Dr. Manish Kumar Ghodki

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Profile Summary –

NIT Alumni/ NIT Former Faculty & Researcher/ 7 Years Teaching & Research Experience in Institute of Repute/ UGC National Fellow/ Technical Book Author/ Reputed Journal Reviewer/ Educator/ Tutor/ Trainer/ Examiner/ Thesis Evaluator/ Program and Project Coordinator

Subject Expertise –

Microprocessor, Microcontroller and Embedded Systems/ Digital Circuits and Systems/ Basic Electrical and Electronics/ Electronic Devices and Circuits/ Analog and Digital Electronics/ Measurement and Instrumentation/ Renewable Energy Sources/ Conventional Energy Systems/ Instrumentation and Control in Energy Systems/ Energy Efficiency in Electrical Utilities/ Industrial and Commercial Applications of Renewable Energy Sources/ Energy Conservation, Management and Audit/ Building and Energy/ Energy from Waste.

Lab Expertise –

Microprocessor and Embedded Systems Lab, Programming and Simulation Lab, Electrical and Electronics Engineering Lab, Renewable Energy Lab, Energy Conservation Lab, Minor and Major Project Lab.

Technical Qualifications –

- **Doctorate –** PhD (Renewable Energy), 1st Division, NIT Kurukshetra *(2021)*
- **Post-Graduation –** M.Tech. (Energy Engineering), 1st Division, NIT Bhopal *(2010)*
- **Graduation –** B.E. (Electronics and Communication), 1st Division, Govt. UIT-BU, Bhopal *(2007)*

Academic Qualifications –

- **Higher Secondary –** 12th Standard (Math-Science), 1st Division, MP State Board *(2000)*
- **High School –** 10th Standard (State General Subjects), 1st Division, MP State Board *(1998)*

Experience *(7.2 Years)* –

- Project Assistant in CSIR-AMPRI, Bhopal *(0.8 years)*
- JRF and SRF in NIT, Kurukshetra *(3 years)*
- Assistant Professor in NIT, Bhopal *(2.3 years)*
- Faculty in Engineering Colleges RKDF, RDIST, PGOI, AISECT and VIST, Bhopal *(1.3 year)*

Publications *(13)* –

- **Books** (1) **–** "Fundamentals of Microprocessor Programming" by Khanna Publications, New Delhi.
- **Journals (8) –** ***SCI (3), ESCI (5), Scopus (6), National (2).***

(1) M. K. Ghodki, "Microcontroller and solar power based electrical energy management system for renewable energy applications," *International Journal of Electrical Power and Energy Systems*, vol. 44, pp. 852-860, 2013. DOI: 10.1016/j.ijepes.2012.08.041. **(SCI, Scopus, ESCI)**

(2) M. K. Ghodki, A. Swarup, and Y. Pal, "A novel embedded controller operated R-2R scheme to conduct the solar energy based supply side management," *International Transactions on Electrical Energy Systems.* vol. 30, no. 6, pp. 1-18, 2020. DOI: 10.1002/2050-7038.12354. **(SCI, Scopus, ESCI)**

(3) M. K. Ghodki, A. Swarup, and Y. Pal, "A novel solar-powered master-slave electric motor-based energy-saving and cooling approach for the motors of conveyor system," *International Transactions on Electrical Energy Systems,* vol. 30, no. 10, 2020. DOI: 10.1002/2050-7038.12563. **(SCI, Scopus, ESCI)**

(4) M. K. Ghodki, A. Swarup, and Y. Pal, "A new IR and sprinkler based embedded controller directed robotic arm for automatic cleaning of solar panel*," Journal of Engineering, Design and Technology*, vol. 18, no. 4, pp. 905-921, 2019. DOI: 10.1108/JEDT-10-2019-0253. **(Scopus, ESCI)**

(5) M. K. Ghodki, "A new solar powered robotic arm guided master-slave electric motors of biomass conveyor," *Journal of Engineering, Design and Technology*, accepted 2022. **(Scopus, ESCI)**

(6) M. K. Ghodki, A. Swarup, and Y. Pal, "Maximizing Energy Saving by Solar Power based Optimal Supply Side Management," *International Journal of Innovative Technology and Exploring Engineering*, vol. 8, no. 12, pp. 388-395, 2019. DOI: 10.35940/ijitee.L3300.1081219. **(Scopus)**

(7) M. K. Ghodki, A. Swarup, and Y. Pal, "An intelligent power supply utilization system based on microcontroller for renewable energy applications," *The Journal of CPRI,* vol. 11, no. 1, pp. 91-108, 2015. **(National Journal)**

(8) M. K. Ghodki, Measurement and Control of Electrical Energy for the Efficient Energy Management," *The Journal of CPRI,* vol. 8, no. 1, pp. 91-108, 2012. **(National Journal)**

- **Conferences (4) – *International (4)***

(1) Manish Kumar Ghodki, M. K. Gupta, Electrical Energy Management and Control System, International Conference of Electrical Power and Energy Systems, vol. 2, pp. 65-71, Bhopal, Aug. 26-28, 2010. **(International Conference)**

(2) M. K. Ghodki, A. Swarup, and Y. Pal, "Solar Energy based Optimal Utilization Technique for Power Supply Management and Control," *International Conference on New and Renewable Energy Resources for Sustainable Future*, Jaipur, India, Nov. 2019. **(International Conference)**

(3) M. K. Ghodki, A. Swarup, and Y. Pal, "Solar power based supply side management of solar energy," *Young Scientists Conference of India International Science Festival*, Oct. 2018. **(International Conference)**

(4) M. K. Ghodki, Energy Conclave, *India International Science Festival*, 2020.

Awards *(3)* –

- UGC National Fellowship for JRF and SRF.
- Honorarium for Journal Publication from Central Power Research Institute (CPRI), Bangalore.

Outreach Activities *(17)*

- **Reviews–** SCI/Scopus Journals *(13)*
- **Viva-voce**– B.Tech. *(4)*

Thesis Guidance *(4)* – M.Tech. Thesis *(4)*

Workshops *(7)* –

- **Solar Photovoltaics** organized by IIT Bombay *(10 days/Full time)*
- **Green Technologies towards Low Carbon Society** organized by NIT Bhopal *(1 day/Full time)*
- **Energy Conservation Awareness** organized by NIT Bhopal *(1 day/Full time)*
- **Bamboo Utilization for Sustainable Development** organized by NIT Bhopal *(1 day/Full time)*
- **Waste to Bioenergy** based e-faculty Development Program cum Workshop organized by Sharda University-UP, MIT-Aurangabad and Department of Agricultural Engineering *(1 week/Full time)*
- **Waste to Wealth** based Poster presentation in Indo-German Workshop *(2 days/Full time)*
- **Robotics for Rehabilitation** based Poster presentation in Indo-French Workshop *(3 days/Full time)*

Trainings *(3) –*

- **Operation and Maintenance** in Wind Farm of Suzlon Energy Ltd, Indore *(2 weeks/Full time)*
- **VLSI Design** from CRISP, Bhopal *(1 week/Full time)*
- **Repairs and Maintenance** of Wireless Sets and Measuring Instruments from Police Radio Headquarter, Bhopal *(2 weeks/Full time)*

Seminar & Webinar *(4) –*

- Experimental education seminar organized by National Instruments at MANIT.
- Webinar on "Sustainable Energy Technologies" Part I, II & III Organized by the School of Energy Science and Engineering, IIT Guwahati.

Academic Projects & Thesis *(6) –*

- **PhD Thesis** on *Development of Schemes for Improving the Efficiency of Solar Panel and Improved Utilization of Solar Energy*
- **M. Tech. Thesis** on *Electrical Energy Measurement and Control System*
- **B.E. Major Project** on *Password Protecting System*
- **B.E. Minor Project** on *Digital Security System*

Software Known – Keil, Proteus, Multisim, Circuit Maker, Labview, Edsim51, ASM51, GNUSim, Tina etc.

Technical Language Known – Assembly Language of Microprocessor and Microcontroller

Computer Skills – Computer Proficiency of CPCT Exam (MP Government), MS-Office and Windows

Typing Skills – English and Hindi (Unicode)

Membership – Solar Energy Society of India (SESI)

Defense Activities – N.C.C. "A" certificate and Camps (Ministry of Defense, Government of India)

Sports Activities – Table Tennis, Athletics and Academic

Personal Profile –

- **Date of Birth –** 31st August 1982
- **Marital Status –** Married
- **Language Known –** English, Hindi and Marathi

Declaration: I hereby declare that all the above information is true to the best of my knowledge.

Date : **Yours Faithfully**

Place: **Dr. Manish Kumar Ghodki**