

Dr. H.M. Manjunatha

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PROFESSIONAL EXPERIENCE (12.5 YEARS)

- **Assistant Professor-** BIET Davanagere- 14th May 2022 to till date
- **Assistant Professor-** Rajeev Institute of Technology, Hassan- Jan 2012 to 10th May 2022
- **Research Scholar (Part-Time)-** Malnad Collage of Engineering Research Centre (VTU-RC), Hassan - March 2015 to DEC 2021, (6 Years)
- **Lecturer -** Sridevi Institute of Technology, Tumakuru – Aug 2009 to Sep 2010 (1 Year)

ACADEMIC QUALIFICATION

Examination	Discipline / Specialization	college	Board / University	Year of Passing	% Marks
Ph.D	Electrical and Electronics Engineering Sciences	MCE (VTU-RC),Hassan	V.T.U, Belgaum	29 th Dec-2021 (21 st VTU Convocation)	-
Research Topic: “Algorithms for Smart Microgrid Management Using Multi-agent Approach”					
M.Tech	Computer Applications in Industrial Drives	MCE, Hassan	V.T.U, Belgaum	2012	FCD
B.E	Electrical & Electronics	SIET Tumkur	V.T.U, Belgaum	2009	FC

PROFESSIONAL MEMBERSHIP

- IAENG (Member Number: 314054)

SUBJECT HANDLED

- Basic Electrical
- Electric Circuit analysis
- Analog Electronic Circuit
- OPAMP and LIC
- Power Generation and Economics
- 8051 Microcontroller

- Electrical Machine Design
- Electric Motor
- Electrical CAED
- Fuzzy logic and neural network
- Energy Auditing and Demand Side Management
- Testing and commissioning
- Smart Grid
- Renewable Energy Resources

PATENT

- **“Smart Energy Meter to Incorporate Demand Response”** Indian patent, application Number-202241076943, published in 06/01/2023
- **“Solar and Wind Energy Powered Distribution Storage Management System”** Indian patent, application Number- 202341006055, published in 10/02/2023
- **“Optimal Power Allocation For Residential Network In Islanded Microgrid Using Capacity Market Demand Response Approach”** Indian patent, application Number-202341018330, published in 31/03/2023

PROJECTS PROPOSALS

- **“Cooperative Energy Prediction and Management of an Isolated Renewable Energy-Powered Smart Home for Enhancing Power Reliability”** A project proposal submitted to SERB (Startup) in Feb-2023. **(Applied)**
- **“Multi-Agent Based Metaheuristic Approach for Managing and Trading of Power in Grid-Tied Microgrid”** A project proposal submitted to VTU Under (RFP) in Feb-2023. **(Applied)**
- **“Intelligent Energy Management of Off-Grid Solar Powered Smart Home”** A Project Proposal submitted to NAIN Project Phase-3 in November 2022. **(Applied)**
- **“Multi-Agent Based Responsive Residential Demand Response for Managing and Trading Power in Smart Distribution Networks”** A Project Proposal submitted to KSCST in June 2022, under science, technology and innovation (STI) interventions in the state **(Applied)**
- **“Energy Conservation and Improving Energy Efficiency in RIT Campus”** A Project Proposal submitted to KREDL, Government of Karnataka in March-2021 **(Applied)**

PROJECTS GUIDED FOR UG STUDENTS

- Intelligent DG power management in RIT campus using IOT
- A fuzzy approach to load shedding of islanded DC microgrid operation based on multiagent system.
- Intelligent energy and power management system in home appliances.
- Intelligent energy management in DC microgrid.
- Energy conservation through home automation.
- Time priority based load management for UPS system.
- Development of neuro-fuzzy based intelligent maximum power point tracking technique for battery charging application.
- Direct load control demand response approach in DC microgrid.

- Priority based load management in microgrid.
- Free Energy harvesting and intelligent light management in tollgate.

SKILLS

- Project Management and Team Building
- Technical writing
- Matlab programming and SIMULINK
- Embedded C
- Pspice
- Microcontroller 8051 and Keil software
- Arduino programming
- E-CAD
- Homer Software
- Thing Speak IOT Platform
- Assembly language programming

JOURNALS AND CONFERENCE DETAILS

- **SCOPUS ID:** <https://www.scopus.com/authid/detail.uri?authorId=57222759867>
- **ORCID ID:** <https://orcid.org/my-orcid?orcid=0000-0001-6651-7131>
- **GOOGLE SCHOLAR**
LINK: <https://scholar.google.com/citations?user=yGlyo2sAAAAJ&hl=en>
- **RESEARCH GATE LINK:** <https://www.researchgate.net/profile/Manjunatha-H-M>

JOURNALS:

1. **H.M. Manjunatha**, T.S. Karibasavaraju, L.H. Anjaneya, Shadaksharaiah Chandraiah, P. Arunkumar, Auction based single buyer energy trading model in grid-tied microgrid with active sellers and buyers, e-Prime - Advances in Electrical Engineering, Electronics and Energy, Volume 4, 2023, 100136, ISSN 2772-6711, <https://doi.org/10.1016/j.prime.2023.100136>.
2. **H.M. Manjunatha** “An Intelligent Method to Load Management of Microgrid Operation using Multi-Agent System” Journal of Recent Trends in Electrical Power System-HBRP Publication, Volume-1, Sep-2022. <https://doi.org/10.5281/zenodo.7085287>
3. **H.M. Manjunatha** and G.K. Purushothama “A Direct Load Control Approach for Residential Demand Response”, International Journal of Science, Technology, Engineering and Management-A VTU Publication, Volume 3, Issue 2, OCT- 2021, pp. 43-49.
4. **H.M. Manjunatha** and G.K. Purushothama “Multi-Agent System based Two-Phase Market Model to Incorporate Demand Response in Grid-Tied Microgrids”, International Journal of Renewable Energy Research, Volume 11, Issue 1, March 2021, pp. 195-210. DOI: <https://doi.org/10.20508/ijrer.v11i1.11636.g8125>. (SCOPUS Cite Score is 4.3 and Quartile is Q2, Impact Factor is 5.127 in Thomson Reuters).
5. **H.M. Manjunatha** and G.K. Purushothama “Multi-Agent based Responsive Residential DR for Managing and Trading Power in Smart DNs” International Journal of Renewable Energy Research, Volume 11, Issue 1, March 2021, pp. 264-275. DOI: <https://doi.org/10.20508/ijrer.v11i1.11714.g8130> (SCOPUS Cite Score is 4.3 and Quartile is Q2, Impact Factor is 5.127 in Thomson Reuters).
6. Abhilash B.T. and **H.M. Manjunatha** “Reliability Assessment of Induction Motor Drive Using Failure Mode Effects Analysis” in ISOR journal of Electrical and Electronics Engineering, e-ISSN:2278-1676, p-ISSN:2320-3331, volume 6, Issue (Jul.-Aug.2013), PP 32-36

7. **H.M. Manjunatha** and G.K. Purushothama "*Energy management through smart home*" in *E-proceedings in International Science Community Association* 28-29 Nov-2015, (ISBN 978-93-84659-38-7).
8. **H.M. Manjunatha** and L. Kumarswamy "*Comparative analysis of PID and fuzzy PI controller for speed control of DC motor*" in *IJMRAE* e-ISSN:0975-7074, volume 6, No. II (April 2014), PP 487-500.

CONFERENCE:

1. **H.M. Manjunatha** and G.K. Purushothama "*A Linear Bidding Algorithm for Single Seller Single Buyer Energy Trading Model in Grid-tied Microgrid*", 5th IEEE international Conference ICEECCOT-2021 10th-11th Dec-2021 GSSSIET Mysuru.
2. **H.M. Manjunatha** and L. Kumarswamy "*Fuzzy Logic Based Speed Control Of DC Motor With Real Time Interface Using 8-Bit Microcontroller*" in ICETE-12 held at NMAMIT, NITTE.
3. **H.M. Manjunatha** "*Wireless power transmission and governing of electric drives using mobile technology*" in the national conference held at NMAMIT, NITTE, 2009.

CERTIFICATION COURSE

1. Successfully completed 8 week NPTEL Online Certification course "**INTRODUCTION TO SMART GRID**" during JUL-SEP 2019.
2. Successfully completed the **MathWorks** self-paced training course "**Machine Learning Onramp**"

FDP AND WORKSHOPS

1. Participated in the Five Day's Virtual Faculty Development Programme on "Electrical Vehicle Technologies-A Future Transportation Tool" organised by Department of Electrical and Electronics Engineering from 28/11/2022 to 02/12/2022.
2. Participated in the workshop on "Recent Developments in Smart Grid and Applications" in association with VTU, Belagavi and IEEE PES Chapter, from 05th- 07th September 2022, Organized by Department of Electrical and Electronics Engineering, GSSSIETW, Mysuru.
3. Participated in the Three Days Virtual Faculty Development Program on "Data Science & Networking" organized by the Department of Electronics and Communication Engineering, Rajeev Institute of Technology, Hassan from 25th to 27th August 2022, in association with IETE, Mysuru Centre.
4. Participated in One Week Faculty Development Program on "AI Applications to Power System" organized by Department of Electrical and Electronics Engineering, SIT, Tumakuru, held from 17th- 22nd January 2022.
5. Participated in One Week Faculty Development Program on "Recent Development in Green Technologies" organized by Department of Electrical and Electronics Engineering, ATME College of Engineering, Mysuru, held from 24th- 29th September 2021.
6. participated in the TEQIP-III sponsored Faculty Development Programme on "Power Electronic Applications to Renewable energy systems and Energy storage systems" organized by Department of Electrical and Electronics Engineering, NIE, Mysuru, held from July 06-10, 2020
7. Participated in three day FDP on "TEAM BUILDING AND MANAGING" conducted by ICT Academy on 23-25 JAN 2020 at Rajeev Institute of Technology.
8. Participated in TEQIP 1.3 sponsored Five day workshop on "OUTCOME BASED

EDUCATION (OBE) AND ACCREDITATION” held at VVCE, Mysore during 16-20 December 2019.

9. Participated in AICTE sponsored one week short term Training program on “SMART GRID AND SMART CITY” (smaRT-2019), held at MCE, Hassan during 8-13 July 2019.
10. Participated five days’ workshop on “RESEARCH: METHODOLOGY, PROCESS AND TOOLS”, Canara engineering college, Mangalore.
11. Participated in 12 days FDP on “Emerging Trends in Power System Research” in Department of Electrical and Electronics Engineering, MEC, Hassan.
12. Participated in three days’ workshop on “Auto cad” in Department of Electrical and Electronics Engineering, RNSIT, Bengalure.
13. Undergone two days’ workshop on “Orcad and PCB design” in Department of Electrical and Electronics Engineering, National Institute of Engineering, Mysore.
14. Participated in one day workshop on “Recent trends in renewable energy resources” in Department of Electrical and Electronics Engineering, Shridevi Institute of Engineering and Technology, Tumkur

ADDITIONAL INFORMATION

- BOS and BOE member for UG and PG in MCE Hassan (Autonomous institute under VTU) 2016-2023.
- Reviewer of technical papers in AICECS 2021 organized by Manipal Institute of Technology Manipal, India, October 28-30, 2021.
- Invited talk on “Potential of Demand Response in India” at AICTE sponsored one week short term Training program on “SMART GRID AND SMART CITY(smaRT-2019), held at MCE, Hassan during 8-13 July 2019.
- Invited talk on “Smart-Grid” at Rajeev polytechnic, 30th june 2018.
- Conducted five days FDP on “Recent Developments in Power System” 23-27NOV 2020 in Rajeev Institute of Technology.
- Question paper setter, evaluator and lab examiner for VTU and SSIT (Deemed to be university)
- Question paper setter, evaluator and lab examiner for MCE (Autonomous institute) Hassan

DECLARATION

I, hereby declare that the details furnished above are true to the best of my knowledge.

Place:

Dr. Manjunatha H.M.