor

Department of Mathematics

School of Engineering

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1. ABOUT

Dr. Gokul Palanisamy is an Assistant Professor in the Department of Mathematics, School of Engineering, Dayananda Sagar University, Bengaluru. He received his Ph.D. in Mathematics from Bharathiar University, Coimbatore, in 2024, with a thesis on finite-time stability and finite-time contractive stability for fractional-order systems. He earned his M.Sc. and B.Sc. degrees in Mathematics from Sri Ramakrishna Mission Vidyalaya College of Arts and Science (Autonomous), Coimbatore, in 2019 and 2017, respectively. Before joining DSU, he served as a Postdoctoral Fellow at the United Arab Emirates University, Abu Dhabi, from October 2024 to September 2026. His research focuses on nonlinear dynamical systems, Lyapunov stability theory, finite-time and contractive stability, synchronization, fractional-order time-delay systems, impulsive and event-triggered control, and neural-network dynamics. His work has appeared in reputed Q1 journals, including IEEE Transactions on Systems, Man, and Cybernetics: Systems, Neurocomputing, Communications in Nonlinear Science and Numerical Simulation, Scientific Reports, and Results in Engineering.

2. RESEARCH INTERESTS

- Fractional-order differential equations
- Nonlinear dynamical systems
- Neural networks
- Stability analysis
- Synchronization and control of complex dynamical systems
- Numerical and computational methods

3. ACADEMIC QUALIFICATIONS

- Ph.D. in Mathematics - Bharathiar University, Coimbatore, 2024
- PGDCA (PT) - Sri Ramakrishna Mission Vidyalaya College of Arts and Science (Autonomous), Coimbatore, 2019
- M.Sc. Mathematics - Sri Ramakrishna Mission Vidyalaya College of Arts and Science (Autonomous), Coimbatore, 2019
- B.Sc. Mathematics - Sri Ramakrishna Mission Vidyalaya College of Arts and Science (Autonomous), Coimbatore, 2017

4. PROFESSIONAL EXPERIENCE

- Assistant Professor - Dayananda Sagar University, Bengaluru, 2026 - Present
- Postdoctoral Fellow - United Arab Emirates University, Abu Dhabi, UAE, October 2024 - September 2026

5. RESEARCH HIGHLIGHTS

- **Publications:** Multiple research publications in Q1 SCIE/Scopus-indexed international journals.

- **Conference Publication:** One Springer conference proceeding titled "Finite-time stability and finite-time contractive stability for fractional-order neural networks with impulsive adaptive control"
- **Research Projects:** Postdoctoral research focused on stability, synchronization, and control of fractional-order neural networks; Ph.D. research focused on stability analysis and control of fractional-order dynamical systems.
- **Awards/Recognitions:** Best NSS Volunteer Award by SRMKV CAS (2016);
Basic Linear Algebra certification from NPTEL (2019)
URF-Bharathiar University (2023-2024)
- **Computational Skills:** MATLAB, Python, LaTeX.

6. SELECTED PUBLICATIONS

1. Gokul, P., Udhayakumar, K., Rihan, F. A., & Ben Said, S. (2026). Quasi-matrix projective synchronization of fractional-order quaternion-valued Cohen-Grossberg neural networks. *Neural Computing and Applications*, 38(9), 298. <https://doi.org/10.1007/s00521-026-12017-y>
2. Gokul, P., Kashkynbayev, A., Prakash, M., & Rakkiyappan, R. (2025). Finite-time contractive stabilization for fractional-order switched systems via event-triggered impulse control. *Communications in Nonlinear Science and Numerical Simulation*, 143, 108658. <https://doi.org/10.1016/j.cnsns.2025.108658>
3. Gokul, P., Udhayakumar, K., Rihan, F. A., & Ben Saïd, S. (2025). Aperiodic intermittent control for finite-time contractive stability of fractional-order coupled delayed neural networks with impulses. *Results in Engineering*, 28, 107885. <https://doi.org/10.1016/j.rineng.2025.107885>
4. Gokul, P., Udhayakumar, K., Rihan, F. A., & Ben Saïd, S. (2025). Fractional-order stochastic delayed neural networks with impulses: Mean square finite-time contractive synchronization. *Scientific Reports*, 16, 1999. <https://doi.org/10.1038/s41598-025-31768-7>
5. Gokul, P., Soundararajan, G., Kashkynbayev, A., & Rakkiyappan, R. (2024). Finite-time contractive stability for fractional-order nonlinear systems with delayed impulses: Applications to neural networks. *Neurocomputing*, 610, 128599. <https://doi.org/10.1016/j.neucom.2024.128599>
6. Palanisamy, G., Kashkynbayev, A., & Rajan, R. (2023). Finite-time stability of fractional-order discontinuous nonlinear systems with state-dependent delayed impulses. *IEEE Transactions on Systems, Man, and Cybernetics: Systems*, 54(2), 1312-1324. <https://doi.org/10.1109/TSMC.2023.3326612>

7. ACADEMIC PROFILES

- Google Scholar: scholar.google.com/citations?user=onGWkFgAAAAJ
- ORCID: - 0000-0002-7853-9490
- Scopus: - 58918496800
- Research Gate: - [researchgate Gokul-p](https://researchgate.net/profile/Gokul-p)
- LinkedIn: - linkedin.com/in/gokul-palanisamy-10b43b32b/

8. CONTACT

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