Dr. Rakesh Kr. Kumawat

Assistant Professor, Department of Applied Science, I K Gujral Punjab Technical University, Punjab.

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DOB: December 1st, 1991

om ajnana-timirandhasya jnananjana-salakaya
cakshur unmilitam yena tasmai sri-gurave namah

Research Profile

Journal Paper	8
Conference Paper	17
Book and Book Chapter	2
Google Scholar Citations	
Citations	57
h-index	
i10-index	1
Research Gate Score	1.98

Experiences

Nov. 2020 to July 2021	**Assistant Professor,** Electrical Engineering Department, I K Gujral Punjab Technical University, Jalandhar, Punjab
Nov. 2019 to 30 August 2020	**Senior Research Fellow,** Electrical Engineering Department, Delhi Technological University, Delhi, 110042, India.
Title of Project	**Development and deployment of motor controller for low and medium power Electric Vehicles**
Sponsoring Agency	**Ministry of Electronics and Information Technology (Meity)**
Nov. 2014 to Oct. 2019	**Teaching Assistantship,** Department of Electrical Engineering, Rajasthan Technical University, Kota, 324010, Rajasthan, India.
Sept. 2014 to Nov. 2014	**Assistant Professor**, Electrical Engineering Department, Maharshi Arvind College of Engineering and Technology, Kota, 325003, Rajasthan, India.
Sept. 2012 to Aug. 2014	**Teaching Assistantship,** Electrical Engineering Department, Rajasthan Technical University, Kota, 324010, Rajasthan, India.
July 2011 to Aug. 2012	**Lecturer**, Electrical Engineering Department, **Bhartiya Institute of Engineering & Technology, Sikar**, 332001, Rajasthan, India.

Professional Qualification

Pursuing: Post Graduate Diploma in Guidance and Counselling (PGDGC), **Vardhman Mahaveer Open University, Kota** (Formerly - Kota Open University, Kota) Rawatbhata Road, KOTA, India.

2014–2020 **Ph. D. (Electrical Engineering, *Power Electronics and Electrical Drive*),** Department of Electrical Engineering, Rajasthan Technical University, Kota, Rajasthan, India.

2012–2014 **Masters of Technology (*Power System Engineering*),** University College of Engineering, Rajasthan Technical University, Kota, Rajasthan, India
First Division. (Honors)

2007–2011 **Bachelor of Technology (*Electrical Engineering*),** School of Engineering and Technology, Jaipur National University, Jaipur, Rajasthan, India. (First Division)

2006-2007 **Senior Secondary,** Bhartiya Sr. Sec School, Reengus, Sikar, Rajasthan Board of Secondary Education, Ajmer (Second Division)

2004-2005 **Secondary Education,** Gyanodaya V. Sec. School, Reengus, Sikar, Rajasthan Board of Secondary Education, Ajmer (Frist Division)

Ph. D Thesis

Title Analysis of Reduced Switch Count Multilevel Inverter for Renewable Energy System

Supervisor Dr. D. K. Palwalia, Professor, Department of Electrical Engineering, Rajasthan Technical University, Kota, Rajasthan, India

Description

- It Include modeling and analysis of multilevel inverter topology to analyze performance parameters.
- Analysis of Cascaded H-bridge multilevel inverter and compare the performance in terms of number of levels, total harmonic distortion, modulation strategy etc.
- Analysis of selective harmonic elimination, mathematical formulation of selective harmonic elimination equation and solve it with modern optimization technique.
- Topological investigation of reduced switch count MLI and their application in renewable energy resources.
- Modeling, analysis and develop laboratory prototype of Reduced switch topology to analyze performance parameters.
- Application of Z-Source-networks based power converters to MLI.
- Model and develop Quasi Z-source (qZSI) based reduced switch count multilevel inverter (RSC-MLI).

RSC-MLI based active power filter topologies can be explored. The performance of qZS-RSC MLI can be enhanced by implementing a modified modulation scheme. Different topological strategies like Tapped-Inductor, Gamma-ZSI, Y-impedance etc. for qZSI and ZSI and their application to RES can be explored.

Master Thesis

Title	Modeling, Analysis and Implementation of Reduced Switch Count Multilevel Inverter Topology
Supervisor	Dr. D. K. Palwalia, Associate Professor, Department of Electrical Engineering, Rajasthan Technical University, Kota, Rajasthan, India
Description	In this thesis efforts have been made to simulate conventional and proposed multilevel inverters and a relative study of carrier wave modulation techniques is presented on the basis of THD under various modulating indices. Renewed 7-level and 5-level multilevel inverter topology are introduced incorporating the least number of unidirectional switches and gate trigger circuitry, thereby ensuring the minimum switching losses, reducing size and installation cost. The new topology is well suited for drives and renewable energy applications. Software packages MATLAB/SIMULINK is used to study and simulate inverter waveforms in off time and in real time, respectively. Hardware interface device DS1103 dSPACE is used to interface the hardware model with the software.

Trainings

2009: June	30 days **Summer Training** at **220KV G.S.S. Reengus,** Sikar, Rajasthan during June 01-30, 2009.
2010: June	45 days **Summer Training** at **Suratgarh Super Thermal Power Station, Suratgarh,** Ganganagar, Rajasthan, India during June 14- July 28, 2010.
2010: October	Project Training and Develop a project "**Computerized Equipment**" at Contrivance IT solution Pvt. Ltd., Jaipur, Rajasthan, India (302017) during October 2010.
2011: March	Project Training and Develop a project "**Multiplex Energy Distribution Management System**" at Contrivance IT solution Pvt. Ltd., Jaipur, Rajasthan, India (302017) during March 2011.
2020: May	Online Training Program on "**Embedded Skill Development Program**" Under Texas Instrument India University Program in association with EdGate technologies Pvt Ltd Bangalore during 15th to 17th May, 2020.
2020: May	Online Training Program on "**Advanced Embedded System Design using Tiva C Series Microcontroller**" Under Texas Instrument India University Program in association with EdGate technologies Pvt Ltd Bangalore during 15th to 24th May, 2020.

Book Chapter

2019: August — Kuldeep Jayaswal, **Rakesh K. Kumawat**, D K Palwalia, "MPPT Construction", ISBN: 978-81-9365-600-6, Edition: 2020.

Books

2020: November — **R. K. Kumawat**, D K Palwalia, "Multilevel Inverter for Renewable Energy Application", ISBN: 978-620-3-02558-3, Edition: Nov, 2020,

Publications

[1] **R. K. Kumawat**, D. K. Palwalia "Reduced Switch Count Multilevel Inverter: A Comprehensive Analysis" in Journal of Power Technology, **accepted for publication on December 3,2018.**

[2] **R. K. Kumawat** & D. K. Palwalia, "A Comprehensive Analysis of Reduced Switch Count Multilevel Inverter", *Australian Journal of Electrical and Electronics Engineering*, vol.17 Issue 1, pp. 13-27, November 2019.

[3] Amit Kumar Sharma, **Rakesh Kumar Kumawat** & Ashok Kumar Sharma, "Simulation of AC to AC Converter Fed Induction Motor for Fault Detection and Reduced Harmonic Content", International Journal of Electrical and Electronics Engineering Research, Vol. 4, Issue 5, pp 53-62, Oct 2014.

[4] **Rakesh Kumar Kumawat**, Seema Agrawal, Seemant Chourasiya, D. K. Palwalia, "A Comparative Study of Power Inverter Topology and Control Structures for Renewable Energy Recourses", *International Advanced Research Journal in Science, Engineering and Technology*, Vol. 2, Special Issue 1, May 2015, pp 350-354.

[5] **R. K. Kumawat**, Seemant Chourasiya, Seema Agrawal, D. K. Palwalia, "Self-excited induction generator: A review", *International Advanced Research Journal in Science, Engineering and Technology,* Vol. 2, Special Issue 1, May 2015, pp 37-42.

[6] Seema Agarwal, Seemant Chourasiya, **Rakesh Kumar Kumawat**, Dr. D. K. Palwalia, "Performance Analysis of Standalone Hybrid PVSOFC- BATTERY Generation System", *International Advanced Research Journal in Science, Engineering and Technology*, Vol. 2, Special Issue 1, May 2015, pp 49-53, ISSN (Online) 2393-8021, ISSN (Print) 2394-1588.

[7] **R. K. Kumawat** and D. K. Palwalia, " Optimization Techniques Based Selective Harmonic Elimination for Multilevel Inverter with Reduced Number of Switches," *International Journal of Scientific Engineering and Technology*, Volume No. 6, Special Issue 3. PP: 215-220, Dec. 2017.

[8] **Rakesh Kumar Kumawat**, "Analysis for an Efficient Wireless Power Transmission", International Journal of Scientific & Engineering Research, Volume 3, ISSUE 9, ISSN 2229-5518, September-2012.

[9] **R. K. Kumawat** and D. K. Palwalia, "Half bridge module asymmetric multilevel inverter based on novel PWM control strategy," IEEE *6th International Conference on Computer Applications in Electrical Engineering-Recent Advances (CERA)*, Roorkee, 2017, pp. 303-307.

[10] **R. K. Kumawat** and D. K. Palwalia, "A novel PWM control for asymmetric multilevel inverter based on half bridge module," IEEE *7th Power India International Conference (PIICON)*, Bikaner, 2016, pp. 1-5.

[11] G. Vijay, **R. K. Kumawat**, and D. K. Palwalia, "Source Conditioning of AC-DC Cuk Converter Using PFC Control Technique", *Second International Conference on Smart Systems and Inventive Technology (ICSSIT 2019),* Tamil Nadu, India, 2019, pp. 1207-1211.

[12] Annu Govind, Vijay Kumar Tayal, Prakash Kumar and **R. K. Kumawat**, "Modernistic Synchronization Technique during Adverse Grid Conditions using Shunt Active Power Filter," *IEEE 4th International Conference on Recent Developments in Control, Automation & Power Engineering (RDCAPE)*, Noida, India, pp. 304-308, 7-8 Oct. 2021.

[13] **R. K. Kumawat** and D. K. Palwalia, " Optimization Techniques Based Selective Harmonic Elimination for Multilevel Inverter with Reduced Number of Switches," 2nd International Conference on "Advances in Power Generation from Renewable Energy Sources" APGRES 2017, Banswara, India, Volume No. 6, Special Issue 3. PP: 215-220, Dec. 2017.

[14] **R. K. Kumawat**, Seema Agrawal, Seemant Chourasiya, D.K. Palwalia, "Modeling & Simulation of PV Array with Single-Phase Reduced Switch Count Five-Level PWM Inverter for Renewable Energy Application" International conference on "Advances in power generation from renewable energy sources" (APGRES2015), June 15-16 2015, PP—162-172.

[15] **R. K. Kumawat**, Seemant Chourasiya, Khushboo Gupta, Seema Agarwal, D. K. Palwalia, "A Review: Multilevel Inverter Topologies", 4th International Conference on Advanced Trend in Engineering, Technology and Research, pp-204-208, ISBN: 978-81-930823-0-0, June-2015.

[16] Khusboo Gupta, Seemant Chourasiya, **R. K. Kumawat**, Seema Agarwal, Dr. D. K. Palwalia, "A Review: Modulation Technique for Neutral Point Clamped Inverter", 4th International Conference on "Advanced Trend in Engineering, Technology and Research", pp-213-217, ISBN: 978-81-930823-0-0, June-2015.

[17] **Rakesh Kumar Kumawat**, Seema Agrawal, Seemant Chourasiya, D. K. Palwalia, "A Comparative Study of Power Inverter Topology and Control Structures for Renewable Energy Recourses", *National Conference on Renewable Energy and Environment*, pp 350-354, May 2015.

[18] **R. K. Kumawat**, Seemant Chourasiya, Seema Agrawal, D. K. Palwalia, "Self-excited induction generator: A review", *National Conference on Renewable Energy and Environment,* pp 37-42, May 2015.

[19] Seema Agarwal, Seemant Chourasiya, **Rakesh Kumar Kumawat**, Dr. D. K. Palwalia, "Performance Analysis of Standalone Hybrid PVSOFC- BATTERY Generation System", *National Conference on Renewable Energy and Environment*, pp 49-53, May 2015.

[20] **R. K. Kumawat**, D. K. Palwalia, Annu Govind, "Harmonic Elimination in Multilevel Inverter using Soft Computing Technique: A Comparison" Published in conference proceeding of International Conference on Latest Trends in Civil, Mechanical and Electrical Engineering, pp.60, APRIL 12-13, 2021.

[21] Annu Govind, Vijay Kumar Tayal, Prakash Kumar and **R. K. Kumawat**, "Comparative Analysis of Current Controlling Techniques for Shunt Active Power Filter for Power Quality Enhancement", Published in conference proceeding of International Conference on Latest Trends in Civil, Mechanical and Electrical Engineering, pp.61, APRIL 12-13, 2021.

[22] Bharat Gothania and **R K Kumawat**, "A New Approach to Control of Induction Motor Drive", Published in conference proceeding of Recent Innovations in Engineering & Technology for Sustainable Living, Career Point University, Kota, India, pp. 160, 08-09 Sep, 2021. ISSN: 2583-1895

[23] Suwarna Shete, Pranjal Jog, **R. K. Kumawat**, D K Palwalia "Battery Management System for SOC Estimation of Lithium-Ion Battery in Electric Vehicle: A Review", 6th IEEE International Conference on Recent Advances and Innovations in Engineering (ICRAIE), Malaysia Section, pp. 1-4, 1-3 December, 2021.

[24] Pranjal Jog, Suwarna Shete, **R. K. Kumawat**, D K Palwalia "Electric Vehicle Charging Station Infrastructure: A Review", *6th IEEE International Conference on Recent Advances and Innovations in Engineering (ICRAIE),* Malaysia Section, pp. 1-7, 1-3 December, 2021.

[25] Annu Govind, Vijay Kumar Toyal, Prakash Kumar and **R. K. Kumawat**, D K Palwalia " Phase Synchronization Control Techniques Under Adverse Grid Conditions Using Shunt Active Power Filter", *6th IEEE International Conference on Recent Advances and Innovations in Engineering (ICRAIE),* Malaysia Section, pp. 1-5, 1-3 December, 2021.

Communicated Publications

1. **R. K. Kumawat**, D. K. Palwalia, "Quasi-Z-Source Based Reduced Switch Count Multilevel inverter for Photovoltaic system", submitted to *International Journal of Ambient Energy*, Taylor Francis *Journal,* submitted on June 05, 2019, **Minor Revision Submitted on 9 August 2021**.
2. **R. K. Kumawat**, D. K. Palwalia, "Quasi-Z-Source Based Reduced Switch Count Multilevel inverter for Photovoltaic system", submitted to *Journal of Control, Automation and Electrical System"* Inderscience Journal, Submitted on August 15, 2020.

Expert Lectures

2014: November — Delivered expert lecture on "Present Scenario of MATLAB & It's Application (PSMIA-2014) " on November 9th, 2014 in one day workshop organized by the Department of Electrical Engineering held at Engineer's Point, Kota, India.

2017: March — Delivered expert lecture on "Present Scenario of MATLAB & It's Application (PSMIA-2017) " on March 29th, 2017 in one day workshop organized by the Department of Electrical Engineering held at Engineer's Point, Kota, India.

Workshop and STTP

2013: 1-Week — Short term training program On, " Power Electronic, Drive & MATLAB Applications (PEDMA-2013)", at Rajasthan Technical University, Kota, during March 18-22, 2013.

2013: 1-Day — One Day Workshop On, " Higher Order Sliding Mode Control (IWHOSMC-2013)", at Rajasthan Technical University, Kota, during January 19, 2013.

2014: 2-Days — Two Days National Workshop On, " Advancement in Image Processing using MATLAB (AAYAM-2014)", at Maharishi Arvind College of Engineering and Technology, Kota, during November 07-08, 2014.

2016: 1-Week — Short term training program On, "Advance Trends in Reliability Solution for Engineering Application (ATRSEA-2016)" at Rajasthan Technical University, Kota, during December 17-21, 2016.

2016: 1-Day — One Day Workshop On, " Startup India for Young Entrepreneurs (SIYE-2016) at Rajasthan Technical University, Kota, during March 18, 2016.

2016: 3-Days — Attend and Present paper in IEEE 7th power India International Conference (PIICON-2016), at Government Engineering College, Bikaner during November 25-27, 2016.

2017: 1-Day — One Day Workshop On, " Power System Laboratory (PSL-2017) at Rajasthan Technical University, Kota, during November 14, 2017.

2017: 3-Days — Three Days Skill Development Program On, "Thermal Power Plant Kota Familiarization (TPPKF-2017)", at Rajasthan Technical University, Kota, during January 11-13, 2017.

2017: 1-Day — One Day Workshop On, " How to write and Publish Scientific Articles and Manuscript", at Rajasthan Technical University, Kota, during April 20, 2017.

2017: 1-Day — One Day Workshop On, " Incubator Eco-System for Start-ups", at Rajasthan Technical University, Kota, Rajasthan, during February 25, 2017.

2017: 2-Days — Two Days International Conference and Expo on "Advanced in Power Generation from Renewable Energy Sources (APGRES-2017)", at Government Engineering College, Banswara, Rajasthan, during December 22-23, 2017.

2017: 1-Day — One Day training program On, "Real Time Simulator for Power Electronics", at Rajasthan Technical University, Kota, during May 09, 2017.

2017: 3-Days — Attend and Present paper in IEEE 6th IEEE International Conference, on "Computer Application in Electrical Engineering Recent Advances" at Indian Institute of Technology, Roorkee, India during October 05-07, 2017.

2016: 1-Week — Short term training program On, "Embedded System Practices using ICT" at Rajasthan Technical University, Kota, during May 22-26, 2017.

2017: 2-Day — Two Days Workshop On, "Intellectual Property Rights (IPR) and Indian Patent System", at Rajasthan Technical University, Kota, during September 28-29, 2017.

2018: 2-Day — Short term training program On, "Digital Control", at Rajasthan Technical University, Kota, during April 23-24, 2018.

2020: May — One Day online module on, “Conference Skill for Researchers” at Researchers Academy presented by Taraka Dale on May 18, 2020.

2020: May — Professional development Course on "SAK5-Fundamental of Electrotechnology " at IDC technologies on 18th May 2020.

2020: May — Attend International Webinar on “Enhancing the Upbring of Learning in Technical Education with Digital Platform for Conductive Outcome” Organized by Government Polytechnic College, Jhalawar, India on May 24, 2020.

2020: June — Attend International Webinar on “Environment and Sustainable Development” Organized by Government Polytechnic College, Jhalawar, India on June 05,2020.

2020: June — Online faculty development Program on "Theory and Simulation in Robotics ", organized by Department of Electrical Engineering, NIT Patna under Electronics and IT Academy held from 1st to 07th June 2020.

2020: June — Attend Webinar on “Role of PLC Scada in Industrial Automation & Future Aspects” Organized by Electrical Engineering Department, Modi Institute of Technology, Kota India in collaboration with SIAT and Reaktech Scientronix System, Kota on June 14,2020.

2020: June — Attend national Webinar on “Phasing and Unlock: Post Covid 19, Precaution and Measure to be taken” Organized by Civil Engineering Department, JIET, Jodhpur, India on June 05,2020 under Unnat Bharat Abhiyan.

2020: June — Online Training Program on "Machine Learning using Python- Beginner’s Level", organized by Computer Science Engineering Department, JIS College of Engineering, West Bengal, India held from 08th to 24th June 2020.

2020: June — Attend National Webinar on “Live Launch of Artificial Intelligence and Data Science” Organized by Modi Institute of Technology, Kota India on June 30 ,2020.

2020: July — Online faculty development Program on "Power Quality and Reactive Power Management", organized by Electrical Engineering Department, Delhi Technological University, Delhi, India during 06th to 10th July 2020.

2020: August — Attend Online National Seminar on “Recent Trends in Solar Power” organized by Raj Kumar Goel Institute of Technology, Ghaziabad, India with Bhartiya Skill Development University, Jaipur, India on 4th August 2020.

2020: September — Online faculty development Program on "Renewable Integration, Challenges & Opportunities", organized by Electrical Engineering Department, Vedant College of Engineering and Technology, Kota, India during 01st to 05th September 2020.

2020: September — Online webinar on "High Impact Online Lecturer", organized by Govt. polytechnic College, Barmer, India on 15th September 2020.

2020: October — Online faculty development Program on "Voltage and Frequency Control of Three Phase Induction Generator in Distributed Generation", organized by Electrical Engineering Department, Govt. Engineering College, Valsad, India on October 1, 2020.

2020: November — One Day Webinar on "Design and Implementation on Digital Control Scheme for Power Electronics Interface of Solar PV System" Organized by Rajasthan Technical University, Kota Sponsored by TEQIP-III on November 26, 2020.

2021: February — Online faculty development Program on "Energy Engineering", organized by ATAL Academy and Rajasthan Technical University, Kota on February 5 to 9, 2021.

2021: February — Online faculty development Program on "Wearable Devices", organized by ATAL Academy and Anna University on February 15 to 19, 2021.

2021: February — Online faculty development Program on "Energy Storage", organized by ATAL Academy and MNIT, Jaipur on February 22 to 26, 2021.

2021: February — Faculty Development Program on "Renewable Energy Technology" Organized by Rajasthan Technical University, Kota and B K BIET Pilani Sponsored by TEQIP-III on February 26 to March 02, 2021.

2021: February — Online faculty Development Program on "Advanced Trends in Electrical Engineering" Organized by Rajasthan Technical University, Kota and Arya College of Engineering, Jaipur Sponsored by TEQIP-III on February 24 to 28, 2021.

2021: March — Online faculty development Program on "Visual Communication", organized by ATAL Academy and S R Engineering College on March 1 to 5, 2021.

2021: March — Online faculty development Program on "Internet of Things (IoT)", organized by ATAL Academy and Government College of Engineering, Dharmapuri on March 15 to 19, 2021.

2021: June — Online faculty development Program on " Current Trends of Power Electronics Applications in Electric Vehicles", organized by ATAL Academy and Government Engineering College Valsad on June 07 to 11, 2021.

Professional Membership

1. Institute for Engineering Research and Publications (IFERP)
   Member Ship Id: PM56817942

2. International Association of Engineers (IAENG),
   Member Ship Id: 270586

3. Institute of Research Engineers and Doctors (IRED)
   Member Ship Id: SNM2020102466

Reviewer of the Journals

IEEE Access	Manus. No: Access-2019-08795
IEEE Access	Manus. No: Access-2019-01460
Elsevier	Manus. No: REF-D-19-00108
Taylor and Francis	Manus. No: TAUT-2019-0355
Taylor and Francis	Manus. No: TAUT-2020-0285
Taylor and Francis	Manus. No: TAUT-2021-0012

Activities and Achievements

2006: February	Award of "Rajya Puraskar" from **Governor of Rajasthan** for service of mankind in February 2006.
2010: October	Co-Ordinator in "Techno Quiz-2010" at CompuCom Institute of IT and Management, Jaipur During October 3, 2010.
August 2011-July 2012	In-charge of admission cell and chief warden at Bhartiya institute of Engineering and Technology, Sikar
2012 March	GATE 2012 exam qualified
2013: 1-Week	Volunteer in Short term training programme On, " Power Electronic, Drive & MATLAB Applications (PEDMA-2013)", at Rajasthan Technical University, Kota, during March 18-22, 2013.
2014: November	Co-Secretory in Two Days National Workshop on " Advancement in Image Processing using MATLAB (AAYAM-2014)", at Maharishi Arvind College of Engineering and Technology, Kota, during November 07-08, 2014.
2014: April	Co-Ordinator in "Anukriti-2014" for Stunt Mania at University College of Engineering, Rajasthan Technical University, Kota, during April 21, 2014.
2018: March	Co-Ordinator in "Thar-2018" for Racing Mania at Rajasthan Technical University, Kota, during March 09-11, 2018.
2018: September	Volunteer in Two Days Workshop On, "Intellectual Property Rights (IPR) and Indian Patent System", at Rajasthan Technical University, Kota, during September 28-29, 2017.
2019: August	Participated in “DST & Texas Instruments India Innovation Challenge Design Contest 2019” powered by AICTE and anchored by NSRCEL@IIMB.
2019: August	Active member and work as “public Relation Manager” at Inspire club, Rajasthan Technical University, Kota, India
2021: April	Best Paper Award for Research Paper at International Conference on Latest Trends in Civil, Mechanical and Electrical Engineering, APRIL 12-13, 2021

- Harmonic Elimination in Multilevel Inverter using Soft Computing Technique: A Comparison
- Comparative Analysis of Current Controlling Techniques for Shunt Active Power Filter for Power Quality Enhancement

Technical Skill

- Matlab, Basic Embedded System, IAR EW, Microsoft Visio, Coral Draw
- Knowledge of System Hardware Design
- Working experience with Texas and ST microelectronics Controller

References

1. **Prof. D. K. Palwalia (Professor)**
   Department of Electrical Engineering,
   Rajasthan Technical university, Kota
   Contact: +91-9462965720
   Email: dkpalwalia@rtu.ac.in

2. **Dr. Gagandeep Kaur (Head & Associate Professor)**
   Department of Electrical Engineering,
   I K Gujral Punjab Technical University, Punjab
   Contact: +91-9417129985
   Email: gaganee@ptu.ac.in

3. **Duli Chand Meena (**Associate Professor**)**
   Department of Electrical Engineering,
   Delhi Technological University, Delhi
   Contact: +91-9868584955
   Email: dcmeena@dce.c.in

4. **Dr. Vivek Shrivastava (**Associate Professor**)**
   Department of Electrical Engineering,
   National Institute of Technology, Delhi
   Contact: +91-8851061034
   Email: shvivek@nitdelhi.ac.in

The above statements are true to the best of my knowledge and belief.

Date: February 04, 2022
Place: Kota

(Dr. R. K. Kumawat)