

Dr. SAURABH MANI TRIPATHI

Assistant Professor

Department of Electrical Engineering
Kamla Nehru Institute of Technology
(An Autonomous Government Institute under AKTU Lucknow)
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ACADEMIC PROFILE

I. Areas of Current Interest

Real-time Simulation | Controller–Hardware–in–the–Loop (C–HIL) Testing
Renewable Energy Systems | PMSM Drives

II. Qualifications

- Ph. D.** (Electrical Engineering) [2016]
Dr. A.P.J. Abdul Kalam Technical University, Lucknow
(Formerly, Uttar Pradesh Technical University)
Thesis: “Investigations on grid-integrated PMSG-based wind energy conversion system”
- M. Tech.** (Power Electronics & Drives) — First Division [2009]
M.M.M. Engineering College, Gorakhpur
Uttar Pradesh Technical University, Lucknow
Thesis: “Determination of regulator parameters by D-partition technique and analysis of transient response of modified CSI-fed induction motor drive”
- B. Tech.** (Electrical & Electronics Engineering) — First Division [2006]
G.L.A. Institute of Technology & Management, Mathura
Uttar Pradesh Technical University, Lucknow

III. Academic Experiences

Assistant Professor

Department of Electrical Engineering
Kamla Nehru Institute of Technology, Sultanpur
Aug. 10, 2009 to **Present**

Lecturer

Department of Electrical & Electronics Engineering
G.L.A. Institute of Technology & Management, Mathura
Dec. 18, 2008 to June 06, 2009

Guest Lecturer

Department of Electrical Engineering
M.M.M. Engineering College, Gorakhpur
Jan. 22, 2008 to Dec. 17, 2008

IV. Research Experiences

Assistant Professor

Department of Electrical Engineering
Kamla Nehru Institute of Technology, Sultanpur
Aug. 10, 2009 to *Present*

Summer Faculty Research Fellow

Department of Electrical Engineering
Indian Institute of Technology (IIT), Delhi
June 04, 2018 to July 13, 2018

V. Additional Roles / Responsibilities at Institute / Department Level (Charge at present)

- **Founder / Coordinator** : Power & Energy Research Centre (PERC)
- **Dy. Coordinator** : TEQIP–III
- **Member** : Board of Studies (Electrical Engineering)
- **Officer In-charge** : Simulation Lab.
- **Officer In-charge** : Seminar

VI. Professional Memberships

- **Life Member** : The Indian Society for Technical Education (ISTE)
- **Member** : The Institution of Electrical and Electronics Engineers (IEEE)
- **Member** : The Institution of Engineers, India (IEI)
- **Member** : The International Association of Engineers (IAENG)
- **Member** : The IAENG Society of Electrical Engineering (ISEE)
- **Member** : The World Academy of Science, Engineering and Technology (WASET)

VII. Awards / Scholarships / Recognitions

- *'HIL Specialist Certification'* from Typhoon HIL, Inc. Switzerland. [2021]
- *'Best Teachers Award 2020'* from AKTU, Lucknow, India. [2020]
- *'HIL Specialist Certification'* from Typhoon HIL, Inc. Switzerland. [2019]
- *'Young Engineers Award 2018-19'* from Institution of Engineers (IE), India. [2018]
- *'Certificate of Outstanding Contribution in Reviewing'* from EPSR, Elsevier. [2017]
- Recognition in *'Marquis Who's Who in the World'*. [2011]
- *'Author of the Month'* in *The Librarian Journal* of Laxmi Publications, India. [2009]
- 'Merit Recognition Certificate' in *National IT Aptitude Test-2007*. [2007]
- *'GATE Scholarship'* during M. Tech. course at MMMEC, Gorakhpur, India. [2006]
- All India Rank–2015 in *GATE-2006*. [2006]
- *Runner-up* in *'Creative Writing Competition'* at GLAITM, Mathura, India. [2005]
- *'Bhau Rao Devras Scholarship'*. [1997]

VIII. Advisory Board Member / Expert Reviewer

- AI Scholar – Academic Exchange Information Centre (*AEIC*)
- Heliyon (*Engineering*) – A Cell Press Journal

IX. Reviewed Papers for Research Journals

- Electric Power Components & Systems (*Taylor & Francis*)
- Energy, Sustainability & Society (*Springer*)
- IEEE Access
- IEEE Systems Journal
- IET Generation, Transmission & Distribution
- International Journal of Energy Research (*Wiley*)
- International Transactions on Electrical Energy System (*Wiley*)
- Journal of Electrical Engineering & Technology (*KIEE*)
- Journal of Modern Power System & Clean Energy (*Springer*)
- Renewable & Sustainable Energy Reviews (*Elsevier*)

X. Reviewed Chapter for Edited Book

- “Advanced Control and Optimization Paradigms for Wind Energy Systems”
Springer Nature, Singapore, 2019 (ISBN 978-981-13-5995-8)

XI. Authored / Edited Books

- [1]. **S.M. Tripathi** and Sanjeevikumar Padmanaban, *Eds.*, “Energy conversion systems: An overview”, *Nova Science Publishers, USA, 2021.*
- [2]. **S.M. Tripathi**, “Analysis of basic systems”, *University Science Press, New Delhi, India, First Edition, 2009.*
- [3]. **S.M. Tripathi**, “Modern control systems: An introduction”, *Jones and Bartlett Learning, MA, First Edition, 2008.*
- [4]. **S.M. Tripathi**, “A course in modern control system”, *University Science Press, New Delhi, India, First / Second Edition, 2007 / 2009.*

XII. Papers in Research Journals

- [1]. **S.M. Tripathi** and Rachna Vaish, "Taxonomical research survey on vector-controlled induction motor drives", *IET Power Electronics*, Vol. 12, Iss. 7, 2019, pp. 1603-1615. [*SCIE*]
- [2]. **S.M. Tripathi**, A.N. Tiwari and D. Singh, "Low-voltage-ride-through enhancement with the ω and T controls of PMSG in a grid-integrated wind generation system", *IET Generation, Transmission & Distribution*, Vol. 13, Iss. 10, 2019, pp. 1979-1988. [*SCI/SCIE*]
- [3]. **S.M. Tripathi** and Prakash Ji Barnawal, "Design and control of a STATCOM for non-linear load compensation: A simplified approach", *Electrical, Control and Communication Engineering (Sciendo)*, Vol. 14, No. 2, 2018, pp. 172-184. [*ESCI*]

- [4]. **S.M. Tripathi** and Chandan Dutta, “Enhanced efficiency in vector control of a surface-mounted PMSM drive”, *Journal of the Franklin Institute (Elsevier)*, Vol. 355, Issue 5, 2018, pp. 2392-2423. [*SCIE*]
- [5]. **S.M. Tripathi**, A.N. Tiwari and D. Singh, "Controller design for a variable-speed direct-drive permanent magnet synchronous generator-based grid-interfaced wind energy conversion system using D-partition technique", *IEEE Access*, Vol. 5, 2017, pp. 27297-27310. [*SCIE*]
- [6]. **S.M. Tripathi**, Ashish Mishra and A.K. Pandey, “High performance speed tracking of CSI-fed SCIM drive employing a variable-gain proportional integral (VGPI) speed controller”, *Journal of Electrical Systems and Information Technology (Elsevier)*, Vol. 5, Issue 3, 2018, pp. 635-652. [*DOAJ*]
- [7]. Prakash Ji Barnawal and **S.M. Tripathi**, “A simple control of STATCOM for non-linear load compensation”, *Asian Power Electronics Journal (APEJ)*, Hong Kong, Vol.11, No.1, 2017, pp. 28-32.
- [8]. Chandan Dutta and **S.M. Tripathi**, “Efficiency improvement in VSI-fed SPMSM drive”, *Asian Power Electronics Journal (APEJ)*, Hong Kong, Vol.11, No.1, 2017, pp. 21-26.
- [9]. **S.M. Tripathi**, A.N. Tiwari and Deependra Singh, “Optimum design of proportional-integral controllers in grid-integrated PMSG based wind energy conversion system”, *International Transactions on Electrical Energy Systems (Wiley)*, Vol. 26, Issue 5, 2016, pp. 1006-1031. [*SCIE*]
- [10]. **S.M. Tripathi**, A.N. Tiwari and Deependra Singh, “Grid-integrated permanent magnet synchronous generator based wind energy conversion systems: A technology review”, *Renewable & Sustainable Energy Reviews (Elsevier)*, Vol. 51, 2015, pp. 1288-1305. [*SCIE*]
- [11]. **S.M. Tripathi**, A.K. Srivastava and A.K. Pandey, “A novel Lagrange’s interpolation based speed controller for closed-loop control of a CSI-fed induction motor drive”, *Asian Power Electronics Journal (APEJ)*, Hong Kong, Vol. 6, No. 1, 2012, pp. 5-10.
- [12]. Nikhil Mishra, Ankit Dixit, **S.M. Tripathi** and K.S. Verma, “A survey on slip power recovery drives”, *Journal of Natural and Physical Sciences*, Vol. 24, No. 1, 2011, pp. 21-28.
- [13]. **S.M. Tripathi**, “Towards power to all: A case study on misuse of power in Lucknow, India”, *Journal of Sustainable Energy and Environment (JSEE)*, Thailand, Vol. 2, No. 3, 2011, pp.127-131.
- [14]. **S.M. Tripathi** and A.K. Pandey, “Dynamic performance analysis of self-commutating PWM CSI-fed induction motor drive under MATLAB environment”, *Asian Power Electronics Journal (APEJ)*, Hong Kong, Vol. 5, No. 1, 2011, pp. 19-24.
- [15]. **S.M. Tripathi**, A.K. Pandey and A.K. Srivastava, “Starting performance investigation of self-commutating PWM CSI-fed induction motor drive with Volts/Hz control strategy under MATLAB environment”, *International Journal of Advanced Engineering Sciences and Technologies*, Vol. 7. No. 2, 2011, pp. 237-242.

- [16]. A.K. Srivastava and **S.M. Tripathi**, “Current source inverter fed induction motor drives: A survey”, *International Journal of Electrical Systems*, Vol. 1, No. 1, 2011, pp. 14-27.
- [17]. A.K. Pandey and **S.M. Tripathi**, “Determination of regulator parameters and transient analysis of modified self-commutating CSI-fed IM drive”, *Journal of Electrical Engineering and Technology (JEET)*, Korea, Vol. 6, No. 1, 2011, pp. 48-58. [*SCIE*]

XIII. Papers in Seminars / Conferences / Symposiums

- [1]. **S.M. Tripathi**, Shruti Dwivedi and S.K. Sinha, “Maximum torque per ampere control incorporating specified damping in speed PI controller design for high performance PMA-SynRM drive: A real-time evaluation for dynamic performance studies”, *4th Biennial International Conference on Nascent Technologies in Engineering (ICNTE-2021)*, FCRIT, Vashi, Navi Mumbai, January 15-16, 2021. [*IEEE*]
- [2]. Utkrisht Goswami, **S.M. Tripathi**, Piyush Pandey, Saumya Jain and Govind Saroj, “Performance investigation on vector controlled IPMSM drive using MIL, SIL and PIL simulations”, *International Conference on Smart Technologies for Energy, Environment & Sustainable Development (ICSTEESD-20)*, GHRCE, Nagpur, India, Dec. 04-05, 2020. [*Springer*]
- [3]. Piyush Pandey, **S.M. Tripathi**, Utkrisht Goswami, H.K. Verma and A.K. Srivastava, “MIL, SIL and PIL simulations of a grid-tied inverter”, *International Conference on Smart Technologies for Energy, Environment & Sustainable Development (ICSTEESD-20)*, GHRCE, Nagpur, India, Dec. 04-05, 2020. [*Springer*]
- [4]. Lokendra Kumar, H.K. Singh, Puneet Kumar and **S.M. Tripathi**, “DTC-SCIM drive using classical switching table & SVPWM methods based on PI controller”, *In Proc. of 9th IEEE Power India International Conference (PIICON 2020)*, DCRUST, Murthal, Haryana, India, Feb. 28-29, 2020. [*IEEE*]
- [5]. Shruti Dwivedi, **S.M. Tripathi** and S.K. Sinha, “Review on control strategies of permanent magnet-assisted synchronous reluctance motor drive”, *In Proc. of International Conference on Power Electronics & IoT Applications in Renewable Energy and Its Control (PARC 2020)*, GLA University, Mathura, India, Feb. 28-29, 2020. [*IEEE*]
- [6]. **S.M. Tripathi** and A.N. Tiwari, “Real-time evaluation of PMSG-based wind turbine control involving PI controller parameters tuned with explicit damping ratio specification”, *In Proc. of International Conference on Electrical and Electronics Engineering (ICE3 2020)*, MMMUT, Gorakhpur, India, Feb. 14-15, 2020. [*IEEE*]
- [7]. **S.M. Tripathi** and Sonu Singh, “Hardware-in-the-loop simulation of Grid-tied converter for unity power factor operation”, *In Proc. of International Conference on Contemporary Computing and Applications (IC3A 2020)*, AKTU Lucknow, India, Feb. 05–07, 2020. [*IEEE*]
- [8]. **S.M. Tripathi** and N.K. Rai, “Real-time simulation and control of PM synchronous generator for wind turbine applications”, *In Proc. of International Conference on Contemporary Computing and Applications (IC3A 2020)*, AKTU Lucknow, India, Feb. 05–07, 2020. [*IEEE*]

- [9]. **S.M. Tripathi**, “Symmetric optimum tuning of PI controller parameters for VSC-based HVDC transmission system”, *In Proc. 34th National Convention of Electrical Engineers on “Recent Advancement in High Voltage Direct Current Transmission”*, NIT Agartala, India, Nov. 16–17, 2018, pp. 165-173. [*IEI*]
- [10]. Indresh Yadav and **S.M. Tripathi**, “A comparative analysis of transient accomplishment of STF and PI speed controlled CSI fed IM drive”, *In Proc. International Conf. on Emerging Trends in Engineering Innovations and Technology Management*, NIT Hamirpur, India, Vol. 1, Dec. 16-18, 2017, pp. 127-133.
- [11]. H.K. Singh, **S.M. Tripathi** and R.P. Payasi, “Direct torque control of squirrel-cage induction motor drive using fuzzy logic based speed controller”, *In Proc. of International Conf. on Advance Techniques in Information and Communication Technology*, India, Sep. 23–24, 2016, pp. 144-150.
- [12]. Chandan Dutta and **S.M. Tripathi**, “Comparison between conventional and loss d - q model of PMSM”, *In Proc. International Conference on Emerging Trends in Electrical, Electronics and Sustainable Energy Systems*, KNIT Sultanpur, India, Vol. 2, Mar. 11-12, 2016, pp. 160-164. [*IEEE*]
- [13]. **S.M. Tripathi**, A.N. Tiwari and Deependra Singh, “FRT compliance in a grid-integrated PMSG-based wind energy conversion system”, *In Proc. International Conference on Emerging Trends in Electrical, Electronics and Sustainable Energy Systems*, KNIT, Sultanpur, India, Vol. 2, Mar. 11-12, 2016, pp. 155-159. [*IEEE*]
- [14]. P.J. Barnawal and **S.M. Tripathi**, “Non-linear load compensation using STATCOM”, *In Proc. International Conference on Emerging Trends in Electrical, Electronics and Sustainable Energy Systems*, KNIT Sultanpur, India, Vol. 1, Mar. 11-12, 2016, pp. 270-274. [*IEEE*]
- [15]. **S.M. Tripathi**, A.N. Tiwari and Deependra Singh, “Maximum power point tracking with optimum relationship-based control in a grid-integrated PMSG-based wind energy conversion system”, *In Proc. International Conference on Advanced and Agile Manufacturing Systems*, India, Dec. 28-29, 2015, pp. 566-569.
- [16]. **S.M. Tripathi**, A.N. Tiwari, Nishtha Anand, Deependra Singh and A.K. Srivastava, “Large wind power generation impact on grid frequency stabilization”, *National Conf. on Recent Advances in Electrical Engineering*, India, Apr. 25–26, 2015, p.41.
- [17]. U.D. Dwivedi, Alok K. Pandey, **S.M. Tripathi** and Abhiruchi Srivastava, “Adaptive filter based islanding detection of grid tied PV system”, *2nd National Power and Energy System Conference*, India, Apr. 10-11, 2015, p.4.
- [18]. Neha Jaiswal and **S.M. Tripathi**, “Grid connected photovoltaic system: A review”, *1st National Power and Energy System Conference*, India, Apr. 25-26, 2014, p.66.
- [19]. **S.M. Tripathi**, Ashish Mishra and A.K. Pandey, “Transient performance investigation on CSI-fed induction motor drive employing a variable-gain-proportional-integral (VGPI) speed controller”, *1st National Power and Energy System Conference*, India, Apr. 25-26, 2014, p.61.

- [20]. H.K. Singh, **S.M. Tripathi** and R.P. Payasi, “Direct torque controlled permanent magnet synchronous motor drive: A review”, *1st National Power and Energy System Conference*, India, Apr. 25-26, 2014, p.56.
- [21]. H.K. Singh, **S.M. Tripathi**, R.P. Payasi and A.K. Srivastava, “Speed control of chopper-fed separately excited dc motor drive”, *In Proc. of National Conference on Emerging Trends in Electrical Systems*, India, Mar. 28-29, 2014, pp. 07-14.
- [22]. Anand Raw, Bindeshwar Singh, **S.M. Tripathi** and S.P. Singh, “Enhancement of transient stability of power systems by TCSC with PI based fuzzy logic algorithm in MATLAB environment”, *National Conference on Recent Trends in Energy Systems*, India, Apr. 05-06, 2013, p.59.
- [23]. Dilip Kumar, **S.M. Tripathi** and S.K. Sinha, “Performance evaluation of a chopper-fed H-bridge controlled dc motor drive”, *National Conf. on Recent Trends in Energy Systems*, India, Apr. 05-06, 2013, p.51.
- [24]. A.K. Srivastava, Dinesh Kumar, **S.M. Tripathi** and P.K. Sen, “Comparative study of proportional-integral and proportional-integral-derivative (PI and PID) controllers for Z-source inverter-fed induction motor drive”, *In Proc. of 2nd Int. Conf. on Power, Control and Embedded Systems*, India, Dec. 17-19, 2012, pp. 507-512. [**IEEE**]
- [25]. Indresh Yadav, **S.M. Tripathi** and A.K. Pandey, “Transient performance investigation of self-tuned fuzzy controlled CSI fed IM drive”, *In Proc. of 3rd National Conference on Power Electronics and Intelligent Control*, India, Nov. 01-02, 2012, pp. 347-353.
- [26]. Priyanka Singh, **S.M. Tripathi** and A.K. Pandey, “Adaptive neuro-fuzzy speed controller for scalar controlled induction motor drive”, *In Proc. of 3rd National Conf. on Power Electronics and Intelligent Control*, India, Nov. 01-02, 2012, pp. 111-116.
- [27]. Dinesh Kumar, **S.M. Tripathi** and A.K. Pandey, “A high performance fuzzy-fuzzy controlled CSI-fed induction motor drive”, *In Proc. of IEEE Sponsored Students’ Conference on Engineering and Systems*, MNNIT, Allahabad, India, Mar. 16-18, 2012, pp. 860-866. [**IEEE**]
- [28]. Priyanka Singh, **S.M. Tripathi**, Ankit Dixit and Nikhil Mishra, “Recent trends in power converters for wind energy conversion system with grid integration impact”, *International Conference on Competitiveness and Innovativeness in Engineering, Management and Information Technology*, India, Jan. 29, 2012, p.113.
- [29]. Ankit Dixit, Nikhil Mishra, Sunil K. Sinha, **S.M. Tripathi** and Priyanka Singh, “Independent control of dual induction motor drive with five leg inverter: A review”, *National Conference on Computer Applications in Electrical Engineering: Recent Trends*, India, Dec. 16-17, 2011.
- [30]. Rajneesh Mishra, S.P. Singh, Deependra Singh, **S.M. Tripathi** and Dinesh Kumar, “Performance investigation of three-phase SVPWM unipolar ac-ac converter-fed induction motor drive under different loading conditions”, *National Conf. on Emerging Trends in Electrical & Electronics Engineering*, India, Nov. 26-27, 2011.

- [31]. Ankit Dixit, Nikhil Mishra, **S.M. Tripathi**, S.K. Sinha and Digvijay Singh, “Predictive control strategies for power converters: A survey”, *National Seminar on Innovations and Applications in Engineering and Applied Sciences*, India, Nov. 09-10, 2011, p.80.
- [32]. A.K. Srivastava and **S.M. Tripathi**, “Performance of a self-commutating PWM CSI-fed induction motor drive incorporating a new Lagrange’s interpolation based speed controller”, *National Seminar on Innovations and Applications in Engineering and Applied Sciences*, India, Nov. 09-10, 2011, p.78.
- [33]. Ankit Dixit, Nikhil Mishra, **S.M. Tripathi** and K.S. Verma, “A survey on slip power recovery drives”, *National Seminar on Innovations and Applications in Engineering and Applied Sciences*, India, Nov. 09-10, 2011, p.78.
- [34]. Neha Sharma, **S.M. Tripathi**, B. Singh, P.K. Sen and Deependra Singh, “Transient performance investigation of vector controlled Z-source inverter-fed induction motor drive”, *In Proc. of National Conference on Excellence in Technology and Management*, India, May 07-08, 2011, pp. 98-103.
- [35]. A.K. Srivastava, **S.M. Tripathi**, D. Kumar and P.K. Sen, “Performance analysis of SVPWM voltage source inverter-fed induction motor drive under different loading conditions”, *In Proc. of National Conference on Recent Advances in Electrical Power and Energy System Management*, India, Mar. 25-26, 2011, pp. 146-150.
- [36]. A.K. Pandey, **S.M. Tripathi** and G.S. Chaurasia, “Steady-state performance analysis of modified CSI-fed induction motor drive”, *In Proc. of International Conference on Energy Engineering*, India, Jan. 07-09, 2009, pp. 435-440.

XIV. Research Projects Undertaken / Completed

[1]. **“Vector Control of Permanent Magnet Assisted Synchronous Reluctance Motor Drive”**

Project Coordinator : **Dr. S.M. Tripathi**
Project Co-coordinator : Dr. S.K. Sinha
P.G. Scholar : Ms. Shruti Dwivedi
Duration : Dec. 2019 – Dec. 2020
Status : **Completed**
Funded by : TEQIP–III
Award Amount : Rs. 1.0 Lakh
(Grant-in-aid under ‘Research Promotion Scheme’)

[2]. **“Performance Investigation on Vector Controlled IPMSM Drive using MIL, SIL and PIL Simulations”**

Project Coordinator : **Dr. S.M. Tripathi**
U.G. Scholars : Mr. Utkrisht Goswami, Mr. Govind Saroj and
Ms. Saumya Jain
Duration : Dec. 2019 – Dec. 2020
Status : **Completed**
Funded by : TEQIP–III
Award Amount : Rs. 0.25 Lakh
(Grant-in-aid for under ‘Research Promotion Scheme’)

[3]. ***“MIL, SIL and PIL Simulations of Grid-tied Inverter”***

Project Coordinator : **Dr. S.M. Tripathi**
U.G. Scholars : Mr. Piyush Pandey, Mr. Aman Kumar Sriwastava and
Mr. Hemant Kumar Verma
Duration : Dec. 2019 – Dec. 2020
Status : **Completed**
Funded by : TEQIP–III
Award Amount : Rs. 0.25 Lakh
(Grant-in-aid under ‘Research Promotion Scheme’)

[4]. ***“Design and Control of a Grid-tied PMSG-based Wind Generation System”***

Principal Investigator : **Dr. S.M. Tripathi**
Duration : Aug. 2017 – Nov. 2019
Status : **Completed**
Funded by : AKTU, Lucknow
Award Amount : Rs. 1.0 Lakh
(Grant-in-aid under ‘Visvesvaraya Research Promotion Scheme’)

[5]. ***“Loss Minimization in VSI-fed PMSM Drive”***

Project Coordinator : **Dr. S.M. Tripathi**
P.G. Scholar : Mr. Chandan Dutta
Duration : Dec. 2015 – Dec. 2016
Status : **Completed**
Funded by : TEQIP–II
Award Amount : Rs. 0.5 Lakh
(Grant-in-aid under ‘Research Promotion Scheme’)

[6]. ***“Harmonics and Non-linear Load Compensation using STATCOM”***

Project Coordinator : **Dr. S.M. Tripathi**
P.G. Scholar : Mr. Prakash Ji Barnawal
Duration : Dec. 2015 – Dec. 2016
Status : **Completed**
Funded by : TEQIP–II
Award Amount : Rs. 0.5 Lakh
(Grant-in-aid under ‘Research Promotion Scheme’)

XV. Frequently Taught Courses

- Electrical Machines – I [UG]
- Basic Systems Analysis [UG]
- Power Station Practice [UG]
- Power Converter Applications [PG]
- Power Semiconductor Controlled Electric Drives [PG]
- Numerical Techniques & Simulation [PG]

XVI. Invited Talks

1. “Grid-interfaced Converter and Control”
MMANTC, Mansoor, Nasik [2021]
2. “Grid-interfaced Wind Energy Conversion System”
BBDITM, Lucknow [2020]
3. “Fuzzy Logic Control Design using MATLAB”
NIT, Uttarakhand [2020]
4. “HIL Simulation of Grid Connected Wind Energy Systems”
Institute of Entrepreneurship Development U.P., Lucknow [2020]
5. “Controller–Hardware-in-the-Loop (C-HIL) Simulation of Grid-tied Inverter”
Rajkiya Engineering College, Ambedkar Nagar [2019]
6. “Data Visualization and Editing using MATLAB”
Kamla Nehru Institute of Technology, Sultanpur [2019]
7. “Real Time HIL Simulation: An Introduction”
Trident Academy of Technology (BPUT), Bhubneshwar, Odisha [2019]
8. “MATLAB: A Tool for Scientific and Technical Computing”
MNNIT, Allahabad, Prayagraj [2019]
9. “MATLAB Application Basics in Control Engineering”
RRS Institute of Management and Technology, Munshiganj, Amethi [2019]
10. “Applications of MATLAB in Engineering Research”
MMM University of Technology, Gorakhpur [2018]
11. “Grid-integrated PMSG-based Wind Generation System”
MMM University of Technology, Gorakhpur [2017]
12. “Thermal Power Station: An Overview”
Kamla Nehru Institute of Technology, Sultanpur [2017]
13. “Intellectual Property Rights (IPR) and Patents”
RRS Institute of Management and Technology, Munshiganj, Amethi [2016]
14. “Application of MATLAB in Control Engineering”
Rajkiya Engineering College, Ambedkar Nagar [2015]
15. “Theory of Single-phase Transformers”
Kamla Nehru Institute of Physical and Social Sciences, Sultanpur [2013]
16. “Utility of MATLAB Programming in Signal Analysis and Basic Circuits’ Simulation”
Kamla Nehru Institute of Technology, Sultanpur [2013]
17. “Analysis of Discrete-Time Systems and Adaptive Control”
MMM Engineering College, Gorakhpur [2011]
18. “Advanced Control Systems”
MMM Engineering College, Gorakhpur [2010]

XVII. Setting-up of New Laboratory / Centre of Excellence

- **Power & Energy Research Centre (PERC)**
(Centre of Excellence)
Department of Electrical Engineering
Kamla Nehru Institute of Technology, Sultanpur, India

XVIII. MoU Formulated for Academic Collaboration

- MoU between **KNIT, Sultanpur, India** and **Typhoon HIL GmbH, Switzerland** jointly with **Quarbz Info Systems, Kanpur, India.**

For technical support to

Power & Energy Research Centre (PERC)
(Centre of Excellence)

Department of Electrical Engineering,
Kamla Nehru Institute of Technology, Sultanpur, India

[Dec. 27, 2019]

XIX. Other Accomplishments

- **Ph. D. Theses Supervision**
02 *(Ongoing)*
- **M. Tech. Theses Supervision**
26 *(Completed)*
02 *(Ongoing)*
- **B. Tech. Projects Supervision**
16 *(Completed)*
02 *(Ongoing)*
- **FDP / Short-term Courses**
19 *(Attended)*
06 *(Organized)*
- **Conferences**
09 *(Attended)*
05 *(Organized)*
04 *(Chaired sessions)*
- **Workshops / Seminars / Induction Programmes**
10 *(Attended)*
04 *(Organized)*
- **Teaching-aid Materials / Courses Developed**
27 *(Short video lectures @ YouTube)*
02 *(Teaching-aid materials)*
03 *(Theory courses)*
02 *(Lab. courses)*

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 <https://www.linkedin.com/in/drsmtripathi/>
 <https://vidwan.inflibnet.ac.in/profile/168978>
 <https://www.researchgate.net/profile/Saurabh-Tripathi-18>
 <https://publons.com/researcher/1410386/saurabh-mani-tripathi/>
 <https://scholar.google.com/citations?user=0w8IGNUAAAAJ>
 <https://www.scopus.com/authid/detail.uri?authorId=56779538500>

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