

Dr. Shivam Yadav

Email✉: shivammyadav@gmail.com, shivam.yadav@recmainpuri.in | Phone☎: +91-9532690197
| Location📍: Mainpuri (UP) India

Professional Summary

Ph.D. in Electrical Engineering specializing in **Power Electronics, PWM strategies, and Motor Drives**, with a strong focus on **low-switching inverter control and harmonic torque minimization**. Experienced academician and researcher with expertise in **simulation, real-time control, and advanced drive systems for EV and industrial applications**. Demonstrated ability to lead funded research, publish in reputed journals, and develop practical solutions for high-power converter systems.

Core Competencies

- Innovative thinker with proven problem-solving skills and a proactive attitude.
- Exposure in converter design, modulation strategies, and drive control systems.
- Exposure to HVDC, FACTS systems, and power semiconductor devices.
- Exposure in MATLAB/Simulink, simulation environments.
- Real-Time Simulation & HIL Systems
- Highly communicative, collaborative, and capable of working in international teams.
- Strong organizational and multitasking capabilities with structured execution.
- Promotes openness, respect, safety, and integrity in team environments.

Professional Experience

- Assistant Professor, Electrical Engineering Department
Lokmata Devi Ahilyabai Holkar (L.D.A.H) Rajkiya Engineering College, Mainpuri
(Dec 2017 – Present).
- Guided **UG/PG projects** in EV drives, inverter design, and fault detection.
- Contributed to **curriculum development and lab setup**
- Serving as **Hostel Warden**, managing administrative and operational responsibilities

Funded Research Project

- Co-Principal Investigator (Co-PI)
Acoustic Signature-Based Intelligent Bearing Fault Detection for EV Motors
Funded by UP Government – **₹18.58 Lakhs**

Research Interests

Key Research Areas:

- Low switching frequency PWM techniques
- Torque ripple minimization in inverter-fed drives
- Design and simulation of PMSM, Induction Motors, and flux switching machines.
- Application of vector control and rotor flux-oriented control for EV drives.
- Proposal development for industry and defense-oriented power electronic solutions.

Education

- Ph.D., Electrical Engineering – NIT Patna
- M.Tech. Power Electronics and Electrical Drives – IIT (ISM) Dhanbad
- B.Tech, Electrical Engineering – UPTU

Technical Skills

- Power Electronics: Converter design, modulation, HVDC, FACTS, inverter topologies.
- Tools: MATLAB/Simulink, PSCAD, LabVIEW, Typhoon HIL, Opal-RT,
- Motor Drives: Vector control, rotor flux-oriented control.
- Hardware Development: PCB design, prototype testing,

Publications & Outreach

Journal Papers

1. Shivam Yadav, Sanjeev Kumar Mallik and Ambarisha Mishra, “Optimal harmonic mitigation technique for high-power IM drives” Electrical Engineering, Vol. 107, pp. 853-867, 2025, DOI: <https://doi.org/10.1007/s00202-024-02562-x>
2. Shivam Yadav, Sanjeev Kumar Mallik and Ambarisha Mishra, “Advanced lower order harmonic torque suppression by P-PWM in high-performance scalar-controlled IM drives”, Journal of Power Electronics, Vol. 25, pp. 71-81, 2025, DOI: <https://doi.org/10.1007/s43236-024-00873-7>.
3. Shivam Yadav, Sanjeev Kumar Mallik and Ambarisha Mishra, “Low-Switching Based Improved PWM for Torque Harmonic Reduction in V/f Controlled High Power Inverter Fed IM Drive” Journal of Operation and Automation in Power Engineering. Vol. 13, No. 2, pp 140-148, 2025.
4. Shivam Yadav, Anshul Kumar Mishra,” Performance Evaluation in IFOC Induction Motor Drive with various PWM Techniques” DOI: [10.1109/ICE348803.2020.9122877](https://doi.org/10.1109/ICE348803.2020.9122877) (Conference paper)
5. Shivam Yadav., Mishra, A.K., Tripathi, J.M., Chandel, A. (2022). Lower Order Harmonic Torque Reduction in v/f Controlled Induction Motor Drive. In: Chakravarthy, V.V.S.S.S., Flores-Fuentes, W., Bhateja, V., Biswal, B. (eds) Advances in Micro-Electronics, Embedded Systems and IoT. Lecture Notes in Electrical Engineering, vol 838. Springer, Singapore. https://doi.org/10.1007/978-981-16-8550-7_15

Professional Traits

- Strong analytical and research-oriented mindset
- Effective team collaborator and communicator
- Adaptable to interdisciplinary and evolving technologies
- Committed to innovation and continuous learning
- Target-oriented and self-driven with strong ownership and integrity.
- Respectful, communicative, and encouraging team player.
- Committed to continuous learning and fostering collaborative innovation.