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Adaptive Control Cyber Physical Systems Multi-Agent Systems Intelligent Control

Summary:

International Journals: Published/Accepted – **52**
International Conferences: 47 **National Conferences: 3**
Book: 1 (**International: Springer**) **Book chapter:** 7
Citation: 3177 (h-index: 28, i-10 index: 50) [Google Scholar]
[https://scholar.google.co.in/citations?user=GmiruH0AAAAJ&hl=en]
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IEEE	06	Elsevier	15	Wiley	10	Inderscience	06
IET	04	Springer	04	Taylor and Francis	04	IGI Global	02
MDPI	01						

Recognized among the World's Top 2% of Scientists, as featured in the Stanford University/Elsevier rankings for the years 2022–2026.

Thrust Area of Research:

- Cyber-Physical Systems and Resilience.
- Multi-Agent Systems and Cooperative Control.
- Nonlinear Control.
- Artificial Intelligence and Soft Computing.

International Book

1. **D. Guha, P.K. Roy, S. Banerjee, S. Purwar, *Application of Intelligent Control Algorithms to Study the Dynamics of Hybrid Power System*, Studies in Systems, Decision and Control, Springer Verlag, Singapore, ISBN 978-981-19-0443-1.**

International Journals

1. S. Chaudhary, V. Gupta, **D. Guha**, et al., Fixed-Time Adaptive Backstepping Control of Robot Manipulator using RBF Neural Network, **Int. J of Robust and Nonlinear Control, Wiley *(SCI Journal with Impact Factor-3.2)***, Accepted on Nov. 11, 2026 ***[Q1 Journal]***.

2. J. Saha, **D. Guha**, and A. Sengupta, Frequency regulation of microgrid employing evolutionary game theory-based PID controller with RNN-based disturbance observer, **Int. J. of Systems Science, Taylor and Francis, (*SCI Journal with Impact Factor-3.5)***, Accepted on Oct. 17, 2026 ***[Q1 Journal]***.

3. J. Saha, S. Batabyal, M. Mukherjee, A. Sengupta, and **D. Guha**, Design of an LMI-Based Direct Data-Driven Controller for Reference Tracking with Experimental Validation, **Optimal Control Applications and Methods, Wiley *(SCI Journal with Impact Factor-2.1)***, Vol 47, Issue 6, pp. 1529-1542, Nov/Dec. 2026 ***[Q2 Journal]***.

4. A. Anand, **D. Guha**, and S. Purwar, Reinforcement Learning for Cooperative Control of Multi-Agent Systems with Switching Topologies, **Int. J of Robust and Nonlinear Control, Wiley *(SCI Journal with Impact Factor-3.2)***, Accepted on Aug. 19, 2026 ***[Q1 Journal]***.

5. A.K. Chaudhary, **D. Guha**, and R. Negi, Dynamic Event-triggered Recurrent Neural Network Framework for Synchronized Frequency Control of Delayed Power System, **Journal of the**

Franklin Institute, ***Elsevier (SCI Journal with Impact Factor-3.7)***, Vol. 363, Issue 14, Article No. 108961, 2026 ***[Q1 Journal]***.

6. S. Chaudhary, V. Gupta, **D. Guha**, and K. Reddy**,** Reinforcement Learning for Predefined-time Optimal Tracking Control of Robot Manipulator, **Optimal Control Applications and Methods, Wiley *(SCI Journal with Impact Factor-2.1)***, Vol 47, Issue 6, pp. 1289-1302, Nov/Dec. 2026 ***[Q2 Journal]***.

7. **D. Guha**, Fuzzy Neural Network-assisted Super-twisting Fractional-Order Terminal Sliding Mode Frequency Control of Cyber-Physical Power System, **Int. J of Robust and Nonlinear Control, Wiley *(SCI Journal with Impact Factor-3.2)***, Accepted on April 14, 2026 ***[Q1 Journal]***.

8. A. Anand, **D. Guha**, S. Purwar, and S. Banerjee, Predefined-time Tracking Consensus Control of Cyber-physical Multi-Agent System under DoS/Deception Attacks using Event-Triggered Switching Topology, **IEEE Trans. on Industry Applications, IEEE *(SCI Journal with Impact Factor-4.5)***, Accepted on March 15, 2026 ***[Q1 Journal]***.

9. A.K. Chaudhary, **D. Guha**, R. Negi, and S. Banerjee, Dynamic Event-triggered RBFNN-enabled Resilient Control of Cyber Physical Systems under Sensor/Actuator Deception and DoS attacks, **IEEE Trans. on Industry Applications, IEEE *(SCI Journal with Impact Factor-4.5)***, Accepted on March 8, 2026 ***[Q1 Journal]***.

10. A. Anand, **D. Guha**, and S. Purwar, Observer-aided Adaptive Consensus Control of Cyber-physical Multi-Agent Systems with Hybrid Attacked Topology, **IEEE Trans. on Automation Science and Engineering**, **IEEE *(SCI Journal with Impact Factor-6.4)***, vol. 23, pp. 5250-5261, 2026 ***[Q1 Journal]***.

11. **D. Guha**, R. Maiti, S. Banerjee and R. Negi, Fractional-Order Finite-Time Control of Cyber-Physical Power System with Time-Delayed Switching and Distributed DoS Attacks Using RBF-Neural Network, **IEEE Trans. on Consumer Electronics, IEEE *(SCI Journal with Impact Factor-10.9)***, vol. 71, no. 4, pp. 9221-9233, Nov. 2025 ***[Q1 Journal]***.

12. S. Roy, A.K. Chaudhary, **D. Guha**, and R. Negi, Adaptive Event-triggered Finite-time Control of Affine Cyber-Physical System under Denial-of-Service (DoS) and Deception Attacks, International Journal of Robust and Nonlinear Control, ***Wiley (SCI Journal with Impact Factor-3.2)****, Accepted on Jan. 12, 2025)* ***[Q1 Journal]***.

13. K. Reddy, R. Sarma, and **D. Guha**, Performance Analysis of Advanced Metaheuristics for Optimal Design of Multi-Objective Model Predictive Control of Doubly Fed Induction Generator, Process, ***MDPI (SCI Journal with Impact Factor-2.8)***, vol. 2025, 13, 221, 2025 ***[Q2 Journal]***.

14. A. Anand, **D. Guha**, and S. Purwar, Adaptive Consensus Control of Leader-Follower Multi-Agent System with Actuator Deception Attacks, Chaos, Solitons and Fractals, ***Elsevier (SCI Journal with Impact Factor- 5.3)***, vol. 187, 115344, October 2024. ***[Q1 Journal]*****.**

15. A.K. Chaudhary, S. Roy, **D. Guha**, *et al.*, *Adaptive Cyber-tolerant Finite-time Frequency Control Framework for Renewable-integrated Power System under Deception and Periodic Denial-of-Service Attacks*, Energy, ***Elsevier (SCI Journal with Impact Factor- 9)***, Vol. 302, Sep 2024, 131809, doi:10.1016/j.energy.2024.131809 ***[Q1 Journal]*****.**

16. **D. Guha**, *Fuzzy-aided Finite-time Frequency Controller of Renewable-integrated Power Systems with Hydrogen Energy Storage*, Engineering Applications of Artificial Intelligence, ***Elsevier (SCI Journal with Impact Factor- 8)***, Vol. 126 (Part-A), 106814, Nov. 2023. *doi: 10.1016/j.engappai.2023.106814* ***[Q1 Journal]*****.**

17. **D. Guha**, P.K. Roy, and S. Banerjee, *Improved Fractional-order Sliding Mode Controller for Frequency Regulation of a Hybrid Power System with Nonlinear Disturbance Observer,* IEEE Transactions on Industry Applications, ***IEEE (SCI Journal with Impact Factor- 4.4),*** *vol. 59, no. 4, pp. 4964-4979, July-Aug. 2023, doi: 10.1109/TIA.2023.3268150* ***[Q1 Journal]*****.**

18. **D. Guha**. *Non-integer disturbance observer-aided resilient frequency controller applied to hybrid power system,* Chaos, Solitons and Fractals, ***Elsevier (SCI Journal with Impact Factor- 7.8)***, vol. 170, 113421, May 2023, *doi: 10.1016/j.chaos.2023.113421* ***[Q1 Journal]*****.**

19. **D. Guha**, P.K. Roy, and S. Banerjee, *Frequency Control of a Wind-diesel-generator Hybrid System with Squirrel Search Algorithm Tuned Robust Cascade Fractional Order Controller Having Disturbance Observer Integrated*, Electric Power Components and Systems, ***Taylor and Francis (SCI Journal with Impact Factor-1.59),*** *vol. 50(14-15), pp. 814-839, 2022, doi: 10.1080/15325008.2022.2141925* ***[In Press]*** ***[Q4 Journal]*****.**

20. **D. Guha**, P.K. Roy, and S. Banerjee, *Adaptive fractional-order sliding-mode disturbance observer-based robust theoretical frequency controller applied to hybrid wind-diesel power system*, ISA Transaction, ***Elsevier (SCI Journal with Impact Factor-5.468),*** *vol. 133, pp. 160-183, Feb 2023, doi: 10.1016/j.isatra.2022.06.030* ***[Q1 Journal]*****.**

21. V. Patel, **D. Guha**, and S. Purwar, *Frequency Regulation of Nonlinear Power Systems using Neural Network Observer-based Optimized Resilient Controller*, International Transactions on Electrical Energy Systems, ***Wiley (SCI Journal with Impact Factor-1.692),*** *vol. 35, Issue 5, Sep/Oct 2023, doi: 10.1002/jnm.3025* ***[Q3 Journal]*****.**

22. V. Patel, **D. Guha**, and S. Purwar, *Optimized cascade fractional-order 3DOF-controller for frequency regulation of a hybrid power system using marine predators algorithm*, International Journal of Numerical Modelling: Electronic Networks, Devices and Fields, ***Wiley (SCI Journal with Impact Factor-1.296),*** *vol. 2022, 6286500, doi: 10.1155/2022/6286500* ***[Q3 Journal]***.

23. V. Patel, **D. Guha**, and S. Purwar, *Neural Network aided Fractional-Order Sliding Mode Controller for Frequency Regulation of Nonlinear Power Systems*, Computers and Electrical Engineering, ***Elsevier (SCI Journal with Impact Factor-3.818),*** Vol. 96, Part-A, December 2021, 107534, doi: *10.1016/j.compeleceng.2021.107534* ***[Q2 Journal]***.

24. **D. Guha**, P.K. Roy, and S. Banerjee, *Observer-aided resilient hybrid fractional-order controller for frequency regulation of hybrid power system*, International Transactions on Electrical Energy Systems, ***Wiley (SCI Journal with Impact Factor- 1.692)***, Vol. 31, Issue 9, September 2021, *doi: 10.1002/2050-7038.13014* ***[Q3 Journal]***.

25. **D. Guha**, P.K. Roy, and S. Banerjee, *Performance evolution of different controllers for frequency regulation of a hybrid energy power system employing chaotic crow search algorithm*, ISA Transaction, ***Elsevier (SCI Journal with Impact Factor-4.305)***, Vol. 120, January 2022, pp. 128-146, *doi: 10.1016/j.isatra.2021.03.017* ***[Q1 Journal]*.**

26. **D. Guha**, P.K. Roy, and S. Banerjee, *Equilibrium optimizer tuned cascade fractional-order 3DOF-PID controller in load frequency control of power system having renewable energy resource integrated*, International Transactions on Electrical Energy Systems, ***Wiley (SCI Journal with Impact Factor- 1.692)***, Vol. 31, Issue 1, January 2021, e12702, *doi: 10.1002/2050-7038.12702* ***[Q3 Journal]***.

27. **D. Guha**, P.K. Roy, and S. Banerjee, *Disturbance observer aided optimised fractional-order three-degree-of-freedom tilt-integral-derivative controller for load frequency control of power systems*, IET Generation, Transmission and Distribution, ***IET (SCI Journal with Impact Factor- 2.862)***, Vol. 15, Issue 4, February 2021, pp. 716-736, doi: *10.1049/gtd2.12054* ***[Q3 Journal]***.

28. **D. Guha**, P.K. Roy, S. Banerjee, S. Padmanaban, F. Blaabjerg, and D. Chittathuru, *Small-signal stability analysis of hybrid power system with quasi-oppositional sine cosine algorithm optimized fractional order PID controller*, IEEE Access, ***IEEE (SCI Journal with Impact Factor- 3.745)***, Vol. 8, August 2020, pp. 155971-155986, *doi: 10.1109/ACCESS.2020.3018620* ***[Q2 Journal]***.

29. **D. Guha**, P.K. Roy, and S. Banerjee, *Maiden application of SSA-optimised CC-TID controller for load frequency control of power systems*, IET Generation, Transmission and Distribution, ***IET (SCI Journal with Impact Factor- 3.229)***, Vol. 13(7), April 2019, pp. 1110-1120, *doi: 10.1049/iet-gtd.2018.6100* ***[Q3 Journal]***.

30. **D. Guha**, P.K. Roy, and S. Banerjee, *Multi Verse Optimization: a novel method for solution of load frequency control problem in power system*, IET Generation, Transmission and Distribution, ***IET (SCI Journal with Impact Factor- 3.229)***, Vol. 11(4), September 2017, pp. 3601-3611, *doi: 10.1049/iet-gtd.2017.0296* ***[Q3 Journal]***.

31. **D. Guha**, P.K. Roy, and S. Banerjee, *Optimal tuning of 3 degree-of-freedom proportional-integral-derivative controller for hybrid distributed power system using dragonfly algorithm*, Computers & Electrical Engineering, ***Elsevier*** *(**SCI with Impact Factor-2.663**)*, Vol. 72, November 2018, pp. 137-153, *doi:10.1016/j.compeleceng.2018.09.003* ***[Q2 Journal].***

32. **D. Guha**, P.K. Roy, and S. Banerjee, *Load frequency control of interconnected power system using grey wolf optimization*, Swarm and Evolutionary Computation, ***Elsevier*** *(**SCI with Impact Factor-6.912**)*, Vol. 27, April 2016, pp. 97-115, *doi:10.1016/j.swevo.2015.10.004* ***[Q1 Journal]***.

33. **D. Guha**, P.K. Roy, and S. Banerjee, *Quasi-oppositional symbiotic organism search algorithm applied to load frequency control*, Swarm and Evolutionary Computation, ***Elsevier*** *(**SCI with Impact Factor-6.912**)*, Vol. 33, April 2017, pp. 46-67, *doi: 10.1016/j.swevo.2016.10.001* ***[Q1 Journal]***.

34. **D. Guha**, P.K. Roy, and S. Banerjee, *Study of Differential Search Algorithm based Automatic Generation Control of an Interconnected Thermal-Thermal System with Governor Dead Band*, Applied Soft Computing, ***Elsevier (SCI with Impact Factor-5.472)***, Vol. 52, March 2017, pp. 160-175, *doi: 10.1016/j.asoc.2016.12.012* ***[Q1 Journal]***.

35. **D. Guha**, P.K. Roy, and S. Banerjee, *Binary bat algorithm applied to solve MISO type PID-SSSC based load frequency control problem*, Iranian Journal of Science and Technology, Transactions of Electrical Engineering, ***Springer (SCI Journal with Impact Factor-0.657)*** Vol. 43, July 2018, pp. 323-342, *doi: 10.1007/s40998-018-0106-0* ***[Q3 Journal]***.

36. **D. Guha**, P.K. Roy, and S. Banerjee, *Application of backtracking search algorithm in load frequency control of multi-area interconnected power system*, Ain Shams Engineering Journal, ***Elsevier (SCI Journal with Impact Factor-1.949)***, Vol. 9(2), June 2018, pp. 257-276, *doi: 10.1016/j.asej.2016.01.004* ***[Q1 Journal]***.

37. **D. Guha**, P.K. Roy, and S. Banerjee, *Quasi-oppositional Backtracking Search Algorithm to Solve Load Frequency Control Problem of Interconnected Power System*, Iranian Journal of Science and Technology, Transactions of Electrical Engineering, ***Springer (SCI Journal with Impact Factor-0.657)***, Vol. 44, August 2019, pp. 781-804, *doi: 10.1007/s40998-019-00260-0* ***[Q3 Journal]***.

38. **D. Guha**, P.K. Roy, and S. Banerjee, *Quasi-oppositional differential search algorithm applied to load frequency control*, Engineering Science and Technology, an International Journal, ***Elsevier (SCI Journal with Impact Factor-5.7)***, Vol. 19, Issue 4, December 2016, pp. 1635-1654, *doi: 10.1016/j.jestch.2016.09.021*.

39. **D. Guha**, P.K. Roy, and S. Banerjee, *Load frequency control of large scale power system using quasi-oppositional grey wolf optimization algorithm*, Engineering Science and Technology, an International Journal, ***Elsevier (SCI Journal with Impact Factor-5.7)***, Vol. 19, Issue 4, December 2016, pp. 1693-1713, *doi: 10.1016/j.jestch.2016.07.004.*

40. A. Anand, **D. Guha**, and S. Purwar, Distributed Neuro-Adaptive Cooperative Consensus Control of Leader-Follower Multi-Agent System with unknown Disturbances, Int. J. of Automation and Control, **Inderscience *(Scopus*)**, **Accepted** on May 15, 2026.

41. A. Tiwary, S. Chaudhary, **D. Guha**, and R. Maiti, Disturbance Observer-based Robust Control of Twin-Rotor MIMO System with Mismatched Uncertainties, Int. J. of Automation and Control, **Inderscience *(Scopus*)** [In Press].

42. V. Patel, **D. Guha**, and S. Purwar, Frequency Regulation of Time-delayed Power System utilizing Nonlinear Resilient Controller, Int. J. of Automation and Control, **Inderscience *(Scopus*)**, vol. 18(1), pp. 87-109, Nov. 2023, *doi: 10.1504/IJAAC.2024.135096*.

43. V. Patel, **D. Guha**, and S. Purwar, Disturbance Observer-based Higher-order Sliding Mode Controller for Frequency Regulation of Hybrid Power Systems, Int. J. of Automation and Control, **Inderscience *(Scopus*)**, Vol. 17(2), January 2023, pp. 188-226, *doi:*

10.1504/IJAAC.2023.129387

44. **D. Guha**, P.K. Roy, and S. Banerjee, Quasi-oppositional Jaya Optimized 2-degree-of-freedom PID Controller for Load Frequency Control of Interconnected Power Systems, International Journal of Modelling and Simulation, **Taylor and Francis *(Scopus)***, Vol. 42(1), October 2020, pp. 63-85, *doi: 10.1080/02286203.2020.1829444.*

45. **D. Guha,** P.K. Roy, and S. Banerjee, *Whale optimization algorithm applied to load frequency control of a mixed power system considering nonlinearities and PLL dynamics*, Energy System, **Springer *(Scopus)***, Vol. 11, February 2019, pp. 699-728, *doi: 10.1007/s12667-019-00326-2.*

46. **D. Guha**, P.K. Roy, and S. Banerjee, *Grasshopper optimization algorithm scaled fractional order PI-D controller applied to reduced order model of load frequency control system*, International Journal of Modeling and Simulation, **Taylor and Francis *(Scopus)***, Vol. 40(3), March 2019, pp. 217-242, *doi: 10.1080/02286203.2019.1596727.*

47. **D. Guha**, P.K. Roy, and S. Banerjee, *Symbiotic Organism Search Algorithm Applied to Load Frequency Control of Multi-area Power System, Energy System*, **Springer *(Scopus)***, Vol. 9, May 2018, pp. 439-468, *doi: 10.1007/s12667-017-0232-1*.

48. **D. Guha**, P.K. Roy, and S. Banerjee, *Oppositional biogeography-based optimization applied to SMES and TCSC-based load frequency control with generation rate constraints and time delay*, International Journal of Power and Energy Conversion, ***Inderscience (Scopus)***, Vol. 7, Issue 4, Jan 2016, pp. 391-23, *doi: 10.1504/IJPEC.2016.10000395.*

49. **D. Guha**, P.K. Roy, and S. Banerjee, *Solutions of UPFC based Load Frequency Control using Quasi-Oppositional Biogeography Based Optimization Considering Various Nonlinearities of Power System*, International Journal of Power and Energy Conversion, ***Inderscience (Scopus)***, Vol. 9, Issue 2, March 2018, pp. 105-143, *doi: 10.1504/IJPEC.2018.090674*.

50. **D. Guha**, P.K. Roy, and S. Banerjee, *Application of Modified Biogeography Based Optimization in AGC of an Interconnected Multi-Unit Multi-Source AC-DC Linked Power System*, International Journal of Energy Optimization and Engineering, ***IGI Global***, Vol. 5, Issue 3, 2016, pp. 1-18, doi: *10.4018/IJEOE.2016070101*.

51. **D. Guha**, P.K. Roy, and S. Banerjee, *Grey Wolf Optimization to Solve Load Frequency Control of an Interconnected Power System*, International Journal of Energy Optimization and Engineering, ***IGI Global***, Vol. 5, Issue 4, 2016, pp. 62-83, *doi: 10.1016/j.swevo.2015.10.004*.

52. **D. Guha**, P.K. Roy, and S. Banerjee, Krill herd algorithm for automatic generation control with flexible AC transmission system controller including superconducting magnetic energy storage units, The Journal of Engineering, **IET**, Vol. 2016, Issue 5, May 2016, pp. 147-161, doi: 10.1049/joe.2016.0053.

Book Chapters

1. **D. Guha**, P.K. Roy, and S. Banerjee, *Robust optimization algorithms for solving automatic generation control of multi-constrained power system*, Handbook of Research on Power and Energy System Optimization, **IGI-Global,** Chapter 3, 2018, pp. 75-114, *doi: 10.4018/978-1-5225-3935-3.ch003*. [Scopus Indexed]

2. **D. Guha**, P.K. Roy, and S. Banerjee, *Dynamic and Stability Analysis of Wind-Diesel-Generator (WDG) with Robust and Intelligent Computation Control Algorithm*, Handbook of Research on Smart Power System Operation and Control, **IGI-Global,** Chapter 3, 2019, pp. 56-95, *doi: 10.4018/978-1-5225-8030-0.ch003*. [Scopus Indexed]

3. V. Patel, **D. Guha**, and S. Purwar, *Minimum order disturbance observer-aided integral sliding mode controller for frequency regulation of hybrid power system*, Control of Standalone Microgrid (ISBN 9780128230220), **Academic Press (Elsevier), Chapter** 12, 2021, pp. 277-296, *doi: 10.1016/B978-0-12-823022-0.00009-X*.

4. V. Patel, D. Guha, and S. Purwar, Disturbance observer-aided adaptive sliding mode controller for frequency regulation in hybrid power system, Microgrids: Modeling, Control, and Applications (ISBN 9780323854634), Academic Press (Elsevier), Chapter 2, 2022, pp. 43-66, doi:10.1016/B978-0-323-85463-4.00001-0.

5. **D. Guha** and S. Saringi, *Nonlinear resilient frequency controller for hybrid interconnected power system*, Advanced Frequency Regulation Strategies in Renewable-Dominated Modern Power Systems (AFRGRPS-2021), **Academic Press (Elsevier)**, Chapter 4, 2023, pp. 61-91, *doi: 10.1016/B978-0-323-95054-1.00014-7*.

6. A. Anand, **D. Guha** and S. Purwar, *Distributed Adaptive Fault-tolerant Consensus Control of Multi-agent Systems with Deception attacks*, Enhancing the Control of Systems and Devices: Improving Performance, Reliability and Adaptability in Dynamic Environments, **Academic Press (Elsevier – In Press).**

7. **D. Guha**, *Neural Network-observer based Adaptive Finite-time Frequency Control of Cyber-physical Power Systems*, Enhancing the Control of Systems and Devices: Improving Performance, Reliability and Adaptability in Dynamic Environments, **Academic Press (Elsevier – In Press).**

International Conferences [47]

1. A. Anand, **D. Guha**, A. Sen, and S. Purwar, Consensus Control of Multi-agent Systems using Reinforcement Learning, **Accepted** in the Proc. of ACODS 2026, Nov. 18-21, 2026, NIT Warangal.

2. A. M. Gururani, V. Gupta, **D. Guha,** and R. Negi, Actor-Critic Reinforcement Learning-based Adaptive Backstepping Control for Coupled Tank Systems, **Accepted** in the Proc. of ACODS 2026, Nov. 18-21, 2026, NIT Warangal.

3. V. Gupta, **D. Guha,** and R. Negi, RNN-Based Adaptive Backstepping Tracking Control with

Dynamic Event Triggering, **Accepted** in the Proc. of PIICON 2026, Dec. 10-12, 2026, SoA University, Bhubaneswar.

4. V. Singh, M. Gautam, **D. Guha,** and R. Negi, DQN-Based Adaptive Robustness Parameter Scheduling for Predefined-Time Consensus Tracking of Second-Order Multi-Agent Systems, **Accepted** in the Proc. of PIICON 2026, Dec. 10-12, 2026, SoA University, Bhubaneswar.

5. A. Narayan, A. Anand, **D. Guha**, and S. Purwar, Adaptive Backstepping Consensus Control for Multi-Agent Systems, in the Proc. of SeFeT 2026, July 8-11, 2026, Department of Electrical Engineering, VNIT Nagpur, India.

6. V. Gupta, A. K. Chaudhary, **D. Guha** and R. Negi, Recurrent Neural Network-enabled Cyber-tolerant Resilient Control of Nonlinear System, in Proc. of 2026 4th Odisha Int. Conf. on Electrical Power Engineering, Communication and Computing Technology **(ODICON-2026)**, **Feb. 20-21, 2026**, ITER, SOA Deemed to be University, Bhubaneswar, Odisha, India.

7. V. Singh, M. Gautam, R. Negi and **D. Guha**, Consensus Control of Multi-Agent System using Backstepping Control, in Proc. of 2026 4th Odisha Int. Conf. on Electrical Power Engineering, Communication and Computing Technology **(ODICON-2026), Feb. 20-21, 2026**, ITER, SOA Deemed to be University, Bhubaneswar, Odisha, India.

8. A. Narayan, A. Anand, D. Guha and S. Purwar, Consensus Control of Multi-Agent System using Backstepping Control, in Proc. of 2026 4th Odisha Int. Conf. on Electrical Power Engineering, Communication and Computing Technology **(ODICON-2026), Feb. 20-21, 2026**, ITER, SOA Deemed to be University, Bhubaneswar, Odisha, India.

9. V. Gupta, S. Chaudhary and **D. Guha**, Dynamic Event-triggered Adaptive Backstepping Control for a 2-DOF Robot Manipulator, in Proc. of in 5th IEEE Int. Conf. on Power, Control, and Computing Technologies **(ICPC²T 2026)**, NIT Raipur, **March 11-13, 2026**.

10. S. Chaudhary, V. Gupta and **D. Guha**, Backstepping Controller for Robot Manipulator using Actor-Critic Reinforcement Learning, in Proc. of in 2025 International Conference on Power Electronics & Energy (ICPEE 2025)**, KIIT Bhubaneswar, Dec. 14-16, 2025**.

11. A. Yadav, **D. Guha** and R. Negi, Data-driven Control of Discrete-time System with Dynamic Event-triggered Strategy, in Proc. of in 2025 International Conference on Power Electronics & Energy (ICPEE 2025)**, KIIT Bhubaneswar, Dec. 14-16, 2025**.

12. **D. Guha,** Fuzzy-assisted Nonlinear Resilient Frequency Control of Network Power System with DoS/Deception attacks, In Proc. of **IEEE 5th International Conference on Sustainable Energy and Future Electric Transportation (SEFET)**, Jaipur, India, **July 9-12 2025**, pp. 1-5.

13. P. Kumar, A. Anand, **D. Guha** and S. Purwar, Predefined Time Consensus Control for Multi-Agent Systems, In Proc. of **2025 IEEE 5th International Conference on Sustainable Energy and Future Electric Transportation (SEFET)**, Jaipur, India, **2025**, pp. 1-6.

14. A. Yadav, **D. Guha** and R. Negi, Data Driven Control of Nonlinear System with Noisy

Measurements, In Proc. of Int. Conf. on Recent Innovations and Trends in Electrical & Electronics Engineering and Computing, NIT Patna.

15. P. Kumar, A. Anand, **D. Guha**, and S. Purwar, Leader-Follower Consensus Control of Multi-Agent Systems with Disturbance by Distributed Sliding Mode Control, In Proc. of **2025 IEEE 1st Int. Conf. on Smart and Sustainable Developments in Electrical Engineering (SSDEE-2025)**, Feb 28 - March 2, 2025, IIT(ISM) Dhanbad, pp. 1-6.

16. P. Kumar, A. Anand, **D. Guha**, and S. Purwar, Second-Order Consensus in Heterogeneous Multi-Agent Systems by Distributed Sliding Mode Control, **Accepted** in **1st Int. Conf. on Sustainable Energy Technologies and Computational Intelligence (SETCOM 2025)**, February 21 – 23, 2025, Pandit Deendayal Energy University (PDEU), Gandhinagar, India.

17. S. Chaudhary, **D. Guha**, and R. Maiti, Backstepping-enabled Fixed-time Terminal Sliding Mode Control of Robot Manipulators, **Accepted** in Fourth Int. Conf. on Power, Control, and Computing Technologies (ICPC^{2}T), January 20-22, 2025, NIT Raipur, Chhattisgarh, India.

18. S. Kumar, B. Dash, R. Maiti, and **D. Guha,** Adaptive Fuzzy Predictor based Fast Terminal Sliding Mode Controller Design for Two-link Robot Manipulator, **Accepted** in 2024 Tenth **Indian Control Conference (ICC)**, December 9-11, 2024, IISER Bhopal.

19. S. Roy and **D. Guha**, Finite-time Controller of Cyber-Physical Affine System with Mismatched Uncertainty, In Proc. of 2024 IEEE 4th International Conference on **Sustainable Energy and Future Electric Transportation (IEEE SeFeT 2024)**, 31 July - 03 August, 2024.

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