

# Curriculum Vitae

**Dr. Awadhesh Kumar**  
**Assistant Professor**  
**Electrical Engineering**  
**Madan Mohan Malaviya**  
**University of Technology**  
**Gorakhpur-273010**



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## Objective

- To be able to add new values and skills through constant learning in a dynamic environment.
- To become the best Teacher of Electrical Engineering in a relatively larger space.
- To add quality research works into my credit.
- To perform the assigned administrative responsibility with integrity.

## Personal Details

- Date of Birth: 05-07-1974
- Father's Name: Shri Srikant Gupta
- Mother's Name: Late Smt. Lalmuni Devi
- Nationality: Indian
- Marital Status: Married
- Languages: Hindi, English, Sanskrit
- Mobile No.: 9235501645, 9452800414

## Professional & Academic Qualifications

- **2017- Ph.D.** in Electrical Engineering with **CPI: 10/10** from Department of Electrical Engineering, Motilal Nehru National Institute of Technology, Allahabad, Uttar Pradesh [Thesis Supervisor: Prof. Dinesh Chandra, (Received MHRD fellowship)] [**NIRF Rank-48**].
- **2012: M.E.** (Instrumentation & Control) with **85.1%** from National Institute of Technical Teachers' Training and Research, Chandigarh, Punjab University, Punjab (**2<sup>nd</sup> Topper of 2008 batch in the Institute**) [**NIRF Rank-72**]
- **1998: B.E.** (Electrical & Electronics Engineering) with 72.5 % from Birla Institute of Technology, Mesra, Ranchi, Jharkhand [**NIRF Rank-38**]
- **1992:** Passed **12<sup>th</sup>** from CBSE Board with 70.4%, Jugaldevi Saraswati Vidya Mandir, Kanpur, Uttar

Pradesh

- **1990:** Passed **10<sup>th</sup>** from CBSE Board with 80.4%, Saraswati Shishu Mandir Higher Secondary School, Gorakhpur, Uttar-Pradesh.[**Topper of District Gorakhpur**]

## **Professional Experience**

- **Teaching Experience: 19 Years, Post-Ph.D. Experience: 7 Years**
- From 4<sup>th</sup> January 2021-till date, Assistant Professor (Level-11, AGP-7000/-) in Electrical Engineering Department, Madan Mohan Malaviya University of Technology, Gorakhpur, Uttar Pradesh
- From 29<sup>th</sup> December 2014 to 3<sup>rd</sup> January 2021, Assistant Professor (Level-10, AGP-6000/-) in Electrical Engineering Department, Madan Mohan Malaviya University of Technology, Gorakhpur, Uttar Pradesh
- From 24<sup>th</sup> July 2012 to June 2017- Research Scholar in Electrical Engineering Department, Motilal Nehru National Institute of Technology, Allahabad, Uttar Pradesh
- From 16<sup>th</sup> July 2008 to 23<sup>rd</sup> July 2012 as Assistant Professor and Head in the Department, Electrical & Electronics Engineering, LDC Institute of Technical Studies, Soraon, Allahabad, Uttar Pradesh
- From 26<sup>th</sup> July 2005 to 15<sup>th</sup> July 2008 as a Lecturer and Sr. Lecturer in the Department of Electrical and Electronics Engineering, United College of Engineering and Research, Naini, Allahabad, Uttar Pradesh

## **Administrative Responsibilities**

### **Present Responsibilities**

- **Associate Dean of Extension, Field Outreach and Alumni Relations** since 1<sup>st</sup> January 2024, and for the session 2023-24
- **Deputy Coordinator, University Standard Club, (As a part of MoU between Bureau of Indian Standards, MMMUT Gorakhpur),** since 09<sup>th</sup> November 2023, and for the session 2023-24
- **Coordinator, NSS, MMMUT, Gorakhpur** since March 2020, and for the sessions, 2020-21, 2021-22, 2022-23, 2023-24
- **University Nodal Officer, AISHE, MMMUT, Gorakhpur** for the sessions, 2019-20, 2020-21, 2021-22, 2022-23, 2023-24
- **PG Convener, EED, MMMUT, Gorakhpur,** since 22<sup>nd</sup> April 2019, and for the sessions, 2020-21, 2021-22, 2022-23, 2023-24

- **Faculty Advisor, Electrical Engineers' Legation (EEL)** an Electrical Engineering student's society for the sessions, 2017-18, 2018-19, 2019-20, 2020-21, 2021-22, 2022-23, 2023-24
- Member, Departmental Internal Quality Assurance Cell (DIQAC) since 09 February 2024, for the session 2023-24
- Departmental Nodal Officer Scholarship 2023-24
- O/C Circuit Lab, EED, MMMUT, Gorakhpur
- O/C Network Lab, EED, MMMUT, Gorakhpur
- Member of BOS, EED, MMMUT, Gorakhpur
- Member of ITRC Management and Development committee, MMMUT, Gorakhpur

### **Past Responsibilities**

- Executive Committee Member of Advance Control and Dynamic Optimization Society, India from 30 October 2020 to October 2022.
- **Assistant Coordinator, Admission Cell**, MMMUT, Gorakhpur -2015-16, 2016-17
- **Hostel Warden, Tagore Bhavan** from January 2021 to February 2022, 2021-22
- **Hostel Superintendent, Raman Bhavan**, MMMUT, Gorakhpur, (March 2015-March 2018), 2015-16, 2016-17, 2017-18
- **CTO, NCC** 2015-16, 2016-17
- **Member Campus Development Cell** in 2017-18
- **Member Women's Cell** in 2017-2018
- **I/C TEQIP, EED**, MMMUT, Gorakhpur 2018-19, 2019-20, 2020-21
- **O/C Computer Lab, EED**, MMMUT, Gorakhpur, since 2018 to 15 September 2021
- Departmental Member Training and Placement Cell 2015-16
- **Project Coordinator, UG** for 2017-18, 2018-19, 2019-20
- O/C Design Lab-II, ITRC, MMMUT, Gorakhpur (2015-19)
- Member Departmental Purchase Committee 2019, 2020, 2021
- Member of Moderation committee-odd /even semester-2015-16, 2020-21, 2021-22
- Nodal Officer, EED for NAAC 2022-23

### **Awards/ Appreciation/ Achievements**

- B.Tech. Project titled "**Charge while Drive**" selected by Council of Science & Technology CST, UP
- Certificate of Appreciation from Vice Chancellor, Madan Mohan Malaviya University of Technology, Gorakhpur for contribution in NAAC preparation which resulted in university graded as 'A'
- Gorakhpur District Topper in High School

- NITTTR Chandigarh Institute 2<sup>nd</sup> highest marks obtained (85.1%) in M.E.
- Obtained 10/10 CPI in Ph.D. Course work
- Received MHRD scholarship for Ph.D. Course.
- Received Institute sponsorship for M.E. Course.
- Appreciation Letter with Cash Prize of 5000/- on 20<sup>th</sup> March 2009 in LDCITS, Allahabad for facilitating a quantum jump in Results of First Year by Prof. I.C. Agrawal, Director of LDCITS and former Director MNNIT Allahabad.
- Recognized among top five faculties in UCER, Allahabad.
- Experience of establishment of various labs in EED, LDCITS, Allahabad.
- Assisted in procurement under TEQIP-III for Measurement, Control, Electrical drives, Machine lab and Power system lab.
- Established Virtual Instrumentation lab in EED, MMMUT, Gorakhpur
- Secured 100% in an Online Quiz on “Basic Electrical Engineering “organized by Department of Electrical Engineering in association with IEEE Student Branch, AISSMS’s IOIT, Pune during 25 May to 28 May 2020.
- Executive Member of Automatic Control & Dynamic Optimization Society (ACDOS) National Member Organization (NMO) of International Federation of Automatic Control (IFAC) since November 2020.

### Research Index

- **Google Scholar Citations: 245**
- **h-index: 9**
- **i10-index: 7**

**Projects Completed:01**  
**Projects Submitted: 03 (CSTUP)**

1. Project ID: 598, Project Title: Charge while driving selected for financial grant of Rs. 20,000/- under CSTUP – Engineering Student’s Project Grant Scheme 2022-23
2. Project ID: 4422, Project Title: Impact of Integration of Renewable Energy and Electric Vehicles on Grid Stability, Grant Amount: 1536000/- CSTUP (Submitted)

### Research Supervision:

1. Ph.D.: 02 Completed, 08 in Progress
2. M. Tech. Dissertation: 33 Completed, 03 in Progress

## Publications in International Journals with reputed Indexing (SCI/ SCIE/ Scopus) :19

1. Dhananjay Gupta, Awadhesh Kumar and V. K. Giri, "Design and Investigations of MIT, FOMIT and Modified MIT Rule-Based MRAC for Non-interacting and Interacting Two-Tank Coupled Systems", International Journal of Automation and Control, Inderscience Publications, January 2024. **(Accepted) (Scopus)**
2. Padmesh Singh, Awadhesh Kumar, Surya Bhusan Dubey and Pankaj Sahu, "Real Time Voltage Stability estimation under Contingencies by Generalized Curve Fit Method using PMU" Tuijin Jishu/Journal of Propulsion Technology, Vol. 44, No. 3, pp. 2413-2430, December, 2023, ISSN: 1001-4055**(Scopus)**.
3. Dhananjay Gupta, Awadhesh Kumar and V. K. Giri, "Effect of Adaptation Gain and Reference Model in MIT and Lyapunov Rule-based Model Reference Adaptive Control for First and Second Order Systems", Transaction of the Institute of Measurement and Control, September 2023. **(Accepted) (SCIE)**
4. Vikas Patel, Awadhesh Kumar and V. K. Giri, "Fractional-Order Adaptive Sliding Mode Control with Disturbance Observer for Frequency Regulation in isolated Micro-grid", International Journal of Dynamics and Control, September 2023. **(Scopus)**.
5. Brajesh Kumar Singh and Awadhesh Kumar and V. K. Giri, "Comprehensive Review of various Control Strategies for Quadrotor Unmanned Aerial Vehicles", FME Transactions, Vol. 51, No. 3, pp. pp. 298-316, May 2023, **(Scopus)**. ISSN: 1451-2092
6. Padmesh Singh, Awadhesh Kumar, Pankaj Sahu and Manu Kumar Singh, "Voltage Stability margin evaluation and enhancement using STATCOM," BandaotiGuangdian/Semiconductor Optoelectronics, Vol. 42, No. 1 (January 2023), 830-836. ISSN: 1001-5868. **(Scopus)**
7. Brajesh Kumar Singh and Awadhesh Kumar "Attitude and position control with minimum snap trajectory planning for quadrotor UAV" International Journal of Dynamics and Control, Vol.11, No.5, pp. 2342-2353 January 2023. DOI: 10.1007/s40435-022-01111-3. ISSN: 2195-2698 **(Scopus)**.
8. Santosh Kumar Suman and Awadhesh Kumar, "Unstable System Approximants via Balancing in view of the Singular Perturbation Approximation", Journal of Institution of Engineering India Series B (2022). <https://doi.org/10.1007/s40031-022-00841-4>**(SCOPUS)**
9. Brajesh Kumar Singh and Awadhesh Kumar "Model Predictive Control using LPV approach for Trajectory Tracking of Quadrotor UAV with External Disturbances" Aircraft Engineering and Aerospace Technology. ISSN: 1748-8842. **(SCIE, IF 1.293)**.
10. Santosh Kumar Suman and Awadhesh Kumar, "Investigation and Implementation of Model Reduction Technique for Large scale Dynamical Systems", Archives of Computational Methods in Engineering 2022, Vol. 29, pp. 3087-3108 ISSN: 1134-3060, **14 January 2022**. DOI: <https://doi.org/10.1007/s11831-021-09690-8>**(SCIE, IF- 9.7)**
11. Santosh Kumar Suman and Awadhesh Kumar, "Computing Dominant Poles of High Dimensional

Transfer Functions Using Modified Clustering Method”, IETE Journal of Research, Taylor & Francis, Vol. 69, Issue 9, pp. 6224-6246, ISSN: 0377-2063, November 2021. DOI: <https://doi.org/10.1080/03772063.2021.1996285>, (SCIE, IF-2.333)

12. Santosh Kumar Suman and Awadhesh Kumar, “Reduced Order Modelling and Balancing Control of Bicycle Robot”, FME Transactions, Vol. 49, No. 4, pp. 919-931, October 2021, ISSN: 1451-2092 (Scopus)
13. Supriya Kaul, Nitesh Tiwari, Shekhar Yadav and Awadhesh Kumar, “Comparative Analysis and Controller Design for BLDC motor using PID and Adaptive PID Controller” Recent Advances in Electrical and Electronic Engineering Bentham Science Journal, August 2021. DOI : [10.2174/2352096514666210823152446](https://doi.org/10.2174/2352096514666210823152446), ISSN (Online): 2352-0973 (Scopus)
14. Santosh Kumar Suman and Awadhesh Kumar, “Linear System of Order Reduction using a Modified Balanced Truncation Method”, Circuits, Systems, and Signal Processing, Springer, Vol. 40, pp. 2741-2762, Pub Date: 2021-01-03, Issue date: June 2021, DOI: 10.1007/s00034-020-01596-3, ISSN No. 1531-5878 (SCIE, IF 2.225)
15. Santosh Kumar Suman and Awadhesh Kumar, “Reduction of Large-Scale Dynamical Systems by Extended Balanced Singular Perturbation Approximation”, International Journal of Mathematical, Engineering and Management Sciences, Vol.-5, Issue-5, pp. 939-956. <https://doi.org/10.33889/IJMEMS.2020.5.5.072> ISSN: 2455-7749. (June-2020) (Scopus)
16. Richa and Awadhesh Kumar, “Dominant Pole based Approximation for Discrete time System”, International Journal of Mathematical, Engineering and Management Sciences, Vol. 4, No. 1, pp. 56-65, ISSN: 2455-7749, 2019. DOI: <https://dx.doi.org/10.33889/IJMEMS.2019.4.1-005> (Scopus)
17. Santosh Kumar Suman and Awadhesh Kumar, “Model Order Reduction by Using Improved Approximation Techniques” Scientific Journal of King Faisal University, Vol. 21, Issue-2, pp. 80-87, <https://doi.org/10.37575/b/eng/2246>, , (Online First) Published. (December-2020) ISSN: 1658-0311 (Scopus)
18. Santosh Kumar Suman and Awadhesh Kumar, “Higher-Order Reduction of Linear System and Design of Controller”, Scientific Journal of King Faisal University, <https://doi.org/10.37575/b/eng/2235> ISSN: 1658-0311, (Online First) Published. (May-2020) pp. 1-16 (Scopus)
19. Santosh Kumar Suman and Awadhesh Kumar, “Investigation and Reduction of Large-Scale Dynamical Systems”, WSEAS Transactions on Systems, ISSN / E-ISSN: 1109-2777 / 2224-2678, Volume 18, 2019, Art. #23, pp. 175-180, IET Inspec, American Mathematical Society (AMS), Zentralblatt MATH. (July 2019) <https://www.wseas.org/multimedia/journals/systems/2019/a425102-075>

### Publications in other Reputed International Journals: 23

20. Awadhesh Kumar and Dinesh Chandra, “Improved Modal Truncation Approximant: A hybrid Approach”, Journal of Electrical Engineering, Vol. 22(1), pp. 8-15, ISSN-1582-4594, June-30, 2022. (Scopus)



21. Dhananjay Gupta and Awadhesh Kumar, "Numerical Methods of Optimization: A Review", Journal of Control and Instrumentation, Vol.-12, issue-2, pp. 19-25, 2021, ISSN: 2229-6972 DOI:10.37591/JoCI (UGC listed)
22. Dhananjay Gupta, Santosh Kumar Suman and Awadhesh Kumar, "Control and Stabilization of Maglev System Using 2-DOF PID Controller and its Comparative Analysis with Other PID Controller", Journal of Electronic Design Technology. Vol.-11, issue-2, pp.1-6, 2020 DOI:<https://doi.org/10.37591/joedt.v11i2.4161> ISSN: 2321-4228
23. Santosh Kumar Suman and Awadhesh Kumar, "Model Order Reduction of Transmission Line Model", WSEAS Transactions on Circuits and Systems, Vol.19, issue-7, pp. 62-68,2020. ISSN: 1109-2734, <https://doi.org/10.37394/23201.2020.19.7> (March, 2020) (**Scopus**)
24. Santosh Kumar Suman and Awadhesh Kumar, "Model Reduction of Power System by Modified Balanced Truncation Method," Universal Journal of Control and Automation, Vol. 8, No. 3, pp. 41 - 52, 2020, ISSN: 2331-6500, <https://doi.org/10.13189/ujca.2020.080301>
25. Santosh kumar Suman, Awadhesh Kumar, "Approximation of Large-scale dynamical systems for benchmark collection", Journal of Mechanics of Continua and Mathematical Sciences, Vol. 14, No. 3, pp. 196-215 May-June 2019. ISSN: 2454-7190, <https://doi.org/10.26782/jmcms.2019.06.00016> (May-June 2019)
26. Seema Chaudhary and Awadhesh Kumar, "Control of Twin Rotor MIMO System using PID and LQR Controller". Journal of Aircraft and Spacecraft Technology, Science Publication, Vol. 3, No. 1, pp. 211-220, (ISSN Print: 2523-1200, ISSN Online: 2523-1197), June 2019, <https://doi.org/10.3844/jastsp.2019.211.220>
27. Dhananjay Gupta, Santosh Kumar Suman and Awadhesh Kumar, "Approximation Based Optimal Control Design Strategy for the Magnetic Levitation System", Journal of Electronic Design Technology, vol. 10, Issue-1, pp 8-14: 2019, (ISSN: 2229-6980 – Online, ISSN: 2321-4228 – Print) DOI: <https://doi.org/10.37591/joedt.v10i1.2515>
28. Girijendra Tripathi, Awadhesh Kumar, "Balanced Truncation Based Reduction of Large-Scale system", Journal of Multimedia Technology & Recent Advancement, vol-6, Issue-Feb-2019 eISSN: **2349-9028**
29. Santosh Kumar Suman, Awadhesh Kumar and V.K. Giri, "An Application of Genetic Algorithms for the Real-Life Problems", Invertis Journal of Science and Technology, Vol. 11, No. 4, pp. 178-188, October-December, 2018, ISSN: 2454-762X, DOI: 10.5958/2454-762X.2018.00023.9
30. Noor Ahmad and Awadhesh Kumar, "Design consideration for high power zero voltage zero current switching full bridge converter with transformer isolation and current doubler rectifier", IOSR Journal of Electrical and Electronics Engineering, Volume: 11, Issue 3, Pages: 28-32, May-June 2016. DOI: 10.9790/1676-1103022832, e-ISSN: 2278-1676
31. Avadh Pati, Awadhesh Kumar and Dinesh Chandra, "Suboptimal Control Using Model Order Reduction", Chinese Journal of Engineering, Hindawi Publishing Corporation, Volume 2014, Article ID 797581, December 2013 DOI: <http://dx.doi.org/10.1155/2014/797581> (**Scopus**)
32. Aditya Dixit and Awadhesh Kumar, "Hybrid operation of Battery-Supercapacitor based Energy Storage System under variable operating conditions in Renewable Energy Resources Based Power System" International Advanced Research Journal in Science, Engineering and Technology, Vol.-8, Issue -6, pp. ----, June 2021, ISSN: 2394-1588.
33. Aditya Dixit and Awadhesh Kumar, "Applications of Energy Storage Systems in Power Systems with high penetration of RERs" International Advanced Research Journal in Science, Engineering and Technology, Vol. 8, Issue 6, pp. 741-747, June 2021, ISSN: 2394-1588.

34. Pooja Rai and Awadhesh Kumar, "Review on PLC SCADA based Automated System Control Applications and Challenges", International Journal of Research and Development in Applied Science and Engineering, ISSN: 2454-6844, Vol. 21, Issue-1, 2021
35. Shweta Singh and Awadhesh Kumar, "Different MPPT Techniques in Solar Photovoltaic System: A Comprehensive Review", i-manager's Journal on Instrumentation and Control Engineering, Volume: 4, No. 1, Issue: Nov-Jan 2016, Pages: 32-39, 2016, ISSN: 2321-1148. **(ProQuest)**
36. Shweta Singh and Awadhesh Kumar, "Fuzzy logic based MPPT scheme for sepic converter in Solar Photovoltaic System", i-manager's Journal on power system Engineering, Volume: 4, No. 1, Issue: Feb-April, 2016, Pages: 23-31, 2016, ISSN: 2322-0376.**(ProQuest)**
37. Maneesh Kumar Gupta and Awadhesh Kumar, "Model Order Reduction using Chebyshev Polynomial, Stability Equation Method and Fuzzy C-Means Clustering", i-manager's Journal on Instrumentation and Control Engineering, Volume: 4, No. 2, Issue: Feb-Apr 2016, Pages :7-13, 2016, ISSN: 2321-1148. **(ProQuest)**
38. Maneesh Kumar Gupta and Awadhesh Kumar, "Model Reduction of Continuous and discrete system using Differentiation Method and many Clustering technique", i-manager's Journal on Instrumentation and Control Engineering, Volume: 4, No. 3, Issue: May-July 2016, Pages :27-33, 2016, ISSN: 2321-1148. **(ProQuest)**
39. Deepak Gupta and Awadhesh Kumar, "Approximation of Large Scale Systems by Balanced Truncation And Singular Perturbation Method", i-manager's Journal on Instrumentation and Control Engineering, Volume: 4, No. 2, Issue : Feb-Apr 2016, Pages : 14-20, 2016, ISSN: 2321-1148. **(ProQuest)**
40. Deepak Gupta and Awadhesh Kumar, "An Investigation into Model Order Reduction through Balancing Methods and their Error Norm", International Journal of Emerging Technology and Advance Engineering, vol. 6, Issue no. 3 pp. 287-292, 2016, ISSN:2250-2459. **(Scopus)**
41. NikkuShahi and Awadhesh Kumar, "Model Order Reduction Using Krylov-Subspace Based Two-Sided Arnoldi Algorithm", i-manager's Journal on Instrumentation and Control Engineering, Volume: 4, No. 2, Issue: Feb-Apr 2016, Pages: 29-38, 2016, ISSN: 2321-1148. **(ProQuest)**
42. Nikku Shahi and Awadhesh Kumar, "Numerical Implementation of Two-Sided Arnoldi Algorithm", i-manager's Journal on Instrumentation and Control Engineering, Volume: 4, No. 2, Issue: August-October 2016, Pages: 1-6, 2016, ISSN: 2321-1148. **(ProQuest)**

### **Book Chapters: 05**

1. Santosh Kumar Suman, Awadhesh Kumar and Shekhar Yadav, "Balance Truncation-Padè Approximation Method extended to Large-Scale Linear Dynamic Systems" Advances in Mathematics Research, Nova Science Publishers, Vol. 32, November 2022. ISBN: 979-8-88697-332-7
2. Santosh Kumar Suman and Awadhesh Kumar, "Determination of Order Reduction in Large Scale Linear Dynamical by using Improved Balancing Technique" New Approaches in Engineering Research, Book Publisher International, Vol.-13, pp. 24-38, 24 August, 2021 ISBN-13 (15) 978-93-91882-73-0 (Print), 978-93-91882-81-5 (eBook), DOI: <https://doi.org/10.9734/bpi/naer/v13/12465D>
3. Shantani Sinha, Santosh Kumar Suman and Awadhesh Kumar, "Color sensor-based object sorting Robotic Arm", Algorithms for Intelligent Systems, V. K. Giri et al: Computing Algorithms with Applications in Engineering, pp. 169-180, ISBN: 978-981-15-2368-7, 487356\_1\_En (16) Springer



Nature Singapore Pte Ltd, published in March, 2020

4. Brajesh Kumar Singh and Awadhesh Kumar, “Stabilization and Control of Magnetic Levitation System using 2-Degree-of-Freedom PID Controller” Springer Nature Singapore Pte Ltd. 2019, A. Khare et al. (eds.), Recent Trends in Communication, Computing and Electronics, Lecture notes in Electrical Engineering 524, pp. 569-579, [https://doi.org/10.1007/978-981-13-2685-1\\_54](https://doi.org/10.1007/978-981-13-2685-1_54)(Scopus, Web of Science)ISSN: 1876-1100
5. Gupta A., Mathew L., Chatterji S. (2014): V/f-Based Speed Controllers for an Induction Motor Using AI Techniques: A Comparative Analysis. In: Babu B. et al. (eds) Proceedings of the Second International Conference on Soft Computing for Problem Solving (SocProS 2012), December 28-30, 2012. Advances in Intelligent Systems and Computing, vol 236, pp. 1161-1171, Springer, New Delhi (Print ISBN: 978-81-322-1601-8) (Scopus, DBLP)

#### Edited/Published Books/ Proceedings: 02

6. Engineering Mathematics, Volume-I, Jagdamba Publishing Company, New Delhi, 2021, ISBN:978-93-85437-23-6
7. Awadhesh Kumar, “Proceedings of the National Conference onRecent Advances in Electrical and Electronics Engineering (RAEEE-2018)” Excel India Publishers, New Delhi, July 2018 (ISBN: 978-93-86724-91-5)

#### Publications in International Conference (Scopus Indexed): 19

1. Dhananjay Gupta, Awadhesh Kumar and Vinod Kumar Giri,“A Comparative Stability Analysis of Inverted Pendulum using MIT Rule, Fractional-Order MIT Rule and Modified MIT Rule-based MRAC”,Second International Conference on recent trends in Management Engineering and Technology (ICMET), 22-23 December 2023.
2. Brajesh Kumar Singh and Awadhesh Kumar, “Dynamic Modelling and Control of Quadrotor Unmanned Aerial Vehicle System”, 8th International Conference on Research Developments in Applied Science, Engineering and Management (AEM-2023), The Indian Council of Social Science Research (ICSSR), Punjab University Campus, Chandigarh, India, 30 July 2023.
3. Vaishnavi Gupta, Amarjeet Singh, Priyanjali, Dibyanshu Yadav, Arjun Dikshit, Tirumalsetty Chiranjeevi, Awadhesh Kumar and Raj Kumar Patel, “Design and Implementation of Snake detection cum Repellent Device”, International Conference on IoT, Communication and Automation Technology (ICICAT-2023), Buddha Institute of Technology Gorakhpur, 23-24 June 2023. (Scopus)
4. Anjali Rai, Santosh Kumar Suman, Awadhesh Kumar, Shekhar Yadav, “Impact of Control Stability using LQR and Pole-placement for Ball & Beam System”, 5<sup>th</sup> IEEE International Conference on Intelligent Computing and Control Systems (ICICCS-2021), pp. 543-547, Vaigai College of Engineering, Madurai, India, May 06-08, 2021Doi: 10.1109/ICICCS51141.2021.9432281, published in May 2021. <https://doi.org/10.1109/ICICCS51141.2021.9432281>(Scopus)
5. Santosh Kumar Suman and Awadhesh Kumar, “Model Reduction of Flexible-Missile Control Plant using BST via Schur Method”, First Virtual International Conference on Latest Advancements &

6. Priyanka Shukla and Awadhesh Kumar, "Comparative Performance Analysis of Various Control Algorithms for Quadrotor Unmanned Aerial Vehicle System and Future Direction", International Conference on Electrical and Electronics Engineering (ICE3 2020), Madan Mohan Malaviya University of Technology, Gorakhpur, India, pp. 498-501, February 14-15, 2020.(Scopus)<https://doi.org/10.1109/ICE348803.2020.9122868>(Scopus)
7. Sanjay Kumar, Prashant Upadhyaya and Awadhesh Kumar, "Performance Analysis of Solar Energy Harnessing System using HOMER Energy software and PVSyst software", 2nd IEEE International Conference on Power Energy, Environment and Intelligent Control (PEEC-2019), pp.156-159, 18-19 October 2019, GL Bajaj Institute of Technology and Management, Greater Noida (UP), India.(Scopus)<https://doi.org/10.1109/PEEIC47157.2019.8976665>(Scopus)
8. Seema Chaudhary and Awadhesh Kumar, "Control of Twin Rotor MIMO System Using 1-Degree-of-Freedom, 2-Degree-of-Freedom PID and Fractional order PID Controller", 3rd IEEE International Conference on Electronics, Communication and Aerospace Technology (ICECA-2019), pp. 746-751, 12-14 June 2019, RVS Technical Campus, Coimbatore, Tamil Nadu, India, ISBN: 978-1-7281-0167-5(Scopus)<https://doi.org/10.1109/ICECA.2019.8821923>
9. Dhananjay Gupta, Santosh Kumar Suman and Awadhesh Kumar, "Optimal and Suboptimal Control Design Strategy for the Maglev System" 3rd International Conference on Trends in Electronics and Informatics, Tirunelveli, India, pp. 999-1002, 23-25, April 2019.(Scopus)<https://doi.org/10.1109/ICOEI.2019.8862760>
10. Brajesh Kumar Singh and Awadhesh Kumar, "Backstepping Approach based Controller Design for Magnetic Levitation System", 5th IEEE Uttar Pradesh Section International Conference (UPCON-2018), pp.1-6, 2-4 Nov 2018, MMMUT Gorakhpur,UP<https://doi.org/10.1109/UPCON.2018.8596885>(Scopus)
11. Gaya Prasad and Awadhesh Kumar, "A Comparison between Sliding mode Control and Feedback Linearization", 5th IEEE Uttar Pradesh Section International Conference (UPCON-2018), pp.1-5, 2-4 Nov 2018, MMMUT Gorakhpur, UP.(Scopus)<https://doi.org/10.1109/SSST.1996.493510>(Scopus)
12. Gaya Prasad and Awadhesh Kumar, "A Robust Sliding Mode Control For 2-Link Robotic Manipulator System", International Conference on New Technological Opportunities in Networking and Sciences-2018 (NEWTONS-2018), SIT Pithoragarh, Uttarakhand,08-10 June 2018.
13. Diwakar Singh and Awadhesh Kumar, "Comparison between TP and FAN Data Compression Techniques of ECG Signal" 1st IEEE International Conference on Electronics, Materials Engineering and Nano-Technology, IMENTech- 2017, pp.1-8, IEM Science city Kolkata, 28-29

April, 2017. (Scopus)<https://doi.org/10.1109/IEMENTECH.2017.8077013>(Scopus)

14. Manoj Kumar Maurya and Awadhesh Kumar, “Dimension Reduction and Controller design for Large Scale Systems using Balanced Truncation” IEEE International Conference on Electronics, Materials Engineering & Nano-Technology (IEMENTech-2017), IEM Science City, Kolkata, pp. 1-4, 28-29 April, 2017. (Scopus)<https://doi.org/10.1109/IEMENTECH.2017.8076972>(Scopus)
15. Shashi Kant Chaudhary and Awadhesh Kumar, “Approximation to an Unstable, MIMO Waste-Water Treatment Plant” IEEE International Conference on Electronics, Materials Engineering & Nano-Technology (IEMENTech-2017), IEM Science City, Kolkata, pp. 1-4, 28-29 April, 2017. (Scopus)<https://doi.org/10.1109/IEMENTECH.2017.8076973>(Scopus)
16. Shashi Kant Chaudhary and Awadhesh Kumar, “Hankel Norm Approximation of a Stable Non-Minimal System” IEEE International Conference on Electronics, Materials Engineering & Nano-Technology (IEMENTech-2017), IEM Science City, Kolkata, pp. 1-4, 28-29 April, 2017. ISBN:978-1-5386-1703-8(Scopus) DOI: [10.1109/IEMENTECH.2017.8076978](https://doi.org/10.1109/IEMENTECH.2017.8076978)(Scopus)
17. Shweta Singh, Vivekanand Rai, Kishan Bhushan Sahay and Awadhesh Kumar, “Simulation and Comparison of DVR and D-STATCOM for Voltage Sag Mitigation”, 6th IEEE International Conference on Power System (ICPS-2016), IIT Delhi, pp. 1-6,4-6 March, 2016. (Scopus)
18. Awadhesh Kumar, Bhoomika Maurya and Dinesh Chandra “Dimension reduction and controller design for a waste-water treatment plant”, IEEE International Conference on Power and Advanced Control Engineering(ICPACE- 2015), BNM Institute of Technology (BNMIT), Bangaluru, India, pp.413-417, 13-14 August 2015. (Scopus)
19. Awadhesh Kumar and Dinesh Chandra, “Improved Padé-Pole Clustering Approximant”, International Conference on Computer Science and Electronics Engineering, Dubai, UAE,17-18 November2013.

#### **Publications in National Conference (Published with ISBN): 07**

1. Dhananjay Gupta, Awadhesh Kumar and Yogya Mehrotra, “Review of Numerical Methods of Optimization” Proceedings of the National Conference on Recent Advances in Electrical and Electronics Engineering (RAEEE-2018), Excel India Publishers, New Delhi, MMMUT, Gorakhpur, Uttar Pradesh, 16-17 March, 2018, pp. 136-138, (Print: ISBN: 978-93-86724-91-5, July 2018).
2. Sanjay Kumar and Awadhesh Kumar, “A Review on Solar PV System Design in India” Proceedings of the National Conference on Recent Advances in Electrical and Electronics Engineering (RAEEE-2018), Excel India Publishers, New Delhi, MMMUT, Gorakhpur, Uttar Pradesh, 16-17 March, 2018, pp. 176-178, (Print: ISBN: 978-93-86724-91-5, July 2018).
3. Gaya Prasad and Awadhesh Kumar, “Adaptive Control Strategy for a Robotic Manipulator System”, Proceedings of the National Conference on Recent Advances in Electrical and Electronics Engineering (RAEEE-2018), Excel India Publishers, New Delhi, MMMUT, Gorakhpur, Uttar

Pradesh, 16-17 March, 2018, pp. 35-37, (Print: ISBN: 978-93-86724-91-5, July 2018).

4. Brajesh Kumar Singh and Awadhesh Kumar, "A Review on Different Control Strategies for Magnetic Levitation System", National Conference on Emerging Trends in Science, Technology and Management (ETSTM-2017), Ashoka Institute of Technology and Management, Varanasi, 11-12 Nov 2017, (ISBN: 978-93-5281-325-4).
5. Richa and Awadhesh Kumar, "A technical Review on various Control and Optimization Strategies for Inverted Pendulum System", Proceedings of 3rd National Conference on Recent Advances in Science and Technology (NCRAS-2017), pp.373-377, SIT Pithoragarh, Uttarakhand, 11-12 November 2017. (ISBN: 978-93-86724-77-9)
6. Gaya Prasad, Mohd. Saif and Awadhesh Kumar, "The state of art in Adaptive Control Technique", Proceedings of 3rd National Conference on Recent Advances in Science and Technology (NCRAS-2017), pp. 324-328, SIT Pithoragarh, Uttarakhand, 11-12 November 2017. (ISBN: 978-93-86724-77-9)
7. Mohd. Saif, Gaya Prasad and Awadhesh Kumar, "Optimal Control of TRMS using FOPID controller", Proceedings of 3rd National Conference on Recent Advances in Science and Technology (NCRAS-2017), pp. 378-383, SIT Pithoragarh, Uttarakhand, 11-12 November 2017. (ISBN: 978-93-86724-77-9)

#### **Publications in National Conference (Others): 08**

8. Mohd. Saif and Awadhesh Kumar, "Modelling and Controlling of a Non-linear Twin Rotor MIMO System with PID Controller", National Conference on Recent Advances in Electrical and Electronics Engineering (RAEEE-2018), MMMUT, Gorakhpur, Uttar Pradesh, 16-17 March, 2018.
9. Deepak Gupta and Awadhesh Kumar, "Approximation of Single Input Single Output and Multiple Input Multiple Output systems by Different Model Reduction Techniques", National Conference on Recent Advances in electrical and Electronics Engineering (RAEEE-2018), MMMUT, Gorakhpur, Uttar Pradesh, 16-17 March 2018.
10. Shashi Kant Chaudhary & Awadhesh Kumar, "A Review on Design and Analysis of Controller for Cruise Control System", Proceedings of the National Conference on Electrical Power Technology, Management and IT Applications (EPTMITA-16), 2016, Madan Mohan Malaviya University of Technology, Gorakhpur, India, 23-24 September 2016.
11. Shiv Shankar Kumar & Awadhesh Kumar, "A Review to Modelling and its Approximation to Fractional Order Systems", Proceedings of the National Conference on Electrical Power Technology, Management and IT Applications (EPTMITA-16), 2016, Madan Mohan Malaviya University of Technology, Gorakhpur, India, 23-24 September 2016.
12. Manoj Kumar Maurya & Awadhesh Kumar, "A Note on Large Scale Systems and its Approximation", Proceedings of the National Conference on Electrical Power Technology, Management and IT Applications (EPTMITA-16), 2016, Madan Mohan Malaviya University of Technology, Gorakhpur, India, 23-24 September 2016.
13. Ateet Kumar Srivastava & Awadhesh Kumar, "Model Order Reduction of Interval Systems: A Critical Review", Proceedings of the National Conference on Electrical Power Technology, Management and IT Applications (EPTMITA-16), 2016, Madan Mohan Malaviya University of Technology, Gorakhpur, India, 23-24 September 2016.
14. Maneesh Kumar Gupta & Awadhesh Kumar, "Performance Analysis and Comparison of Reduced Order Systems using Chebyshev Polynomial, Improved Pole Clustering FuzzyC-Means Clustering

Techniques”, Proceedings of the National Conference on Electrical Power Technology, Management and IT Applications (EPTMITA-16), 2016, Madan Mohan Malaviya University of Technology, Gorakhpur, India, 23-24 September, 2016.

15. Suneet Sahu, Awadhesh Kumar & Kishan Bhusan Sahay, ” Design of Power Quality Management Scheme Using Lab VIEW Virtual Instrument” National Conference on Advances in Electrical Engineering-2015 (RAEE-15), MMMUT, Gorakhpur.

#### **Attended and presented papers in National/ International Conferences: 11**

1. Dhananjay Gupta, Awadhesh Kumar and Vinod Kumar Giri, “A Comparative Stability Analysis of Inverted Pendulum using MIT Rule, Fractional-Order MIT Rule and Modified MIT Rule-based MRAC”, Second International Conference on recent trends in Management Engineering and Technology (ICMET), 22-23 December 2023.
2. Brajesh Kumar Singh and Awadhesh Kumar, “Dynamic Modelling and Control of Quadrotor Unmanned Aerial Vehicle System”, 8<sup>th</sup> International Conference on Research Developments in Applied Science, Engineering and Management (AEM-2023), The Indian Council of Social Science Research (ICSSR), Punjab University Campus, Chandigarh, India, 30 July 2023.
1. Vaishnavi Gupta, Amarjeet Singh, Priyanjali, Dibyanshu Yadav, Arjun Dikshit, Tirumalsetty Chiranjeevi, Awadhesh Kumar and Raj Kumar Patel, “Design and Implementation of Snake detection cum Repellent Device”, International Conference on IoT, Communication and Automation Technology (ICICAT-2023), Buddha Institute of Technology Gorakhpur, 23-24 June 2023.
2. Gaya Prasad and Awadhesh Kumar, “A Robust Sliding Mode Control For 2-Link Robotic Manipulator System”, International Conference on New Technological Opportunities in Networking and Sciences-2018 (NEWTONS-2018), SIT Pithoragarh, Uttarakhand, 08-10 June, 2018.
3. Richa and Awadhesh Kumar, “A technical Review on various Control and Optimization Strategies for Inverted Pendulum System”, 3rd National Conference on Recent Advances in Science and Technology (NCRASST-2017), SIT Pithoragarh, Uttarakhand, 11-12 November, 2017.
4. Gaya Prasad, Mohd. Saif and Awadhesh Kumar, “The state of art in Adaptive Control Technique”, 3rd National Conference on Recent Advances in Science and Technology (NCRASST-2017), SIT Pithoragarh, Uttarakhand, 11-12 November, 2017.
5. Mohd. Saif, Gaya Prasad and Awadhesh Kumar, “Optimal Control of TRMS using FOPID controller”, 3rd National Conference on Recent Advances in Science and Technology (NCRASST-2017), SIT Pithoragarh, Uttarakhand, 11-12 November 2017.
6. Awadhesh Kumar and Dinesh Chandra, “Modal Truncation Approximant for Discrete Time Systems”, 2nd IEEE sponsored International Conference on Control, Computing, Communication & Materials-2016 (ICCCCM-2016) held during 21-22 October 2016.
7. Attended the 2nd IEEE sponsored International Conference on Control, Computing, Communication & Materials-2016 (ICCCCM-2016) held during 21-22 October 2016.
8. Awadhesh Kumar, Bhoomika Maurya and Dinesh Chandra “Dimension reduction and controller design for a waste-water treatment plant”, IEEE International Conference on Power and Advanced Control Engineering, 13-14 August, 2015 (ICPACE- 2015) (**Scopus**)
9. Participated as Volunteer in Students’ Conference in Engineering and Systems (SCES-2014) organized by IEEE student Branch and Motilal Nehru National Institute of Technology, Allahabad held during 28-30 May 2014.



10. Awadhesh Kumar and Dinesh Chandra, “Improved Padé-Pole Clustering Approximant”, International Conference on Computer Science and Electronics Engineering, Dubai, pp. 29-32, UAE,17-18 November,2013
11. Participated as distinguished reviewer in the technical review committee in an IEEE sponsored International Conference on Control, Computing, Communication & Materials-2013 (ICCCCM-2013) held during 03-04 August 2013.

### **Acted as Resource Person**

(Conference/Workshop/STC organized, Expert lectures delivered, Session Chairs, Social activities organized etc.)

### **Conferences Organized:**

1. As a Coordinator, 2-days TEQIP-III sponsored National Conference on “**Recent Advances in Electrical and Electronics Engineering (RAEEE-2018)**” in the Department of Electrical Engineering, MMMUT, Gorakhpur,16-17 March 2018. (Budget: 125000/-)

### **Workshop/ Short- Term Courses/ Faculty Development Programs/ Seminars Organized**

1. As a **Deputy Coordinator**, organised “**Empowering through Standards: A comprehensive Sensitization workshop**”on 08<sup>th</sup> December 2023 by University Standard Club, MMMUT Gorakhpur and Bureau of Indian Standards, Lucknow under BIS-MMMUT MoU activities series.
2. As a **Convener**, one-week STTPon“**Recent Advances in Control Systems (RACS-2022)**” held during 25-29 November 2022 by Department of Electrical Engineering, MMMUT Gorakhpur and jointly sponsored by AICTE New Delhi & MMMUT Gorakhpur under AICTE-MMMUT MoU activities series. (3 Lacs)
3. As a **Coordinator**, one-week Online FDP on“**Examination Reforms**” during 26-30, March 2022in a joint Collaboration with AICTE New Delhi and MMM University Technology, Gorakhpur (Budget: 93000/-)
4. As a **Coordinator**, organized an Expert Lecture on the topic “**Buzz Words and Recent Trends in Automation**” by Prof. S. Chatterji, EED NITTTR Chandigarh and Mentor AICTE New Delhi on 26<sup>th</sup> November 2021 in Electrical Engineering Department, MMMUT Gorakhpur.
5. As a **Coordinator**, one-week AICTE Training and Learning (ATAL) Academy Online FDP in thrust area “Control Systems & Sensors Technology” on “**Recent Advances in Control Systems (RACS-2021)**” during 18-22, October 2021 at MMM University Technology, Gorakhpur (Budget: 93000/-)
6. As a **Coordinator**, one-week AICTE Training and Learning (ATAL) Academy Online FDP in thrust area “Control Systems & Sensors Technology” on “**Recent Advances in Control Systems (RACS-2020)**” during 17-21, October 2020 at MMM University Technology, Gorakhpur (Budget: 93000/-)
7. As a **Coordinator**, one-week online Faculty Development program on “**Power Electronics for Electrical Vehicles and Energy Systems (PEEVES-2020)**” organized jointly by Electrical



Engineering Department, MMMUT, Gorakhpur and SVNIT, Surat under twinning activity, financially sponsored by TEQIP-III, MMMUT, Gorakhpur, 28 September-03 October 2020. (Budget: 65000/-)

8. As a **Coordinator**, One-week TEQIP-III sponsored Short-Term Course on “**Emerging Trends in Smart Grid and Optimization Techniques (ETSGOT-2018)**” in the Department of Electrical Engineering, MMMUT, Gorakhpur, 11-16 September 2018. (Budget: 1,40,000/-)
9. As a **Coordinator**, One-week TEQIP-II sponsored Short-Term Course on “**Recent Advances in Control and Energy Systems (RACES-2017)**” in the Department of Electrical Engineering, MMMUT, Gorakhpur, 25 February -03 March 2017 (Budget: 4,31,000/-)
10. As a **Deputy Coordinator**, One-week TEQIP-II sponsored Short-Term Course on “**Recent Advances in Electrical Systems and Renewable Energy (RAERE-2016)**”, 01-07, August 2016 (Budget: 2,50,000/-)
11. As a **Convener**, Workshop on “**Recent advances in Electrical Engineering Laboratories (RAEEL-2015)**” sponsored under TEQIP-II, in the Department of Electrical Engineering, MMMUT, Gorakhpur, 2<sup>nd</sup> December 2015 (Budget: 10,000/-)
12. As a **Convener**, Workshop on “**Energy efficiency in industrial, domestic and Transport sector**”, 22-23 August 2015, Sponsored Jointly by PCRA and TEQIP-II, attended by 74 students and 45 faculty members. (Budget: 10,000/-)

#### **Social Activities Organized:**

1. Organized as **Associate Dean of Extension, Field Outreach and Alumni Relations** a “**One day Training Programme on Accessibility to PWDs**” in joint collaboration with CRC and MMMUT Gorakhpur on 24<sup>th</sup> January 2024.
2. Organized as **Associate Dean of Extension, Field Outreach and Alumni Relations** a “**Study-Trip to MMMUT Gorakhpur**” for the School Children of Rajkiya Model Inter College Mathiya Sriram Sewarahi Kushinagar on 4<sup>th</sup> January 2024 as a part of study trip to Higher Educational Institutions
3. Organized as **NSS Coordinator** “**Aayansh-Diwali celebration with Malviya Kids**” a stationary collection and distribution drive on the eve of Dipawali with students studying in Malaviya Shiksha Niketan at MMMUT Gorakhpur on 9<sup>th</sup> November 2023.
4. Organized as **NSS Coordinator** “**Meri Mati Mera Desh**” Abhiyan and Celebrated “**Kalash Yatra**” at MMMUT Gorakhpur on 13<sup>th</sup> October 2023.
5. Organized as **NSS Coordinator** “**Swacchatahi Sewa**” Abhiyan and Celebrated “**International Non-violence Day**” at MMMUT Gorakhpur on 2<sup>nd</sup> October 2023.
6. Organized as **NSS Coordinator** “**Yoga Camp**” on 21.06.2023 at Chauri-Chaura Saheed Smarak Sthal Gorakhpur.
7. Organized as **NSS Coordinator** “**Padhe Gorakhpur Badhe Gorakhpur**” Abhiyan, started since 1<sup>st</sup> December 2022 in the eight schools of adopted villages by MMMUT Gorakhpur.

8. Organized as **NSS Coordinator “Blood Donation Camp”** on 01.12.2022 through Gorakhnath Blood Bank Gorakhpur.
9. Organized as **NSS Coordinator “Pararth-2: A three-month Cloth collection and distribution drive”** from 01.12.2022 to 28.02.2023.
10. Organized as **NSS Coordinator “Blood Donation Camp”** on 29.09.2022 through Medical College Blood Bank Gorakhpur.
11. Organized as **NSS Coordinator “Swacchata Abhiyan”** in MMMUT Gorakhpur during 11-17 August 2022.
12. Organized as **NSS Coordinator “Two months Yoga Camp”** at MMMUT Gorakhpur from 21.04.2022 to 21.06.2022.
13. Organized as **NSS Coordinator “Pararth: A one month Cloth collection and distribution drive”** from 14.04.2022 to 14.07.2022.
14. Organized as **NSS Coordinator “Blood Donation Camp”** on 30.12.2021 through District Hospital Blood Bank Gorakhpur.
15. Organized as **NSS Coordinator “NSS Orientation cum Health Awareness program”** for first year students in IPNS-2021, on 23.12.2021.
16. As a **Convenor, “NSS Annual Function”** organized by National Service Scheme (NSS), MMMUT Gorakhpur on 28 September 2021.
17. As a **Convenor**, International Seminar on **“Managing the Stress and Anxiety during COVID-19 pandemic”** organized by National Service Scheme (NSS), MMMUT Gorakhpur during 2-3 September 2021.
18. As a **Convenor**, Seminar on World Water Day in collaboration with Institution of Engineers (India) Gorakhpur Local Chapter and NSS MMMUT Gorakhpur, on the theme **“Valuing Water”** on 22<sup>nd</sup> March 2021.

#### **Departmental Activities Organized:**

1. As a **Faculty Advisor**, ELECTRA-2023 a Departmental Activity by society Electrical Engineers Legation (EEL), 24-25 April 2023.
2. As a **Faculty Advisor**, ELECTRA-2022 a Departmental Activity by society Electrical Engineers

Legation (EEL), 23-24 March 2022.

3. As a **Faculty Advisor**, ELECTRA-2021 (Online)
4. As a **Faculty Advisor**, ELECTRA-2020 (Online)
5. As a **Faculty Advisor**, ELECTRA-2019 a Departmental Activity by society Electrical Engineers Legation (EEL), 11-13 January 2019.
6. As a **Faculty Advisor**, ELECTRA-2018 a Departmental Activity by society Electrical Engineers Legation (EEL)

#### **Expert Lecture/ Invited Talks delivered: 28**

1. Expert Lecture delivered on 20<sup>th</sup> January 2024 on the topic: “**Laboratory Practices and Electrical Safety Measures**”, in a two days training programme for Laboratory staff “Recent Advancements in Electrical, Electronics Labs and Awareness of Latest Software (RAEEL-2024)” held during 19-20 January 2024 by Department of Electrical Engineering, MMMUT Gorakhpur.
2. Expert Lecture delivered on 13<sup>th</sup> June 2023 on the topic: “**Application of Optimization Techniques in Control System Design**”, at Ashoka Institute of Technology and Management, Varanasi, Uttar Pradesh.
3. Expert Lecture delivered on 12<sup>th</sup> June 2023 on the topic: “**Application of Artificial Intelligence in Control System Design**”, at Ashoka Institute of Technology and Management, Varanasi, Uttar Pradesh.
4. Expert Lecture delivered on 15<sup>th</sup> February 2023 on the topic: “**Particle Swarm Optimization: Concepts & Applications**”, at Ashoka Institute of Technology and Management, Varanasi, Uttar Pradesh.
5. Expert Lecture delivered on 3-4 February 2023 in a STTP on Recent Trends and Research Opportunities in Electrical & Electronics Engineering (RTROEEE-2023)” on the topic: “**Optimization Techniques: An Introduction to Particle Swarm Optimization Part-II**”, at United College of Engineering & Research, Naini, Allahabad, Uttar Pradesh.
6. Expert Lecture delivered on 28<sup>th</sup> November 2022, on the topic, “**Modelling of Non-linear Control Systems**”, in a STTP on “Recent Advances in Control Systems (RACS-2022)” held during 25-29 November 2022 by Department of Electrical Engineering, MMMUT Gorakhpur and jointly sponsored by AICTE New Delhi & MMMUT Gorakhpur under AICTE-MMMUT MoU activities series.
7. Expert Lecture delivered on 24<sup>th</sup> January 2022, on the topic, “**Control Schemes in Electrical Vehicles**”, in an online refresher Course “**Battery Energy Storage System & its Management**” sponsored by AICTE-ISTE during 20/01/2022 to 26/01/2022” by Department of Electrical Engineering, KJ’s Educational Institute Trinity College of Engineering & Research,

**Pune, Maharashtra.**

8. Expert Lecture delivered on 18<sup>th</sup> October 2021, on the topic, “**Recent Advances and Challenges in Control Systems**”, in an online FDP “Recent Advances in Control Systems-2021” held during 18-22 October 2021 by Department of Electrical Engineering, MMMUT Gorakhpur and sponsored by AICTE Training and Learning (ATAL) Academy.
9. Expert Lecture delivered on 12<sup>th</sup> October 2021 on the topic, “**Electrical Circuit Transients: An Analysis**”, organised by Department of Electrical Engineering, Maharana Pratap Engineering College, Kanpur.
10. Expert Lecture delivered on 3<sup>rd</sup> September 2021 on the topic, “**Stress Management**”, in the International Seminar on “**Managing Stress and Anxiety during COVID-19 Pandemic**” organised by National Service Scheme, MMMMUT Gorakhpur.
11. Expert Lecture delivered on 14<sup>th</sup> August 2021 on the topic, “**Concepts, Applications and Key Challenges in Control Technology**”, organised by Institution of Engineers (India) Gorakhpur Local Chapter.
12. Expert Lecture delivered on 22<sup>nd</sup> July 2021 on the topic “**Artificial Intelligence, Human Perception and Fuzzy Logic Control Systems**” in a Faculty Development Program on “Artificial Intelligence” organised by Electrical Engineering Department, Bansal Institute of Engineering and Technology, Lucknow during 19-25 July 2021.
13. Expert Lecture delivered on 2<sup>nd</sup> July 2021 on the topic “**Electrical Safety Measures at Workplace**” in National Electrical Safety week, 2021 at HPCL LPG Bottling Plant, Mehul Mumbai.
14. Expert Lecture delivered on 28<sup>th</sup> June 2021, on the topic “**Concepts, Approaches and Key Challenges in Approximation**” in an AKTU sponsored, Online Faculty Development Program on “Advanced Control Strategies: Design and Applications (ACS DA-2021)” organised by Department of Electrical Engineering, Rajkiya Engineering College, Sonbhadra held during 28 June to 02 July 2021.
15. Expert Lecture delivered on 15<sup>th</sup> March 2021 on the topic “**Robust Control: Concepts and Approaches**” in an AICTE sponsored Short Term Training Programme (online) on Fractional Order Robust Control System Design (series III) under AQIS 2019-20 scheme organized by Department of Electrical and Electronics Engineering, Vardhman College of Engineering Hyderabad Telangana during 15-20 March 2021.
16. Expert Lecture Delivered on 4<sup>th</sup> March 2021 on the topic, “**Engineers and Engineering: Towards a healthy Planet**”, organised by Institution of Engineers (India) Gorakhpur Local Chapter.
17. Expert Lecture Delivered on 08<sup>th</sup> January 2021 on the topic, “**Stability Analysis: Linear System perspective with MATLAB Applications**”, at Ashoka Institute of Technology and Management, Varanasi, UP.
18. Expert Lecture delivered on 24<sup>th</sup> December 2020 on the topic “**Smart Sensors: A Control Perspective**” in a TEQIP-III sponsored Short-Term Training Programme (online) on Machine Vision, Data Acquisition System and Smart Sensors organized by Department of Electrical Engineering, Rajkiya Engineering College, Banda UP during 21-25 December 2020.
19. Expert Lecture delivered on 28<sup>th</sup> November 2020 on the topic “**Suboptimal Control Design through Robust Reduction Technique**” in an AICTE sponsored Short Term Training Programme

(online) on Fractional Order Robust Control System Design (series II) under AQIS 2019-20 scheme organized by Department of Electrical and Electronics Engineering, Vardhman College of Engineering Hyderabad Telangana during 23-28 November 2020.

20. Expert Lecture delivered on 20<sup>th</sup> October 2020 on the topic “**Polynomial based Approximants**” in an online FDP Recent Advances in Control Systems held during 17-21 October, 2020 by Department of Electrical Engineering, MMMUT Gorakhpur and sponsored by AICTE Training and Learning (ATAL) Academy.
21. Expert Lecture delivered on 1<sup>st</sup> October 2020 on the topic “**Variable Frequency Transformer: An Introduction & Future direction**” in a TEQIP-III sponsored one-week Faculty development Program on “Power Electronics for Electric Vehicles and Energy Systems (PEEVES-2020)” jointly organized by Department of Electrical Engineering, SVNIT Surat and MMMUT Gorakhpur, during 28 September-03 October 2020.
22. Expert Lecture delivered on 2<sup>nd</sup> July 2020 on the topic “**Electrical Safety**” in National Electrical Safety week, 2020 at HPCL LPG Bottling Plant Sahjanwa Gorakhpur.
23. Expert Lecture delivered on 19<sup>th</sup> October 2019 on the topic “**Variable Frequency Transformer: A conceptual Review**” in a TEQIP-III sponsored one-week National Workshop on “Electric Vehicles Need & Environment” jointly organized by Department of Electrical Engineering, Institute of Engineering and Technology, Dr. Ram Manohar Lohia Awadh University, Ayodhya & Dr. Ambedkar Institute of Technology, Bangalore during 16-20 October 2019.
24. Keynote Speech Delivered on 09<sup>th</sup> June 2018 in an International Conference NEWTONS-2018 on: “**System Approximants: Concept and Approaches**”, at Seemant Institute of Technology, Pithoragarh, Uttarakhand.
25. Expert Lecture Delivered on 04<sup>th</sup> May 2018 in a Faculty Development Program on Power Theft & Energy Management (PTEM-2018) on the topic “**Power Theft: Issues and Mitigation Schemes**” and “**Optimization Techniques: An Introduction**”, at United College of Engineering & Research, Naini, Allahabad, Uttar Pradesh.
26. Expert Lecture Delivered on 28<sup>th</sup> August 2017 on the topic: “**Transients in Circuit Analysis with application to Power System**”, at Ashoka Institute of Technology and Management, Varanasi, UP.
27. Expert Lectures Delivered on 16<sup>th</sup> September 2016 on the topic: “**MATLAB Simulation for Control Systems**”, at Ashoka Institute of Technology and Management, Varanasi, Uttar Pradesh.
28. Expert Lectures Delivered on 03<sup>rd</sup> August 2016 in a Short-term Course “Recent Advances in Electrical Systems and Renewable Energy (RAERE-2016)” on the topic “**Model Order Reduction: Concept and Approaches**”, at MMMUT Gorakhpur.

### **Chaired Session in International/ National Conferences and other Outreach Activities**

1. Chaired a Technical Session on 09.02.2024 in 5<sup>th</sup> IEEE International Conference on Computing, Power and Communication Technologies (IC2PCT-2024)” organized by Galgotia University, Greater Noida, during February, 09-10, 2024.
2. Worked as Technical Program Committee member and Reviewer in the Congress on Smart Computing Technologies (CSCT-2023) organized by Soft Computing Research Society and SAU Centre for Research and Innovative Learning (SCRIL) South Asian University, India held during 02-03 December 2023.

3. Acted as Judge on 20.10.2023 in the TechYuva-2023 organized by Buddha Institute of Technology Gorakhpur in association with AKTU Innovation Hub, Lucknow and technically co-sponsored by IEEE young Professional, UP Section during 19-20 October 2023.
4. Worked as Program Committee member and Reviewer in International Conference on “Artificial Intelligence: Theory and Applications (AITA-2023)” organized by ICFAI Business School (IBS) Bangalore, Off Campus center of ICFAI Foundation for Higher Education (IFHE) University India, during 11-12 August 2023.
5. Chaired a Technical Session on 30.07.2023 in 2023 IEEE World Conference on Applied Intelligence and Computing (AIC-2023)” jointly organized by Rajkiya Engineering College, Sonbhadra and Ashoka Institute of Technology and Management, Varanasi, technically sponsored by Soft Computing Research Society, during July,29-30, 2023.
6. Chaired a Technical Session on 24.06.2023 in IEEE sponsored International Conference on IoT, Communication and Automation Technology, jointly organized by Rajkiya Engineering College, Sonbhadra and Buddha Institute of Technology, Gorakhpur, during June 23-24, 2023.
7. Worked as Technical Program Committee member in 4<sup>th</sup> Electric Power and Renewable Energy Conference (EPREC-2023) held at Department of Electrical Engineering, National Institute of Technology Jamshedpur during 25-27 May 2023.
8. Worked as Program Committee Member and Reviewer in 3<sup>rd</sup>International Conference on Computational Intelligence (ICCI-2022)” held at Indian Institute of Information Technology, Pune, duringDecember 29-30, 2022.
9. Worked as Program Committee Member and Reviewer in 6<sup>th</sup> Joint Conference on Advances in Computational Intelligence (IJCACI-2022)” organized bySAU Centre for Research and Innovative Learning (SCIRIL), South Asian University, India &Jahangimagar University Bangladesh, duringOctober15-16, 2022.
10. Worked as Program Committee Member and Reviewer in 2022 IEEE World Conference on Applied Intelligence and Computing (AIC-2022)” organized byREC, Sonbhadra&technically supported by Soft Computing Research Society, duringJune17-19, 2022.
11. Served as primary evaluator in Toycathon, 2021 organized by Ministry of Education, I&B, MSME, Women & Child Development, Commerce & Industry, Textiles and AICTE, India
12. Chaired a Technical Session on 27.02.2021 in International Conference on Recent Advances in Science and Engineering (RASE-2021)” held at REC, SonbhadraduringFebruary26-27, 2021.
13. Chaired a Technical Session in International Conference on Electrical and Electronics Engineering (ICE3-2020)” held at MMMUT, Gorakhpur on September 14-15, 2020.
14. Chaired a Technical Session in International Conference on Computing Applications in Electrical and Electronics Engineering (ICCAEEE-2019) held at REC, Sonbhadra on 30-31 August 2019.
15. Chaired a Technical Session in International Conference on New Technological Opportunities in Networking and Sciences (NEWTONS-2018) held at SIT, Pithoragarh on 08-10 June 2018.
16. Chaired Technical Session-VIII on Control System Track in TEQIP-III sponsored National Conference “Recent Advances in Electrical and Electronics Engineering (RAEEE-2018)” held at MMMUT, Gorakhpur on March 16-17, 2018.
17. Chaired Technical Session-I on Electrical Power System & Power Electronics and Drives Track in TEQIP-III sponsored National Conference “Electrical Power Technology, Management and IT Applications (EPTMITA-2016)” held at MMMUT, Gorakhpur on September 23-24, 2016.
18. Chaired Technical Session IV on Control System & Miscellaneous Fields Track in TEQIP-III



sponsored National Conference “Electrical Power Technology, Management and IT Applications (EPTMITA-2016)” held at MMMUT, Gorakhpur on September 23-24, 2016.

### **Reviewer of Journals:**

- IEEE Transactions on Circuits and Systems
- IEEE Transactions on Mechatronics
- ISA Transactions Journal - Elsevier
- Asian Journal of Control
- Transaction of Institute of Measurement and Control, SAGE Journals
- Intelligent Automation and Soft Computing
- WSEAS Transactions on Circuits and Systems
- International Journal on Electrical Engineering and Informatics
- Iranian Journal of Science and Technology, Transactions of Electrical Engineering, Springer

### **Reviewer of Conferences:**

- Congress on Smart Computing Technologies, track CSCT-2023
- 3rd International Conference on Power Electronics & IoT Applications in Renewable Energy and its Control during 23rd-24th February 2024
- 5th International Conference on Communication and Intelligent Systems (ICCIS 2023) during December 16-17, 2023
- IEEE sponsored International Conference on IoT, Communication and Automation Technology, jointly organized by Rajkiya Engineering College, Sonbhadra and Buddha Institute of Technology, Gorakhpur, during June 23-24, 2023.
- 2022 IEEE Silchar Subsection Conference, IEEE SILCON-2022, 4-6 November 2022 (Hybrid Mode), National Institute of Technology Silchar
- 2<sup>nd</sup> International Conference on Power Electronics and IoT Applications in Renewable Energy and its Control (PARC-2022)
- 47<sup>th</sup> Annual Conference of the IEEE Industrial Electronics Society, Toronto, Canada 13-16 October, 2021 (IECON-2021)
- 2<sup>nd</sup> Electric Power and Renewable Energy Conference, 28-30 May 2021 (EPREC-2021)
- 6th Students' Conference on Engineering & Systems (SCES-2020)
- International Conference on Power Electronics & IoT Applications in Renewable Energy and its Control (PARC-2020)
- International Conference on Electrical and Electronics Engineering (ICE3-2020)
- International Conference on Energy, Environment & Material Sciences (ICEEM-2019)
- International Conference on Computing Applications in Electrical & Electronics Engineering (ICCAEEE-2019)

- 2nd IEEE International Conference on Power Energy, Environment, and Intelligent Control (PEEIC-2019)
- International Conference on Sustainable Communication Networks and Application (ICSCN-2019)
- Fourth International Conference on Communication and Electronics Systems (ICCES-2019)
- IEEE Third International conference on Electronics, Communication and Aerospace Technology (ICECA-2019)
- International Conference on Recent Trends in Communication & Intelligent Systems (ICRTCIS-2019)
- 5th Students' Conference on Engineering and Systems 2019 (SCES-2019)
- 5th IEEE Uttar Pradesh Section International Conference on Electrical, Electronics and Computer Engineering, (UPCON-2018)
- New Technological Opportunities in Networking and Sciences (NEWTONS-2018)
- International Conference on Emerging Trends in Communication, Computing and Electronics (IC3E-2018)
- Recent Advances in Engineering, Technology and Computational Sciences (RAETCS-2018)
- International Conference on Innovations in Control, Communication and Information Systems (ICICCI-2017)
- 2nd International Conference on Control Computing Communication and Materials (ICCCCM-2016)
- 4th Students' Conference on Engineering and Systems 2015, (SCES-2015)
- International Conference on control computing communication and materials 2013 (ICCCCM 2013)
- Soft Computing for Problem Solving, 2012 (SocProS 2012)

### **Professional Membership/ Affiliation**

- Executive Member of Automatic Control & Dynamic Optimization Society (ACDOS) for two years during 2020-22
- Professional Member of ACDOS
- International Federation of Automatic Control (IFAC) affiliate
- IEEE Professional Member (95002169)
- Professional member of IEEE Control System Society
- Professional Member of Institution of Engineers (IE) India
- Professional Member of International Association of Engineers (IAENG-286138) since 31st May 2021.

### **Curriculum Revision/ Syllabus Modification**

- Curriculum designed for the Subject "Fuzzy Sets, Logic and Systems & Applications (BEE-47) Credit-5 course" w.e.f. academic session 2022-23 Even Semester.

- Curriculum designed for the Subject “Process Dynamics and Control (MEE-255) Credit-4 course” w.e.f. academic session 2022-23 Odd Semester.
- Curriculum designed for the Subject “Digital Control System (BEE-53) credit-4 course” modified code: BEE-53A credit 5 course, w.e.f. academic session 2021-22 Even Semester.
- Curriculum designed for NSS MMMUT Gorakhpur for the session 2021-22
- Modified and revised the syllabus of Subject “Modeling, Simulation and Evolutionary Techniques (MEE-104)” Modified code: MEE-104A w.e.f. academic session-2019-20.
- Modified and revised the syllabus of Subject “Network Analysis and Synthesis (BEE-14)” Modified code: BEE-14A w.e.f. academic session-2019-20.

### **MOOC's Completed**

- Completed NPTEL SWAYAM Course “Nonlinear Adaptive Control” through NPTEL online with elite certification.
- Completed NPTEL SWAYAM Course “Control Engineering” through NPTEL online with elite certification.

### **Subjects Teaching/ Taught in UG**

- Basic Electrical Engineering, Principles of Electrical Engineering, Electrical Circuit Analysis
- Basic System Analysis
- Network Analysis & Synthesis
- Control Systems, Modern Control Systems, Advance Control Systems, Digital Control Systems
- Linear Dynamical Systems
- Fuzzy Sets, Logic and Systems & Applications

### **Subjects Teaching/ Taught in PG**

- Modelling, Simulation and Evolutionary Techniques
- Process Dynamics and Control
- Optimization Techniques
- Digital Control System

### **Simulators Known**

- MATLAB/SIMULINK
- LABVIEW

### **Question Paper Setter of Different Institutions**

- Uttar Pradesh Technical University (UPTU), Lucknow
- Dr. A.P.J. Abdul Kalam Technical University (AKTU), Lucknow
- Sam Higginbottom University of Agriculture, Technology and Sciences (SHUATS), Prayagraj
- Integral University, Lucknow
- Kamala Nehru Institute of Technology (KNIT), Sultanpur
- Uttarakhand Technical University (UTU), Dehradun
- VBS Purvanchal University Jaunpur
- Madan Mohan Malaviya University of Technology (MMMUT), Gorakhpur

### Performance in Competitive Exams

- GATE-2006: Score 434, Percentile 97.86, AIR 835
- GATE-2001: Percentile Score 80.56, AIR 1146
- GATE-2000: Percentile Score 87.67, AIR 808
- GATE-1999: Percentile Score 78.18, AIR 1169
- IES-2005 : Qualified Written Exam & Appeared in Interview
- IES-2006 : Qualified Written Exam & Appeared in Interview

### Professional Training/ Workshop/ Short Term Courses Attended (Less than one week)

1. One day Workshop on **“Empowering through Standards: A comprehensive Sensitization workshop”** on 08<sup>th</sup> December 2023 organized by University Standard Club, MMMUT Gorakhpur and Bureau of Indian Standards, Lucknow under BIS-MMMUT MoU activities series.
2. One day Workshop on **“NIRF: A Comprehensive Analysis”** on 7<sup>th</sup> October 2023 organized by IQAC, MMMUT Gorakhpur.
3. Online Technical Event **“Artificial Intelligence in Robotics”** organized by Department of Electronics and Communication Engineering, Kanpur Institute of Technology, Kanpur in association with IEEE WIE Affinity Group, UP Section, India on September 23, 2021.
4. One day workshop on **“Power Quality Analysis and Energy Management in Smart Sustainable Cities”** organised by MMMUT Gorakhpur in association with fortiss GmbH held on 28 June 2021.
5. Live Workshop on **“Technology Commercialization”** organised by Turnip Innovations and facilitated by Prof. Man Singh, Dean Central University of Gujarat, on 15<sup>th</sup> February 2021.
6. Webinar entitled **“Engineering the Future in the Post-COVID Era”** delivered by Prof. S. K. Ramesh, Professor of Computer and Electrical Engineering, California State University Northridge USA and organised by IEEE student branch MNNIT Allahabad on 14<sup>th</sup> September 2020.
7. Webinar on **“Aatm-Nirbhar Bharat”**, on the topic **“Role of Technological Institutions for Atma-Nirbhar Bharat”** organized by State Project Implementation Unit SPIU-UP, TEQIP-III, 9th July 2020.

8. One-day International Seminar on **“Ek Bharat Shreshtha Bharat: Dekho Apna Desh (Exhibiting the Saga of Indian Art, Heritage and Culture)”** hosted by the department of Humanities and Management Sciences MMMUT, Gorakhpur, 29th June 2020.
9. National Webinar on **“Role of Solar Energy in Clean Global Environment”** on World Environment Day, 05-June-2020.
10. Webinar on **“Relevance of IEEE standards in Teaching, Learning and Industry Collaborations”** on 4th June 2020.
11. Webinar on **“Virtual Labs”** jointly organized by MMMUT, Gorakhpur & Regional Centre REC Banda on 29th May 2020.
12. National webinar on **“COVID-19: From a CyberSecurity Lens”** jointly organized by ITCA and CSE Department, MMMUT, Gorakhpur on 29th May 2020.
13. Webinar on **“e-Learnig Program on Virtual Lab Practices”** organized by Nodal centre of Virtual labs BIT in association with regionalcentre REC Banda affiliated to Center of Virtual Labs IIT Kanpur on 27<sup>th</sup>May 2020.
14. Webinar series on **“Aatm-Nirbhar Bharat”**, on the topic **“Post COVID-19: Role of Science and Technology towards a self-Reliant India”** organized by IEEE India Council on 24th May 2020.
15. Webinar on **“Mathematical modelling and spread of COVID-19”** organized by Mathematics and Scientific Computing Department, MMMUT, Gorakhpur on 16th May 2020.
16. Online workshop on **“Interactive Teaching and Experiential Learning using MATLAB and Simulink”** delivered by Math-Works Expert on 13th May 2020 organized by the State Project Implementation Unit – Uttar Pradesh
17. Webinar on **“Impact of Electrical Vehicles in the post Covid world”** organized by IEEE India Council on 7th May 2020.
18. Webinar on **“Role of Digital Technology in Research and Technology”** organized at MMMUT, Gorakhpur on 5th May 2020.
19. 3 days **Malaviya Research Conclave-2020 (MRC-2020)** organized at MMMUT, Gorakhpur, 22-24 February 2020.
20. One day Training on **“IEEE Xplore Digital Library”** Conducted at MMM. University of Technology, Gorakhpur on 7th December 2019.
21. 2 days International Workshop on **“Energy management in Smart Sustainable Cities”** conducted by Electrical Engineering Department, MMMUT Gorakhpur during 30 November to 01 December 2019.
22. 2019 IEEE Region 10 International Workshop on **“Panel of Conference Organizers (POCO-2019)”** organized at MMMUT, Gorakhpur on 25 September 2019.
23. 3 days **Malaviya Research Conclave-2017 (MRC-2017)** organized at MMMUT, Gorakhpur, 08-11 July 2017.
24. 1-day workshop on **“Role of Local Chapters”** conducted by IIT Kanpur at MMMUT, Gorakhpur on 1st April 2017.
25. 3 days program on **“Communication and Presentation Skills”** organized by Engineering Staff College of India at MMMUT, Gorakhpur, 26-28 March 2017.
26. 3 days **“Pedagogical Training for Effective Teaching in Technical Education”** organized by Engineering Staff College of India at MMMUT, Gorakhpur, 21-23 March 2017.

27. 3 days hands-on workshop on **“Linear Integrated Circuits: A System Approach”** organized in collaboration with Sapience Consulting, under the Texas Instruments India University Program at MMMUT, Gorakhpur, 07-09 June 2016.
28. 1-day workshop on **“Green Energy for Sustainable Development: Role of Educational Institutions”** organized by MMMUT, Gorakhpur on 21st January 2016.
29. 2-days workshop on **“Emerging Trends in Smart Grid and Renewable Energy System (ETSGRES-15)”** organized by Department of Electrical Engineering, MMMUT, Gorakhpur, 08-09 December 2015.
30. 4-days TEQIP-II sponsored workshop on **“Faculty Development for Improved Competencies on Entrepreneurial Motivation Training”** organized at MMMUT, Gorakhpur, 30th October to 3rd November 2015.
31. 2-days **“State Level Faculty Interaction Seminar”** under the aegis of Department of Technical Education, Government of Uttar Pradesh, sponsored by World Bank TEQIP-II, organized at HBTI, Kanpur, 08-09 June 2015.
32. 3-days National Workshop on **“Sustainable, Affordable and Efficient Rural Electrification System”** organized by Department of Electrical Engineering, GBPUAT, Pantnagar (Uttarakhand) in collaboration with REC Ltd. New Delhi, 27th February to 1st March 2015.
33. Sensitization workshop on **“Intellectual Property Rights”** organized by IPR Cell at MNNIT, Allahabad, 06-07 February 2014.
34. National Seminar on **“Management of Change: shifting paradigm in business model”** organized by United Institute of Management, Allahabad 03 May, 2008.
35. National Seminar on **“Advances in Computing and its applications”** organized by United College of Engineering & Research, Allahabad 12-13 April 2008.
36. International Conference on **“Science, Technology & Society: 21st Century perspective”** organized by United College of Engineering & Research, Allahabad 23 November 2006.
37. 3 days’ workshop on **“Emerging Challenges in Power Systems”** under TEQIP at HBTI, Kanpur, 28-30 October 2005.

#### **Professional Training/ Workshop/ Short Term Courses Attended (One week)**

38. One-week online FDP on **“Raspberry PI and its interfacing”** held during 27 February to 1 March 2023, organised by NITTTR Chandigarh
39. One-week STTP on **“Advances in Electric Vehicles and Energy Systems (AEVES-2022)”** held during 19-23 December 2022 by Department of Electrical Engineering, MMMUT Gorakhpur and jointly sponsored by AICTE New Delhi & MMMUT Gorakhpur under AICTE-MMMUT MoU activities series.
40. One-week FDP on **“Recent Advances in Applied Mathematics and Mathematical Tools (RAAMMT-2022)”** held during 14-18 December 2022 by Department of Mathematics and Scientific Computing, MMMUT Gorakhpur and jointly sponsored by AICTE New Delhi & MMMUT Gorakhpur under AICTE-MMMUT MoU activities series.
41. One-week workshop on **“Hands on Training on OPAL-RT (HTORT-2022)”** jointly organised by OPAL-RT Technologies Bangaluru, Karnataka and Electrical Engineering Department, Madan Mohan Malaviya University of Technology Gorakhpur during 27-30 September and 21-23



November 2022.

42. One-week short term course on **“Unpacking E-mobility technologies for India”** from November 20-24, 2021, organised by MNNIT Allahabad, Prayagraj under the scheme for promotion of Academic and Research Collaboration (SPARC) of Ministry of Education, Govt. of India for the project titled, “E-mobility: An Electricity Grid Perspective (P1542)”
43. One-week Online Faculty Development Programme on **“Control System and Sensors Technology”** during 21-25 September 2021, organized by Indian Institute of Information Technology, Nagpur sponsored by ATAL Academy.
44. One-week Online Faculty Development Programme on **“Energy Management and Planning in Smart cities for sustainable Development (EMPSSD-2021)”** during 20-24 September 2021, organized by Department of Electrical Engineering, Rajkiya Engineering College, Sonbhadra, UP sponsored by ATAL Academy.
45. One-week online Faculty Development Program on **“Non-Linear Systems: Modelling and Control”** organised by Department of Electronics and Instrumentation Engineering, NIT Silchar during 1-5 March 2021.
46. Five-day Innovation series on Patent Search and filing conducted by Turnip Innovations on 16-20 February 2021.
47. One-week online Faculty Development Program on **“Control and Automation”** organised by Department of Avionics, Indian Institute of Space Science & Technology, Thiruvananthpuram, Kerala during 15-18 December 2020.
48. One-week Online Faculty Development Programme on **“Emerging Pedagogy in online Teaching Learning”** during 26-30 October 2020, jointly organized by Department of Applied Sciences, Electronics, Electrical Engineering and Computer Science, Rajkiya Engineering College, Sonbhadra, UP.
49. One-week AICTE Training and Learning (ATAL) Academy Online FDP on **“Control Systems & Sensors Technology”** during 21-25, September 2020 at Indian Institute of Information Technology, Nagpur.
50. One-week TEQIP-III sponsored Faculty Development Program on **“The art of Effective Teaching and Learning: ICT Integrated Pedagogy”** organized by the Department of Humanities and Management Science, Madan Mohan Malaviya University of Technology Gorakhpur, Uttar Pradesh, India, held from 14<sup>th</sup> -19<sup>th</sup> September 2020.
51. One-week Online Faculty Development Programme on **“Recent Research Trends in Control, Instrumentation and Allied Engineering: A Multidisciplinary Approach (RRTCIA-2020)”** during 4-8 September 2020, organized by Department of Electronics and Instrumentation Engineering, National Institute of Technology, Silchar, Assam.
52. One-week Online Faculty Development Programme on **“Teaching and Learning of Advance Control Systems”** organized by the Department of Electrical Engineering in association with Teaching Learning Centre, NIT, Warangal, during 10-16 August 2020.
53. One-week Online Training Program on **“ICT Tools for Teaching, Learning and Administration”** organized by the Department of Electronics and Communication JK Institute of Applied physics and Technology University of Allahabad, Prayagraj 04-08 August 2020.
54. One-week Faculty Development Programme (Webinar) sponsored by TEQIP-III on **“Robotics and Control (RoboCon-2020)”** organized by the Electronics and Instrumentation Engineering Department, NIT, Silchar, 15-19 July 2020.

55. One Week TEQIP-III sponsored Short-Term Course on **“Nascent Research Methodology: Challenges and Various Analytical Tools & Techniques”**, Organized by Department of Humanities and Management Science, in collaboration with Sardar Vallabhbhai National Institute of Technology, Surat, Gujarat and Madan Mohan Malaviya University of Technology Gorakhpur, Uttar Pradesh, India, held from 24th -29th June 2020.
56. One-week TEQIP-III sponsored online pedagogical training program on **“Curriculum Design, Delivery and assessment for Outcome based Education”** organized at MMMUT, Gorakhpur during 11-16 May 2020.
57. One-week Faculty Development Programme sponsored by AKTU under TEQIP-III on **“Smart devices and Intelligent Systems (SDIS-2020)”** organized by Electronics Engineering Department, REC, Sonbhadra, 27-31 January 2020.
58. One Week Short Term Course on **“Smart Energy Systems: Operation and Control (SESOC-2019)”** jointly organized by Department of Electrical Engineering MMMUT Gorakhpur and SVNIT Surat held during December 17-22, 2019.
59. One-week Faculty Development Programme endorsed by AICTE/UGC/NBA on **“Selected Topics in Control System Theory-Fundamentals, Advances and Future Directions”** under the aegis of Electronics & ICT Academy, MNIT, Jaipur, 09-13 August 2018.
60. One-week TEQIP workshop on **“Dynamics and Control of Rotorcraft”** organized at IIT, Kanpur, 02-06 February 2018.
61. One-week TEQIP Short Course on **“Introduction to Robotics”** organized at IIT, Kanpur, 04-08 September 2017.
62. One-week TEQIP-II sponsored Short-Term Course on **“Modelling and Simulation of Microelectronics & Communication Devices and Circuits (MSMDC-2016)”** organized by Department of Electronics and Communication Engineering, MMMUT, Gorakhpur, 16-22 December 2016.
63. One-week TEQIP-II sponsored workshop on **“Basic Pedagogy Training: Objective and outcome-based Education System- Transforming Engineering Education to match Global Needs”** organized by EQUATE, New Delhi at MMMUT, Gorakhpur, 12th to 16th June 2015.
64. One-week Short-Term Course on **“Modelling and Control of Power Converters (MACPC-2013)”** organized by Department of Electrical Engineering, MNNIT, Allahabad, 24-28 July 2013.
65. One-week Short-Term Course on **“Advanced Control Systems (ACS-2013)”** organized by Department of Electrical Engineering, MNNIT, Allahabad, 08-12 July 2013.
66. One-week National workshop sponsored by NBHM, DRDO, CSIR, INSA and MNNIT on **“Optimization Techniques & Their Applications (NWOTA-2013)”** organized by Department of Mathematics, MNNIT, Allahabad, 05-11 June 2013.

#### **Professional Training/ Workshop/ Short Term Courses Attended (Two weeks or more)**

67. 15 days Industrial Training at 400 KV substation Motiram Adda Gorakhpur from 26 July to 09 August 2021.
68. Two-week Online Faculty Development Programme on **“ICT Tools for Teaching, learning process and Institutes”** supported by MeitY, and jointly organized by the Electronics and ICT Academy, MNIT Jaipur, NIT Patna and PDPM IITDM Jabalpur, 10-21 August 2020.

69. Two-week Online Faculty Development Programme on “**Advanced Optimization Techniques and Hands-on with MATLAB/SCILAB**” supported by MeitY, and jointly organized by the Electronics and ICT Academy, MNIT Jaipur, NIT Patna and PDPM IIIT DM Jabalpur, 13-24 July 2020.
70. 10-days MHRD/AICTE sponsored summer school on “**Process Instrumentation in Industries**” at UCER, Allahabad, 24 August-04 September 2009.
71. 10 days MHRD/AICTE sponsored summer school on “**Projects in Electrical and Electronics Engineering**” at UCER, Allahabad, 18-29 August 2008.
72. 30 days Vocational Training on “**Short Circuit Analysis and expansion of Power system of TELCO**” at TELCO, Lucknow.

#### Details of Ph.D. Supervision: 02 (Completed) 09 (In progress)

S. No.	Name of Student	Title/Broad Area	Status/Year
1.	Santosh Kumar Suman (Reg. No.-2018038005) Regular Full-Time	Approximation and Control Design of Large-scale Dynamical Systems Final Defense on <b>30.11.2021</b>	Completed November 2021
2.	Brajesh Kumar Singh (Reg. No.-2019038003) Regular Full-Time	Controller Design and Trajectory Planning for Quadrotor UAV System Final Defense on <b>10.09.2023</b>	Completed September 2023
3.	Dhanajay Gupta (Reg. No.-2020038002) Regular Full-Time	Investigations on Adaptive Control Schemes Dynamical Systems Co-Supervisor: Prof. V. K. Giri	Submission Awaited (2020)
<b>In Progress</b>			
1.	Deepak Gupta (Reg. No.-2019038008) Part-Time	Stability Analysis and Control Design for Nonlinear Dynamical Systems	In Progress (2019)
2.	Vikas Patel (Reg. No.-2020038011) Part-Time	Control Strategies for Integrated Solar and Wind Power Plants Supervisor: Prof. V. K. Giri	In Progress (2020)
3.	Padmesh Singh (Reg. No.-2020038007) Part-Time	Control Strategies for Power Systems networks	In Progress (2020)
4.	Vineet Kumar Tiwari (Reg. No.-2020038013) Part-Time	Investigations on Control Schemes for the Improved Performance of Hybrid Electric Vehicle Co-Supervisor: Dr. Shekhar Yadav	In Progress (2020)
5.	Jayant Kumar Sahni (Reg. No.-2020038004) Part-Time	Control Applications to Electrical Systems Supervisor: Dr. Shekhar Yadav	In Progress (2020)
6.	Somendra Bannerji (Reg. No.-202203800_) Part-Time	Control Applications to Electrical Systems Co-Supervisor: Prof. V. K. Giri	In Progress (2022)
7.	Neera Yadav (Reg. No.-202203800_) Part-Time	Control Investigations to Delay Systems Co-Supervisor: Prof. V. K. Giri	In Progress (2022)
8.	Roshan Chitranshi (Reg. No.-202203800_) Part-Time	Control Applications to Electrical Systems Co-Supervisor: Prof. V. K. Giri	In Progress (2022)

**Details of M.Tech. Supervision:33 (Completed)**

<b>S. No.</b>	<b>Name of Student</b>	<b>Title/Broad Area</b>	<b>Status/Year</b>
1.	Ishita Jindal (Reg. No.-2021033202)	Optimized PID Controllers for Ball and Beam System	Completed (June 2023)
2.	Shivam Chaurasia (Reg. No.-2021033206)	Control Law Design for Inverted Pendulum Cart System	Completed (June 2023)
3.	Ankit Kumar Singh (Reg. No.-2020033204)	Fuzzy Logic Controller Design to stabilize a Standard 24V voltage on DC Solar Micro-grid	Completed (July 2022)
4.	JanmejayNagvanshi (Reg. No.-2020033206)	Modelling, Simulation and Comparative analysis of P&O and FLC based MPPT for Solar PV System	Completed (July 2022)
5.	Navneet Kumar Mishra (Reg. No.-2020033207)	Fuzzy Logic based MPPT for PV System and PID Controller based Battery Charging Hybrid System	Completed (July 2022)
6.	Aditya Kumar Dixit (Reg. No.-2019033201)	Modelling and Control of Hybrid Power System incorporating Battery Energy Storage System	Completed (June 2021)
7.	Anjali Rai (Reg. No.-2019033204)	Design and Implementation of Robust Controller for Ball and Beam System	Completed (June 2021)
8.	Himanshu Pathak (Reg. No.-2019033206)	Fuzzy Logic Controller Design for Load Frequency Control of Three- area Power System	Completed (June 2021)
9.	Pooja Rai (Reg. No.-2019033212)	Improved Boiler Automation System for Thermal Power Plant through PLC and SCADA	Completed (June 2021)
10.	Sonia Dwivedi (Reg. No.-2019033214)	Design of PID Controller for AVR System through various Optimization Techniques	Completed (June 2021)
11.	Anupama Gupta (Reg. No.-2018033204)	Controller Design for a 2-DOF Planar Robot using PID and SMC Control Strategy	Completed (2020)
12.	Jyoti Singh (Reg. No.-2018033205)	Speed Control of DC Motor with and without Time Delay	Completed (2020)
13.	Kaushal Mourya (Reg. No.-2018033206)	Comparative Performance Analysis of Various Controllers for A Rotary Inverted Pendulum System	Completed (2020)
14.	Priyanka Shukla (Reg. No.-2018033208)	Modelling and Simulation by using Sliding Mode Control based on Backstepping Technique of a Quadrotor UAV System	Completed (2020)
15.	Shivangi Agarwal (Reg. No.-2018033214)	Modeling and Simulation of a Variable Frequency Transformer	Completed (2020)
16.	Dhananjay Gupta	Optimal and Suboptimal Control design for Magnetic	Completed

	(Reg. No.-2017033205)	Levitation System	(2019)
17.	Girijendra Tripathi (Reg. No.-2017033206)	Balanced Truncation based Model Order Reduction and Controller Design	Completed (2019)
18.	Km. Seema Chaudhary (Reg. No.-2017033211)	An Investigation into Control Strategies for Twin Rotor MIMO Systems	Completed (2019)
19.	Sanjay Kumar (Reg. No.-2017033114)	Performance Analysis of Solar Energy Harnessing System	Completed (2019)
20.	Brajesh Kumar Singh (Reg. No.-2016033204)	Modelling and Control of Magnetic Levitation System: Backstepping Approach	Completed (2018)
21.	Richa (Reg. No.-2016033208)	An investigation into control and Optimization Strategies for Inverted Pendulum System	Completed (2018)
22.	Mohd. Saif (Reg. No.-2016033214)	Modelling, Simulation and Control of a Twin Rotor MIMO System	Completed (2018)
23.	Gaya Prasad (Reg. No.-2016033216)	Adaptive Control Design for a Robotic Manipulator System	Completed (2018)
24.	Ateet Kumar Srivastava (Reg. No.-2015033204)	Model Order Reduction and Controller Design for Continuous time Interval Systems	Completed (2017)
25.	Diwakar Singh (Reg. No.-2015033205)	ECG data Compression using FAN Technique	Completed (2017)
26.	Manoj Kumar Maurya (Reg. No.-2015033209)	Approximation of Large-Scale Systems using Balanced Truncation Technique and its Controller design	Completed (2017)
27.	Shiv Shankar Kumar (Reg. No.-2015033210)	Fractional System Approximation	Completed (2017)
28.	Shashikant Chaudhary (Reg. No.-2015033216)	Approximation to Non-minimal and unstable MIMO System using Hankel-Norm Reduction	Completed (2017)
29.	Deepak Gupta (Reg. No.-2014033202)	An analysis into Model Order Reduction for Linear Large-Scale Dynamical Systems using Balanced Realization Method	Completed (2016)
30.	Manish Kumar Gupta (Reg. No.-2014033204)	Model Reduction of Continuous and Discrete time systems using Differentiation method with Clustering Techniques	Completed (2016)
31.	Nikku Shahi (Reg. No.-2014033207)	Model Order Reduction using Krylov Subspace based Technique.	Completed (2016)

32.	Noor Ahmad (Reg. No.-2014033109)	Zero voltage zero current switching Full Bridge Converter with transformer isolation and Current Doubler Rectifier	Completed (2016)
33.	Shweta Singh (Reg. No.-2014033213)	Fuzzy Logic based MPPT scheme for SEPIC Converter in Photovoltaic System	Completed (2016)

**Details of B.Tech. Project Guided: 24 (Completed), 05 (in progress)**

S. No.	Name of Student	Title of the Project	Status/Year
1.	Shivansh Pandey, Harsh Yadav, Shivangi Tiwari and Suyashi Awasthi	Smart Walking Stick: A magical Eye	In Progress (2023-24)
2.	Yashi Yadav, Anupriya Kushwaha, Anupama Singh and Yatharth Singh	Smart Solar powered Lake Cleaner	In Progress (2023-24)
3.	Mahesh Chaube, Shivam Rai, Pragya Gupta and Anant Kumar Gautam	Smart Health Monitoring device	In Progress (2023-24)
4.	Anup Kumar Yadav, Anurag Ranjan Pandey Vishal Kumar Singh and Rajkamal Rawat	Intelligent and Automatic Voltage Regulator	In Progress (2023-24)
5.	Navneet Patel, Akshat Sharma, Avinash Kumar Chaurasia Shruti Kumar	Smart Shopping Trolley	In Progress (2023-24)
6.	Km. Sristi Verma, Surbhi Srivastava, Tanya Shukla Jeevesh Narayan Rai and Durgesh Singh	Power Grid Synchronization Failure Detection Device	Completed (2023)
7.	Ratika Puri, Nitish Kumar, Shikhar Srivastava Sweta Sehgal and Ranjeet Kumar Verma	Adaptive Traffic Signal Control System	Completed (2023)
8.	Ankita Yadav, Animesh Srivastava, Abhishek Kumar Gupta Ashutosh Gupta and Faheem Ahmed	Design of Ultrasonic Blind Walking Stick (Third Eye)	Completed (2023)
9.	Harshwardhan Upadhyay, Ajay Raj Sharma, Arpit Agrahari and Aditya Kumar Singh	Charge while Driving Selected By CSTUP with Financial assistance of Rs. 20,000/-	Completed (2023)



	Harshit Agrahari		
10.	DevanshKatiyar, Devyani Singh, Dhruv Agrawal, Priyam Srivastav and Swati Singh	Advance Driver Assistance System (ADAS)	Completed (2022)
11.	Anshika Srivastava, Anushka Gautam, Apoorva Bharti and Devanshi Saxena	Design and Simulation of BLDC Motor based Unmanned Ariel Vehicle	Completed (2022)
12.	Kushagra Shukla, Piyush Rai, Namrata Srivastava, Farida Khatoon and Amrita Rai	IoT based Industry Protection using Arduino	Completed (2022)
13.	Shashank Dwivedi, Rajkumar, Ritesh Singh, Mohd. Danish and Shikhar Swaroop	Real-timeVehicleTracking with Biometric Security System	Completed (2021)
14.	Harsh Srivastava, Anusha, Harshika Chandra and Chandramani	Accident Alert, Detection and Anti-theft System using Arduino	Completed (2021)
15.	Santosh Jaiswal, Rohit Kumar Verma, Sanchit Singh and ShivamChaurasia	Intelligent Health monitoring System based on IoT	Completed (2021)
16.	Harsh Upadhyay et. al.	GSM based Power Theft Detection	Completed (2021)
17.	Ankur Prajapati, Anshul Verma, Kumar Abhinav and Abhisek Chand Upadhyay	RFID based Petrol Pump Automation	Completed (2021)
18.	Jyotika Agrawal, Avinash, Mukund Kumar Dubey, Nidhi Mishra and Govind Chaudhary	Energy Efficient Air Pollution Monitoring and Control System	Completed (2020)
19.	Akansha Barnwal, Akash Kumar Maurya, Aman Chaurasia, Praveen Kumar Gupta and Vandana Sharma	Real-time Bilateral visitor Counter	Completed (2020)
20.	Abhisek Kumar, Ruchika Singh, Sandeep Kumar and Shantani Sinha	Line Follower differential wheeled Robot using Arduino	Completed (2019)
21.	Ajit Kumar Tiwari, Aman Yadav,	Automatic Railway crossing Gate Control	Completed (2019)

	Ramendra Singh, Shiv Shankar and Saurabh Joshi		
22.	Jay Singh Chauhan, Kauts Singh Patel, Ketan Srivastava, Devesh Kumar and Santosh Pandey	Android Controlled Car	Completed (2019)
23.	Bhupendra Nath Pandey, Somya Pant, Tushar Srivastava and Vikas Kumar	GSM based wireless LED Display System	Completed (2018)
24.	Shivangi Srivastava, Surabhi Sharma, Mohammad Mehtab and Sandeep Kumar	GSM based Automatic Energy Meter reading with Load Control and Instant Billing	Completed (2018)
25.	Diksha Sharma, Snigdha Singh, Purish Tripathi and Nitish Singh	Remote Alignment of 3D Dish Positioning System by Android Application	Completed (2017)
26.	Pramod Kumar Bharti, Hariom Tiwari, Amit Kumar yadav and Akhilesh Yadav	Cell Phone Controlled Robotic Vehicle	Completed (2017)
27.	Shalvi Kanchan, Iram Parvaz, Akansha Manwal and Jyoti Singh	GSM based Irrigation Control System	Completed (2017)
28.	Pankaj Kumar, Vikas Ranjan, Pradeep Kumar Bharti and Manish Lal Srivastava	Speed Control of BLDC Motor	Completed (2016)
29.	Vishakha, Vishesha, Puja and Ajit Yadav	Harvesting of Solar Energy using Tracker System	Completed (2016)

#### References:

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1.	Prof. Dinesh Chandra	MNNIT Allahabad	Professor	dinuchandra@rediffmail. com	7408702888
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**Declaration**

All the above data and facts are true to the best of my knowledge.

Date 28-02-2024.

Place: Gorakhpur

*(Awadhesh Kumar)*