

Research Publications (Annexure 1)

A. List of Journal Publications (2021-24)

SCIE indexed Journals

1. Y.-Y. Hou, M.-H. Lin, H. Saberi-Nik, and Y. Arya, "Boundary analysis and energy feedback control of fractional-order extended Malkus-Robbins dynamo system," *Chaos, Solitons and Fractals*, vol. 183, art. 114922, Jun. 2024.
2. S. Mahich, Y. K. Saini, V. Devra, K. Aggarwal, A. Kumar, D. Kumar, A. Singh, and Y. Arya, "Metal-free adsorption and photodegradation methods for methylene blue dye removal using different reduction grades of graphene oxide," *Heliyon*, vol. 10, no. 11, e31702, May 2024.
3. P. Kurukuri, M. R. Mohamed, P. H. Raavi, and Y. Arya, "Optimal planning and designing of microgrid systems with hybrid renewable energy technologies for sustainable environment in cities," *Environmental Science and Pollution Research*, vol. 31, no. 22, pp. 32264–32281, May 2024.
4. Y. Arya, R. Ahmad, I. Nasiruddin, and M. F. Ahmer, "LFC performance advancement of two-area RES penetrated multi-source power system utilizing CES and a new CFOTID controller," *bounda (Elsevier)*, vol. 87, art. 111366, May 2024. DOI: <https://doi.org/10.1016/j.est.2024.111366>. IF = 9.4, Q1.
5. K. Peddakapu, M. R. Mohamed, P. Srinivasarao, and Y. Arya, "Assessment of energy storage and renewable energy sources-based two-area microgrid system using optimized fractional order controllers," *Journal of Energy Storage (Elsevier)*, vol. 86, pt. A, 111191, May 2024. DOI: <https://doi.org/10.1016/j.est.2024.111191>. IF = 9.4, Q1.
6. B. K. Reddy, N. C. Giri, P. K. Yemula, E. B. Agyekum, and Y. Arya, "Optimal operation of cogeneration power plant integrated with solar photovoltaics using DLS-WMA and ANN," *International Journal of Energy Research (Wiley-Hindawi)*, vol. 2024, art. 5562804, Apr. 2024. DOI: <https://doi.org/10.1155/2024/5562804>, IF = 4.6, Q1.
7. K. Sabahi, M. Jamil, Y. Shokri-Kalandaragh, M. Tavan, and Y. Arya, "Deep deterministic policy gradient reinforcement learning based adaptive PID load frequency control of an AC micro-grid," *IEEE Canadian Journal of Electrical and Computer Engineering*, vol. 47, no. 1, pp. 15–21, Winter/Mar. 2024. DOI: <https://doi.org/10.1109/ICJECE.2024.3353670>. IF = 2.0, Q4.
8. S. R. Nayak, R. K. Khadanga, D. Das, Y. Arya, S. Panda, and P. R. Sahu, "Influence of ultra-capacitor and plug-in electric vehicle for frequency regulation of hybrid power system utilizing artificial gorilla troops optimizer algorithm," *International Journal of Energy Research (Wiley-Hindawi)*, vol. 2023, art. 6689709, Nov. 2023. DOI: <https://doi.org/10.1155/2023/6689709>, IF = 4.6, Q1.
9. G. Sahoo, R. K. Sahu, S. Panda, N. R. Samal, and Y. Arya, "Modified harris hawks optimization-based fractional-order fuzzy PID controller for frequency regulation of multi-micro-grid," *Arabian Journal for Science and Engineering (Springer)*, vol. 48, no. 11, pp. 14381–14405, Nov. 2023. DOI: <https://doi.org/10.1007/s13369-023-07613-2>. IF = 2.9, Q2.
10. S. R. Nayak, R. K. Khadanga, Y. Arya, S. Panda, and P. R. Sahu, "Influence of ultra-capacitor on AGC of five-area hybrid power system with multi-type generations utilizing sine cosine adopted

dingo optimization algorithm,” *Electric Power Systems Research* (Elsevier), vol. 223, 109513, Oct. 2023. DOI: <https://doi.org/10.1016/j.epsr.2023.109513>. IF = 3.9, Q2.

11. R. Choudhary, J. N. Rai, and Y. Arya, “FOPTID+1 controller with capacitive energy storage for AGC performance enrichment of multi-source electric power systems,” *Electric Power Systems Research* (Elsevier), vol. 221, 109450, Aug. 2023. DOI: <https://doi.org/10.1016/j.epsr.2023.109450>. IF = 3.9, Q2.
12. S. Rangi, S. Jain, and Y. Arya, “SSA-optimized cascade optimal-PIDN controller for multi-area power system with RFB under deregulated environment,” *Optimal Control Applications and Methods* (Wiley), vol. 44, no. 4, pp. 1972–1994, Jul./Aug. 2023. DOI: <https://doi.org/10.1002/oca.2962>. IF = 1.8, Q2.
13. N. Kumari, P. Aryan, G L. Raja, and Y. Arya, “Dual degree branched type-2 fuzzy controller optimized with a hybrid algorithm for frequency regulation in a triple-area power system integrated with renewable sources,” *Protection and Control of Modern Power System* (IEEE), vol. 8, no. 3, pp. 1-29, Jul. 2023. DOI: <https://doi.org/10.1186/s41601-023-00317-7>. IF = 11.0, Q1.
14. P. Khetarpal, N. Nagpal, M. S. Al-Numay, P. Siano, Y. Arya, and N. Kassarwani, “Power quality disturbances detection and classification based on deep convolution auto-encoder networks,” *IEEE Access*, vol. 11, pp. 46026–46038, May 2023. DOI: <https://doi.org/10.1109/ACCESS.2023.3274732>. IF = 3.9, Q2.
15. K. Singh and Y. Arya, “Jaya-ITDF control strategy-based frequency regulation of multi-microgrid utilizing energy stored in high-voltage direct current-link capacitors,” *Soft Computing* (Springer), vol. 27, no. 9, pp. 5951–5970, May 2023. DOI: <https://doi.org/10.1007/s00500-023-07839-0>. IF = 4.1, Q2.
16. K. Singh and Y. Arya, “Tidal turbine support in microgrid frequency regulation through novel cascade Fuzzy-FOPID droop in de-loaded region,” *ISA Transactions* (Elsevier), vol. 133, pp. 218–232, Feb. 2023. DOI: <https://doi.org/10.1016/j.isatra.2022.07.010>. IF = 7.3, Q1.
17. K. Singh, M. Amir, and Y. Arya, “Optimal dynamic frequency regulation of renewable energy based hybrid power system utilizing a novel TDF-TIDF controller,” *Energy Sources Part A-Recovery Utilization and Environmental Effects* (Taylor & Francis), vol. 44, no. 4, pp. 10733–10754, Dec. 2022. DOI: <https://doi.org/10.1080/15567036.2022.2158251>. IF = 2.9, Q3.
18. V. Kumar, V. Sharma, Y. Arya, R. Naresh, and A. Singh, “Stochastic wind energy integrated multi source power system control via a novel model predictive controller based on Harris hawks optimization,” *Energy Sources Part A-Recovery Utilization and Environmental Effects* (Taylor & Francis), vol. 44, no. 4, pp. 10694–10719, Dec. 2022. DOI: <https://doi.org/10.1080/15567036.2022.2156637>. IF = 2.9, Q3.
19. K. Peddakapu, P. Srinivasarao, M. R. Mohamed, Y. Arya, D. J. K. Kishore, “Stabilization of frequency in multi-microgrid system using barnacle mating optimizer-based cascade controllers,” *Sustainable Energy Technologies and Assessments* (Elsevier), vol. 54, 102823, Dec. 2022. DOI: <https://doi.org/10.1016/j.seta.2022.102823>. IF = 8.0, Q2.
20. R. Choudhary, J. N. Rai, and Y. Arya, “Cascade FOPI-FOPTID controller with energy storage devices for AGC performance advancement of electric power systems,” *Sustainable Energy Technologies and Assessments* (Elsevier), vol. 53, pt. C, 102671, Oct. 2022.

DOI: <https://doi.org/10.1016/j.seta.2022.102671>. IF = 8.0, Q2.

21. S. Rangi, S. Jain, and Y. Arya, "Utilization of energy storage devices with optimal controller for multi-area hydro-hydro power system under deregulated environment," *Sustainable Energy Technologies and Assessments* (Elsevier), vol. 52, pt. C, 102191, Aug. 2022.

DOI: <https://doi.org/10.1016/j.seta.2022.102191>. IF = 8.0, Q2.

22. M. Sharma, S. Saxena, S. Prakash, S. Dhundhara, and Y. Arya, "Frequency stabilization in sustainable energy sources integrated power systems using novel cascade noninteger fuzzy controller," *Energy Sources Part A-Recovery Utilization and Environmental Effects* (Taylor & Francis), vol. 44, no. 3, pp. 6213–6235, Jul. 2022. DOI: <https://doi.org/10.1080/15567036.2022.2091693>. IF = 2.9, Q3.

23. E. Çelik, N. Öztürk, Y. Arya, and C. Ocak, "(1+PD)-PID cascade controller design for performance betterment of load frequency control in diverse electric power systems," *Neural Computing and Applications* (Springer), vol. 33, no. 22, pp. 15433–15456, Nov. 2021. DOI: <https://doi.org/10.1007/s00521-021-06168-3>. IF = 6.0, Q2.

24. E. Çelik, N. Öztürk, and Y. Arya, "Advancement of the search process of salp swarm algorithm for global optimization problems," *Expert Systems with Applications* (Elsevier), vol. 182, 115292, Nov. 2021. DOI: <https://doi.org/10.1016/j.eswa.2021.115292>. IF = 8.5, Q1.j

25. Z. Y. Yılmaz, G. Bal, E. Çelik, N. Öztürk, U. Güvenç, and Y. Arya, "A new objective function design for optimization of secondary controllers in load frequency control," *Journal of the Faculty of Engineering and Architecture of Gazi University (DergiPark Akademik)*, vol. 36, no. 4, pp. 2053–2067, Sept. 2021. DOI: <https://doi.org/10.17341/gazimmfd.841751>. IF = 1.1, Q4.

26. I. Eke, M. Saka, H. Gözde, Y. Arya, and M. C. Taplamacioglu, "Heuristic optimization based dynamic weighted state feedback approach for 2DOF PI-controller in automatic voltage regulator," *Engineering Science and Technology, an International Journal* (Elsevier), vol. 24, no. 4, pp. 899–910, Aug. 2021. DOI: <https://doi.org/10.1016/j.jestch.2020.12.023>. IF = 5.7, Q1.

27. Kumar, A., Jain, R., Singh, B. et al. Double stage PV-BES weak grid connected system. *Electr Eng* 105, 2585–2593 (2023). <https://doi.org/10.1007/s00202-023-01834-2>

28. Anubha Gautam, Parshram Sharma, Yogendra Kumar, Gulshan Sharma, Anurag Gautam, Emre Çelik, Nihat Öztürk "Sensitivity factor based congestion mitigation in DPS applying novel GWPSO" *Electric Power Components and Systems*, vol. 51(6), pp 155-167, 2022

29. Atma Ram, Parsh Ram Sharma, Rajesh Kumar Ahuja, Enhancement of power quality using U-SOGI based control algorithm for DSTATCOM, *Ain Shams Engineering Journal*, 2023, 102296, ISSN 2090-4479.

30. Atma Ram, P.R. Sharma, Rajesh Kumar Ahuja, Yogendra Arya, "A dual fundamental current extraction controller for DSTATCOM in the distribution system for power quality improvement under non-ideal source voltage condition" *Electric Power Components and Systems*, Accepted 08 Sep 2023.

31. Manisha Malik, PR Sharma, Optimal siting and sizing of hybrid PV and wind energy distribution network *Soft Computing - A Fusion of Foundations, Methodologies and Applications* Volume 26 Issue 11 Jun 2022 pp 5335–5346 <https://doi.org/10.1007/s00500-022-06911-5>.

32. Yadav, Uma & Gupta, Anju & Ahuja, Rajesh. (2022). Experimental validation of novel PRESH controller for TPSPPS. *Electrical Engineering*. 10.1007/s00202-022-01551-2.
33. Yadav, Uma & Gupta, Anju & Ahuja, Rajesh. (2021). Analysis of CPG control strategies using APC for single phase grid tied SPPS. *Materials Today: Proceedings*. 47. 10.1016/j.matpr.2021.05.195.
34. Yadav, Uma & Gupta, Anju & Ahuja, Rajesh. (2022). Analysis of High-Performance Two-Stage CPG Interfaced with GTSPSS. *Electrical Engineering*. 1-15. 10.1007/s00202-022-01611-7.
35. Priyanshu Singla, Shakuntla Boora, Poonam Singhal, ". Design and simulation of 4 kW solar power-based hybrid EV charging station", *Scientific Reports* 14, 7336 (2024). <https://doi.org/10.1038/s41598-024-56833-5>, SCI
36. Ritika Thusoo, Sheilza Jain, Sakshi Bangia," An Evaluation of UAV Path Following and Collision Avoidance Using NFMGOA Control Algorithm. *Wireless Personal Communication* 122, 1247–1266
37. Boora, S., Agarwal, S.K. & Sandhu, K.S, "Experimental and simulation testing of an EGLC controller for an IAG-EGLC system for electrifying off-grid rural sites," *SN Appl. Sci.* 3, 616, 2021, <https://doi.org/10.1007/s42452-021-04599-0>.
38. Shakuntla Boora, S.K Agarwal, K.S Sandhu, "A Takagi-Sugeno (T-S)-Type FIS-Based Controller for an Autonomous Induction Generator (AIG)" *IETE Journal of Research* 1-14 0377-2063
39. Jain, S., Ahuja, R.K., Gupta, A. et al. Hybrid intelligent h-AFSA-ANN controller for the SPV-BESS-DG-based DC microgrid integrated system. *Electr Eng* (2024). <https://doi.org/10.1007/s00202-023-02130-9>

Scopus indexed Journals

40. R. Ahmad, Ibraheem, Y. Arya, M. S. Ali, A. Ahmad, and Z. Uddin, "Palliation of current harmonics by employing optimised FO (PI+PD) cascade controller regulated SAPF with the exertion of Taguchi SNR method," *Tuijin Jishu/Journal of Propulsion Technology*, vol. 45, no. 1, pp. 431–450, 2024. Cite Score = 1.1, Quartile = Q3.
41. Y. Arya, "ICA assisted FTIλDN controller for AGC performance enrichment of interconnected reheat thermal power systems," *Journal of Ambient Intelligence and Humanized Computing (Springer)*, vol. 14, no. 3, pp. 1919–1935, Mar. 2023. DOI: <https://doi.org/10.1007/s12652-021-03403-6>. Cite Score = 9.6, Quartile = Q1.
42. K. Peddakapu, M. R. Mohamed, P. Srinivasarao, Y. Arya, P. K. Leung, and D. J. K. Kishore, "A state-of-the-art review on modern and future developments of AGC/LFC of conventional and renewable energy-based power systems," *Renewable Energy Focus (Elsevier)*, vol. 43, pp. 146–171, Dec. 2022. DOI: <https://doi.org/10.1016/j.ref.2022.09.006>. IF = 4.8, Quartile = Q2 (Scopus). ESCI
43. Sumit Kumar Yadav, Shakuntla, Boora, Nitin Goel, "Design and Implementation of Electromagnetic Suspension Systems using FEM Parameterized Linear Actuator" *European Chemical Bulletin*, vol. 11(12), pp 749-759, 2022

44. Sagar Sharma, Shakuntla Boora, "Neural network based novel controller for hybrid energy storage system for electric vehicles," Indonesian Journal of Electrical Engineering and Computer Science, pp. 670-680, Vol. 30, No. 2, May 2023.
45. Atma Ram, P.R. Sharma, Rajesh kumar Ahuja, "CTF-based control technique for power quality enhancement in the SPV system tied to the grid" International Journal of Ambient Energy Volume 45, Issue 1, 2024.
46. Ram, Atma, Sharma, Parsh & Ahuja, Rajesh. (2022). Performance evaluation of different configurations of system with DSTATCOM using proposed Icos^[70] technique Indonesian Journal of Electrical Engineering and Computer Science. 25. 1. 10.11591/ijeecs.v25.i1.pp1-13.
47. Yadav, Uma & Gupta, Anju & Ahuja, Rajesh. (2022). A Novel PRESH controller design for three phase grid tied SPPS. Energy Reports. 8. 1-8. 10.1016/j.egy.2021.11.173.
48. Uma Yadav, Anju Gupta, Rajesh kr Ahuja, Hardware validation of hybrid MPPT technique via Novel ML controller and P&O method, Energy Reports, Volume 8, Supplement 14, 2022, Pages 77-84, ISSN 2352-4847, <https://doi.org/10.1016/j.egy.2022.10.067>.
49. Nitin Goel, Naresh Kr. Yadav, "A Review on Combined Economic and Emission Dispatch in Microgrid using Various Optimization Techniques" European Chemical Bulletin, vol. 12(8), pp 4887-4906, 2023. DOI: 10.48047/ecb/2023.12.8.3912023.08/07/2023 .
50. Sheilza Jain, Sakshi Kalra, Ritika thusoo, "Control of nonlinear quadrotor using PID and Backstepping Techniques", International journal of engineering trends and technology vol 69, 167-173 2231-5381
51. Varun Agarwal, Vatsala Singh , Prerna Gaur , Rashmi Agarwal" PV Output forecasting based on weather classification, SVM and ANN" Indian Journal of Engineering Materials Sciences vol 29 ,211-217 2162-6359
52. Anubha Gautam, Rachna Dhir, "Economizing Generation Cost by Alleviating Congestion in DPS Employing FACTS Devices," SSRG International Journal of Electrical and Electronics Engineering, vol. 11, no. 3, pp. 65-75, 2024. Crossref, <https://doi.org/10.14445/23488379/IJEEE-V11I3P105>
53. Rachna Dhir, Anubha Gautam, " Investigation into the Behavioral Characteristics of Photovoltaic Cells using Matlab/Simulink," Journal of University of Shanghai for Science and Technology, Vol 26, Issue 1, January - 2024, pp. 63-72
54. Shipra Jain, Rajesh Kr. Ahuja, Anju Gupta Experimental Validation of FPDM Controller for controlling and stabilizing the bus voltage of PV DC Microgrid, International Journal of Mechanical Engineering vol 6, 3475-3479 0974-5823
55. Bharti Thakur, Dr Archana Rani ."Comparative analysis of Pi, Fuzzy and Interval type 2 fuzzy based DVR for compensation of voltage sag and swell", Journal of university of Shanghai for science and technology, Vol 23 , July 2021, 550-557
56. Sakshi Bangia, Sachin Sharma, "DTC Control of Induction Motors Employing Advanced Control Techniques. Journal of Harbin University, Vol 45 No. 4, April 2024
57. Gaurav Chauhan, Sakshi bangia, " Performance Evaluation of DG Interconnected Radial Distribution System. International Journal of Intelligent Systems and Applications in Engineering, 12(21s), 2120–2126.

58. Rupali Sinha, Sakshi Bangia, "Development of a Wireless Charging System Prototype for Electric Vehicles in Motion" Journal of University of Shanghai for Science and Technology, Volume 26, Issue 5, May - 2024

B. Conference Paper Details (2021-24)

1. Poonam Singhal, Rishi Singhal and Shailender Gupta, "An Ensembling Approach using DL & Non-DL Techniques for Detecting Brain Tumors using MRI Scans" IEEE International Power and Renewable Energy Conference (IPRECON-2022) at College of Engineering at Karunagappally, Kerala 16-18 Dec 2022
2. Poonam Singhal, Rishi Singhal and Shailender Gupta, "Solar-Cast: Solar Power Generation Prediction from Weather Forecasts using Machine Learning" IEEE 10th Power International Conference (PIICON - 2022) at NIT Delhi 25-27 Nov 2022
3. Himanshu Gera, Shakuntla Boora, Poonam Singhal, "An Insight into Techno-Economic and Feasibility Analysis of Wind/Solar Integrated System-A Review," ICETESTB, May 10-11, 2023.
4. U. Yadav, A. Gupta and R. K. Ahuja, "Comparison Analysis of Conventional RCC and Novel PRESH Controller in Three Phase GTSPPS," 2021 3rd International Conference on Electrical, Control and Instrumentation Engineering (ICECIE), Kuala Lumpur, Malaysia, 2021, pp. 1-9, doi: 10.1109/ICECIE52348.2021.9664745.
5. Shintu, Sujit Kumar, Yash Tyagi and Shakuntla Boora, "Design and Development of PWM Based Speed Controller for PM-BLDC Motor," ICETESTB, May 10-11, 2023.
6. Yash Tayagi, Shakuntla Boora and Poonam Singhal, "A Performance Analysis Based Comprehensive Review of Permanent Magnet Brushless DC Motors," ICETESTB, May 10-11, 2023.
7. Shiva Singh and Shakuntla Boora, "Arduino Based Battery Thermal Management for Electric Vehicle," IASTSF, 2022, Feb 28-March 01, 2022
8. Jalaj Tayagi, Poonam Singhal, Shakuntla Boora and Atma Ram, "Vehicle a Game Changer Technology in Automobile Sector-An Extensive Review," International Conference on Integrated Approaches in Science and Technology for Sustainable Future, IASTSF, 2022, Feb 28-March 01, 2022.
9. Robin Singh, Shakuntla Boora, "SVPWM Operated Inverter", International Conference on Advances in Sustainable Energy, Environment and Engineering, ICASEE 2021, ISBN: 978-93-91681-04-3, April 16-17, 2021.
10. Sagar, Shakuntla Boora, "SVPWM Technique Operated Matrix Converter for the Speed Control Of the Induction machine", International Conference on Advances in Sustainable Energy, Environment and Engineering, ICASEE 2021, ISBN: 978-93-91681-04-3, April 16-17, 2021.
11. Neha Jadoun, Shakuntla Boora, "A STATCOM based control Scheme for Grid Connected Wind Energy System for Power Quality Improvement", International Conference on Advances in Sustainable Energy, Environment and Engineering, ICASEE 2021, ISBN: 978-93-91681-04-3, April 16-17, 2021.

12. Navdeep Singh, Kunal Vashisht, Shakuntla Boora, Leena G, "Review of Different Methods of Speed Control of Brushless DC Motor", International Conference on Advances in Sustainable Energy, Environment and Engineering, ICASEE 2021, ISBN: 978-93-91681-04-3, April 16-17, 2021.
13. Jalaj Tayagi, Shakuntla Boora, "Review of Electric Motor towards the Advancement in Automobile Sector", International Conference on Advances in Sustainable Energy, Environment and Engineering, ICASEE 2021, ISBN: 978-93-91681-04-3, April 16-17, 2021.
14. Sujit Kumar, Shakuntla Boora, Poonam Seinghal, P.R Sharma, "Comparative Study and Performance Analysis of Various Fibonacci Pattern of Solar Photovoltaic Tree- An Extensive Review, International Conference on Advances in Information Communication Technology, AICTC, 17-18 Dec 2022
15. Jalaj Tayagi, Sumit Kumar Yadav, Shakuntla Boora, Poonam Singhal, "Implementation of Battery and Ultra capacitors Based storage for Electric Vehicle System,7-9 Oct 2022, IEEE, GCAT 2022.
16. Akash Yadav, Hardik Khatri, Kashish Nagpal, Shakuntla Boora and Poonam Singhal, "An Implementation of DC Microgrid Integrated With Renewable Energy Sources", 5th International Conference RDCAPE 2023, 12-13 Oct 2023
17. Prateek Nara, Shakuntla Boora, Poonam Singhal, "A Literature Review on Smart Cities", in National Conference on G20 India: Vasudhaiva Kutumbakam, Striving Sustainable Growth and Development Amid Challenges, 5-6 October 2023.
18. Mayank Bansal, Kartikey Dahiya, Mukul Bansal, Shakuntla Boora, "Detection Strategies for Preventing Cyber Attacks in Smart Grids: A Comprehensive Literature Review, 10th International Symposium on Fusion of Science and Technology 2024, ISFT, 4-8th Jan 2024.
19. Pranav, Preet Kaur, Rashmi Agarwal, "Wireless Power Transfer on Roads for Power Transfer ",10th International Symposium on Fusion of Science and Technology 2024(ISFT-2024) ,04-08th Jan'2024
20. Aslam, Nikhil Dev, Rashmi Agarwal, "Feasibility of Electric Vehicles (EVs) in strategic markets ",10th International Symposium on Fusion of Science and Technology 2024(ISFT-2024) ,04-08th Jan'2024
21. Nitin Goel, Neeraj Gupta, Prashant Kumar, Lalit Rai, "A Mathematical Model of Steam Drum Boiler and its Simulink Model for Power Plant" International Conference on Emerging Trends in Engineering, Science, Technology and Business (ICETESTB-2023), EIT Faridabad, May 10-11, 2023
22. Amit Sharma, Atma Ram & Nitin Goel, "IRPT Based Control Technique for DSTATCOM For Power Quality Enhancement", Proceeding of International Conference on Advances in Sustainable Energy, Environment and Engineering (ICASEE-2021), J C Bose University of Science and Technology, YMCA Faridabad, April 16-17, 2021 ISBN-978-93-91681-04-3 pp:1-7
23. Manish, Anju Gupta, Atma Ram & Nitin Goel, "Simulation of A Three Phase Inverter Using Closed Loop Voltage Control", International Conference on Advances in Sustainable Energy, Environment and Engineering (ICASEE-2021), J C Bose University of Science and Technology, YMCA Faridabad, April 16-17, 2021 ISBN: 978-93-91681-04-3
24. Nitin Goel, Atma Ram & Rajesh Saw "Performance Enhancement of MPPT Based Photovoltaic System Using Fuzzy Logic Controller", International Conference on Advances in Sustainable Energy, Environment and Engineering (ICASEE-2021), J C Bose University of Science and Technology, YMCA Faridabad, April 16-17, 2021, ISBN: 978-93-91681-04-3

25. Shipra Jain," Power Management in DC Microgrid", International Conference on Integrated approaches in Science and Technology for Sustainable Future, IASTSF-2022 , 28thFeb -1st March 2022
26. Satvinder Singh ,"Design and analysis on fuzzy logic control of BUCK converter for photo Voltaic emulator in international conference on "Fourth Industrial Revolution based Technology and Practices (ICFIRTP-2022)",23-24 November organized by Quantum university Roorkee, Uttarakhand, India
27. Dhir, Rachna & Garg, Rachna & Mahajan, Priya. (2022). A Review of Microgrid Control Strategies. 1-5. 10.1109/DELCON54057.2022.9753044.
28. Priyanka, Sakshi Bangia, Rachna ,"Speed Control Of SRM Motor Using Fuzzy Logic Controller" International Conference on Advances in Sustainable Energy, Environment, and Engineering (ICASEE-2021), April 21
29. Samarth Mishra, Shruti Thakur, Piyush Kaushik, Rachna Dhir, "Electric Vehicle Adoption in India: Current Scenario, Challenges and Future Prospects",10th International Symposium on Fusion of Science and Technology 2024(ISFT-2024) ,04-08th Jan'2024
30. Rachna Dhir, "Examination of Photovoltaic-Battery System in Standalone and Grid Connected Mode ",1st International Symposium on Battery Technology Advances and Future Trends, PDEU Gandhinagar,19-21st Jan' 2024
31. Prabhat, Atma Ram & Rajesh Kr. Ahuja, "4.5 KW IGBT Based Natural Cooled Battery Charger with an Emergency Charging Unit" Proceeding of International Conference on Advances in Sustainable Energy, Environment and Engineering (ICASEE-2021), J C Bose University of Science and Technology, YMCA Faridabad, April 16-17, 2021, ISBN-978-93-91681-04-3 pp:37-42
32. Sakshi Bangia, "Development of IOT Based Unmanned Aerial Vehicle",10th International Symposium on Fusion of Science and Technology-2024(ISFT-2024,04th-08th Jan 2024.
33. Sakshi Bangia, "Precision Robotic Arm",10th International Symposium on Fusion of Science and Technology-2024(ISFT-2024, 04th-08th Jan 2024.
34. Sakshi Bangia, "Electrical Wireless Charging System",10th International Symposium on Fusion of Science and Technology-2024(ISFT-2024, 04th-08th Jan 2024.
35. Sakshi Bangia," Optimal placement of Distributed Generation in Distribution System for loss reduction using ETAP, International conference on Research and Innovation for sustainable development(ICRISD-2024), 04th-05th May,2024
36. Sakshi Bangia,"Creating a Proyootype for Wirelessly charging Electric Vehicles in Motion International conference on Research and Innovation for sustainable development(ICRISD-2024), 04th-05th May,2024.
37. Sakshi Bangia,"Performance Evaluation pf SST Enabled Hybrid Distribution Grid", Ist International Conference on Suistainable Energu Sources, Technlogies and System(ICSESTS-2023),3rd-5th August 2023.
38. Sakshi Bangia,"Altitude control pf Quadrotor using PID Control", International conference on Advances in Sustainable Energy, Environment and Engineering(IXASSE-2021) 16th-17th April 2021.

C. Book Chapters (2021-24)

1. S. Rangi, S. Jain, and **Y. Arya**, “SSA-based FOPID controller for AGC of two-area multi-source power system incorporating HES under deregulated environment,” in *Power Engineering and Intelligent Systems, Proceedings of PEIS 2023, Vol. 2*, Lecture Notes in Electrical Engineering book series (LNEE, volume 1098), Book Edited by V. Shrivastava, J. C. Bansal, B. K. Panigrahi, Published by Springer, Singapore, p. 191–202, Jan. 2024. Print ISBN: 978-981-99-7382-8, Online ISBN: 978-981-99-7383-5, DOI: https://doi.org/10.1007/978-981-99-7383-5_15
2. S. Dhundhara, M. Sharma, F. Guéniat, **Y. Arya**, “Overview of the renewable-dominated power systems and their frequency regulation issues,” In *Advanced frequency regulation strategies in renewable-dominated power systems*, Book Edited by S. Dhundhara, Y. Arya, R. C. Bansal, Published by Elsevier, p. 1–19, Sept. 2023. ISBN: 978-0-323-95054-1, DOI: <https://doi.org/10.1016/B978-0-323-95054-1.00015-9>
3. **Y. Arya** and K. Singh “Optimal frequency control of micro-grid system using IPD-(1 + I) controller,” in *Recent Developments in Electrical and Electronics Engineering-Select Proceedings of ICRDEEE 2022*, Lecture Notes in Electrical Engineering book series (LNEE, volume 979), Book Edited by P. Singhal, S. Kalra, B. Singh, and R. C. Bansal, Published by Springer, Singapore, p. 411–420, Apr. 2023. Print ISBN: 978-981-19-7992-7, Online ISBN: 978-981-19-7993-4, DOI: https://doi.org/10.1007/978-981-19-7993-4_34
4. S. Rangi, S. Jain, and **Y. Arya**, “Optimal AGC of two-area multi-source power system incorporating ES under deregulated environment,” in *Recent Developments in Electrical and Electronics Engineering-Select Proceedings of ICRDEEE 2022*, Lecture Notes in Electrical Engineering book series (LNEE, volume 979), Book Edited by P. Singhal, S. Kalra, B. Singh, and R. C. Bansal, Published by Springer, Singapore, p. 201–209, Apr. 2023. Print ISBN: 978-981-19-7992-7, Online ISBN: 978-981-19-7993-4, DOI: https://doi.org/10.1007/978-981-19-7993-4_17
5. M. Sharma, S. Dhundhara, **Y. Arya**, and M. Kaur, “Fast-acting electrical energy storage systems for frequency regulation in modern power systems,” In *Energy Storage for Modern Power System Operations*, Book Edited by S. Dhundhara and Y. P. Verma, Published by Wiley-Scrivener Publications, p. 105–141, Sept. 2021. Print ISBN: 9781119760337, Online ISBN: 9781119760375, DOI: <https://doi.org/10.1002/9781119760375.ch5>
6. R. Choudhary, J. N. Rai, and **Y. Arya**, “Impact of energy storage device on the performance of AGC using ALO tuned PID controller,” In *Artificial Intelligence and Speech Technology*, Book Edited by A. Dev, A. Sharma, and S. S. Agrawal, Published by CRC Press, p. 87–96, Jun. 2021. eBook ISBN: 9781003150664, DOI: <https://doi.org/10.1201/9781003150664-10>
7. Atma Ram, P.R. Sharma, Rajesh Kr. Ahuja, “Harmonics Mitigation using PR controller based DSTATCOM in the distribution system”, in *Recent Developments in Electrical and Electronics Engineering-Select Proceedings of ICRDEEE 2022*, Lecture Notes in Electrical Engineering book series (LNEE, volume 979), Book Edited by P. Singhal, S. Kalra, B. Singh, and R. C. Bansal, Published by Springer, Singapore, p. 411–420, Apr. 2023. Print ISBN: 978-981-19-7992-7, Online ISBN: 978-981-19-7993-4, DOI: https://doi.org/10.1007/978-981-19-7993-4_34
8. Rachna Dhir, “Modeling and Simulation of a Single-Phase Single-Stage Grid Connected PV System”, in *Recent Developments in Electrical and Electronics Engineering-Select Proceedings of ICRDEEE 2022*, Lecture Notes in Electrical Engineering book series (LNEE, volume 979), Book Edited by P. Singhal, S. Kalra, B. Singh, and R. C. Bansal, Published by Springer, Singapore, p. 411–420, Apr. 2023. Print ISBN:

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9. Sumit Kumar Yadav, Shakuntla Boora and Nitin Goel "A Hybrid approach to PMBLAC Machine for High-Speed mobility", in *Recent Developments in Electrical and Electronics Engineering-Select Proceedings of ICRDEEE 2022*, Lecture Notes in Electrical Engineering book series (LNEE, volume 979), Book Edited by P. Singhal, S. Kalra, B. Singh, and R. C. Bansal, Published by Springer, Singapore, p. 411–420, Apr. 2023. Print ISBN: 978-981-19-7992-7, Online ISBN: 978-981-19-7993-4, DOI: https://doi.org/10.1007/978-981-19-7993-4_34
10. Anubha Gautan, P R Sharma, Yogendra Kumar, "Application of a Novel Method to Reduce Congestion in DPS Applying TCSC" in *Recent Developments in Electrical and Electronics Engineering-Select Proceedings of ICRDEEE 2022*, Lecture Notes in Electrical Engineering book series (LNEE, volume 979), Book Edited by P. Singhal, S. Kalra, B. Singh, and R. C. Bansal, Published by Springer, Singapore, p. 411–420, Apr. 2023. Print ISBN: 978-981-19-7992-7, Online ISBN: 978-981-19-7993-4, DOI: https://doi.org/10.1007/978-981-19-7993-4_34
11. Ram, A., Sharma, P.R., Ahuja, R.K. (2023). Harmonics Mitigation Using Proportional–Resonant Controller-Based DSTATCOM in Distribution System" in *Recent Developments in Electrical and Electronics Engineering-Select Proceedings of ICRDEEE 2022*, Lecture Notes in Electrical Engineering book series (LNEE, volume 979), Book Edited by P. Singhal, S. Kalra, B. Singh, and R. C. Bansal, Published by Springer, Singapore, p. 411–420, Apr. 2023. Print ISBN: 978-981-19-7992-7, Online ISBN: 978-981-19-7993-4, DOI: https://doi.org/10.1007/978-981-19-7993-4_34
12. Kumar, S., Boora, S., Singhal, P., Sharma, P.R. (2023). "Comparative Study and Performance Analysis of Various Fibonacci Pattern of Solar Photovoltaic Tree—An Extensive Review" in *Recent Developments in Electrical and Electronics Engineering-Select Proceedings of ICRDEEE 2022*, Lecture Notes in Electrical Engineering book series (LNEE, volume 979), Book Edited by P. Singhal, S. Kalra, B. Singh, and R. C. Bansal, Published by Springer, Singapore, p. 411–420, Apr. 2023. Print ISBN: 978-981-19-7992-7, Online ISBN: 978-981-19-7993-4, DOI: https://doi.org/10.1007/978-981-19-7993-4_34
13. S. Rangi, S. Jain, and Y. Arya, "Optimal AGC of two-area multi-source power system incorporating ES under deregulated environment" in *Recent Developments in Electrical and Electronics Engineering-Select Proceedings of ICRDEEE 2022*, Lecture Notes in Electrical Engineering book series (LNEE, volume 979), Book Edited by P. Singhal, S. Kalra, B. Singh, and R. C. Bansal, Published by Springer, Singapore, p. 411–420, Apr. 2023. Print ISBN: 978-981-19-7992-7, Online ISBN: 978-981-19-7993-4, DOI: https://doi.org/10.1007/978-981-19-7993-4_34
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15. Sakshi Kalra, "Path planning of quadrotor using A* and LQR", International Conference on Recent Developments in *Recent Developments in Electrical and Electronics Engineering-Select Proceedings of ICRDEEE 2022*, Lecture Notes in Electrical Engineering book series (LNEE, volume 979), Book Edited by P. Singhal, S. Kalra, B. Singh, and R. C. Bansal, Published by Springer, Singapore, p. 411–420, Apr.

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D. Books Edited by Faculty members(2021-24)

1. Proceedings of 3rd International Conference on Artificial Intelligence, Robotics, and Communication ICAIRC 2023. Editors: S. Yadav, Y. Arya, S. M. Pandey, N. Gherabi, D. A. Karras, Lecture Notes in Electrical Engineering (LNEE, volume 1172), Hardcover ISBN: 978-981-97-2199-3, eBook ISBN: 978-981-97-2200-6, Publisher: Springer Singapore, Link: <https://link.springer.com/book/9789819721993>, Jun. 2024.
2. Energy Power and Automation Engineering - Select Proceedings of the International Conference, ICEPAE 2023. Editors: S. Yadav, Y. Arya, N. A. Muhamad, K. Sebaa, Lecture Notes in Electrical Engineering (LNEE, volume 1118), Hardcover ISBN: 978-981-99-8877-8, eBook ISBN: 978-981-99-8878-5, Publisher: Springer Singapore, DOI: <https://doi.org/10.1007/978-981-99-8878-5>, Mar. 2024.
3. Advanced Frequency Regulation Strategies in Renewable-Dominated Power Systems. Editor: S. Dhundhara Y. Arya, R. C. Bansal, ISBN 978-0-323-95054-1, Publisher: Elsevier, Academic Press, DOI: <https://doi.org/10.1016/C2021-0-02707-3>, Sept. 2023.
4. Challenges and Research Trends of Renewable Energy Power System. Editor: Y. Arya, Hardcover ISBN 978-3-0365-7528-5, eBook ISBN: 978-3-0365-7529-2, Publisher: MDPI, DOI: <https://doi.org/10.3390/books978-3-0365-7529-2>, Jun. 2023.
5. Recent Advances in Metrology-Select Proceedings of AdMet 2021. Editors: S. Yadav, K. P. Chaudhary, A. Gahlot, Y. Arya, A. Dahiya, N. Garg, Lecture Notes in Electrical Engineering (LNEE, volume 906), Hardcover ISBN: 978-981-19-2467-5, eBook ISBN: 978-981-19-2468-2, Publisher: Springer Singapore, DOI: <https://link.springer.com/book/10.1007/978-981-19-2468-2>, Jul. 2022.
6. Recent Developments in Electrical and Electronics Engineering – Select Proceedings of ICRDEEE 2022. Editors : Poonam Singhal, Sakshi Kalra, Bhim Singh, R.C Bansal, Lecture Notes in Electrical Engineering(LNEE volume 979) ISBN: 978-981-19-7993-4, Publisher : Springer