

Dr.Manjunatha H.M.

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Davanagere

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**PROFESSIONAL EXPERIENCE (14 YEARS)**

- **Assistant Professor-** BIET Davanagere- 14th May 2022 to till date
- **Assistant Professor-** Rajeev Institute of Technology, Hassan- Jan 2012 to 10th May 2022 (10.5Years)
- **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)

DEPARTMENT RESPONSIBILITY

- Department NBA coordinator
- NAAC coordinator for criteria-5
- QPDS member
- AICTE activity coordinator
- FDP coordinator 2020
- Placement coordinator 2012-2018
- Final year project co-ordinator 2014-2016 and 2019
- Department coordinator of student performance monitoring cell
- Time table coordinator
- CIE coordinator

PATENT

- **“SMART WATER QUALITY MONITORING DEVICE”** Indian patent, application Number- 202441017149 A, Published in 29/03/2024
- **Indian Design Patent “Portable Solar Powered Bathroom Shower”**, Application Number-393246-001, **Granted** in 13/10/2023
- **“Reliability Assessment of Induction Motor Drive Using Failure Mode Effects Analysis”** Indian patent, application Number-202341059758, Published in 06/10/2023
- **“Smart Controller for Energy Management of Isolated Solar powered Smart Home ”** Indian patent, application Number-202241054549, Published in 01/09/2023
- **“Smart Kitchen for Ingredient Measurement through Sensors and Recipe Prediction Using Machine Learning Approach ”** Indian patent, application Number-202241045212, Published in 01/09/2023
- **“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
- **“Solar and Wind Energy Powered Distribution Storage Management System”** Indian patent, application Number-202341006055, published in 10/02/2023
- **“Smart Energy Meter to Incorporate Demand Response”** Indian patent, application Number-202241076943, published in 06/01/2023

PROJECTS PROPOSALS

- **“Three Days National Level Symposium on Challenges and Opportunities of Industry 4.0 in Power System,”** Symposium proposal submitted to CSIR Human Resource Development Group in March 2024 (**Applied under examination**)
- **“Development of an Energy Trading and Management Framework for Consumer, Producer, and Prosumer-Driven Grid-Tied Microgrid”** project proposal submitted to SERB (SERB SURE project's file no SUR/2023/002858) in DEC-2023. (**Applied- Under Examination**)
- **“Application of Artificial Intelligence in Power Systems for Enhanced Efficiency and Sustainability”** A FDP proposal submitted to INSA in NOV-2023. (**Applied**)
- **“RenewaSmart: Renewable Energy Innovation Center”** A project proposal submitted to VGST under K-FIST- L1 : Karnataka Fund for Infrastructure Strengthening in Science & Technology (K-FIST L1) in May-2023. (**Applied**)
- **“Recent Trends in Power System Planning, Operation and Control”** A FDP proposal submitted to VGST in May-2023. (**Applied**)
- **“Cooperative Energy Prediction and Management of an Isolated Renewable Energy-Powered Smart Home for Enhancing Power Reliability”** A project proposal submitted to SERB (Start-up) in Feb-2023. (**Applied- Under Examination**)
- **“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)

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, G. K. Purushothama, Y. Nanjappa and R. Deshpande, "Auction-Based Single-Sided Bidding Electricity Market: An Alternative to the Bilateral Contractual Energy Trading Model in a Grid-Tied Microgrid,"** in *IEEE Access*, vol. 12, pp. 48975-48986, 2024, doi: 10.1109/ACCESS.2024.3384092.
2. **Manjunatha H M** “Machine Learning-Based Prediction of Lithium-Ion Battery Life Cycle for Capacity Degradation Modelling” has been published in Volume 21 - Issue 2 (February 2024) of World Journal of Advanced Research and Reviews (WJARR) <https://doi.org/10.30574/wjarr.2024.21.2.0553>
3. **Manjunatha H M, Supriya M R, Nagendra Prasad H K, Shri Harsha J, Santhoshkumar G M, “Auction-based single buyer energy trading framework in grid-tied microgrid with distributed energy storage and demand response using a multi-agent approach,”** e-Prime - Advances in Electrical Engineering, Electronics and Energy, (Elsevier Journal) Volume 6, 2023, 100367, ISSN 2772-6711, <https://doi.org/10.1016/j.prime.2023.100367>.
4. **Manjunatha H. M** “User-led approach for knowledge & information management in academia” International Research Journal of Modernization in Engineering Technology and Science Volume 5, pp 760-765, 2023
DOI : <https://www.doi.org/10.56726/IRJMETS44633>
5. **Nagendraprasad H. K, Manjunatha H. M, Jayaram M. V** “Energy Management of Renewable Energy Resources Powered Distribution Storage System in Grid-tied Microgrid” GRENZE International Journal of Engineering and Technology Volume-2 July 2023.
6. **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 (Elsevier Journal), Volume 4, 2023, <https://doi.org/10.1016/j.prime.2023.100136>.
7. **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>
8. **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.
9. **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).
 10. **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).
 11. 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
 12. **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).
 13. **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 (April2014),PP 487-500.

CONFERENCE:

1. **Manjunatha H. M** “Leveraging Internet of Things for Accurate Load Forecasting in Power Systems: Opportunities, Challenges, and Applications” ICWCIE-2024 June-2024 SSIT Tumkur . Published in Springer Lecture notes in Electrical Engineering.
2. **Manjunatha H. M** “Research optimization strategies on improving the mechanical property of glass fibre reinforced composite” AIP Conference Proceedings
3. **Manjunatha H. M** “**Energy Management of Renewable Energy Resources Powered Distribution Storage System in Grid-tied Microgrid**” “Fourteenth International Conference on “Advances in Computing, Control, and Telecommunication Technologies – ACT 2023” organized by Rajeev Institute of Technology, Hassan 573201,India, in collaboration with IDES and Grenze Scientific Society, India during June 15th and 16th,2023 (Yet to publish in Elsevier conference proceedings)
4. **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.
5. **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.
6. **H.M. Manjunatha** “*Wireless power transmission and governing of electric drives using mobile technology*” in the national conference held at NMAMIT, NITTE, 2009.

SKILLS

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

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**”
3. Successfully completed the **MathWorks** self-paced training course “**Power Electronics Onramp**”

ADDITIONAL INFORMATION

- BOS and BOE member for UG and PG in MCE Hassan (Autonomous institute under VTU) 2016-2023.
- Reviewer for the journal, “**Journal of Cleaner Production**” A Elsevier Publication, 2023
- Reviewer for the journal, “**International Journal of Renewable Energy Research**” Scopus Journal (Q2)
- 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” 23-27 NOV 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

REFERENCES

1. **Dr.G.K.Purushothama (Retired)**
Professor, Dept. of EEE, MCE, Hassan-573202
E-mail: gkuttama@gmail.com
Ph.No: 9008552156
2. **Dr. M.S.Raviprakash**
Principal SSIT, Tumakuru
E-mail: ravidmagge@rediffmail.com
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3. Dr. R. Prakasha

Professor and HOD, Dept. of EEE,
Acharya Institute of Technology, Bangaluru
E-mail: prakashr@acharya.ac.in
Ph.No: 9448694645

4. Dr. Raghavendra Deshpande

Associate Professor, Dept. of EEE, GSSSIET, Mysuru
E-mail: raagu.deshpande@gmail.com
Ph.No: 9538647166

DECLARATION

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

Place: Davanagere

Dr.Manjunatha H.M.