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23/1, NAYANDAHALLI,
Opp. GOPALAN ARCADE,
MYSORE ROAD, BANGALORE 560039

☎ : **99860 41498**

Dr.PREMA V.

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Career Objectives

To pursue a teaching career with a reputed institution where I can keep learning and improve my knowledge as well as make the best use of my knowledge and skills to benefit my institution and myself.

Experience

Teaching-16 Years
Industry - 1.5 Years

May 2020-till date
Associate Professor, B.M.S. College of Engineering, Bangalore
July 2008- April 2020
Asst. Professor at RV College of Engineering, Bangalore
Aug 2007-June2008
Senior lecturer at Sapthagiri College of Engineering, Bangalore
Jul 2005 –Aug 2007
Senior Lecturer at The Oxford College of Engineering, Hosur Road, Bangalore

Subjects handled:
Power Semiconductor devices, PWM converters and applications, Power Quality and Reactive Power Management, Solid State Power Converters, Switched Mode Power Converters, AC-DC Drives, DSP Applications to Drives, Electric Vehicles, Logic Design, Electronic Circuits, Signals & Systems, Power Electronics, Advanced Power Electronics, Signals & Systems, Digital Signal Processing, Electrical Power Utilization, Electrical and Electronic Measurements, Object Oriented Programming with C++, Basic Electrical Engg.,

Laboratories handled:
Power Electronics Lab, Circuit simulation & Measurements lab, Power Electronics lab, Analog Electronics Lab, Digital Electronics Lab, Digital Signal Processing Lab, Power System Simulation Lab.

Dec 2002 – April 2003
Apprentice trainee (Electrical) Biomedical Engg. Dept, Sri Chitra Tirunal Institute for Medical Sciences & Technology, Trivandrum, Kerala

Jan 2002 – December 2002
Junior Technical support engineer for Biomedical instruments at M/s Epsilon Diagnostics, Cochin, Kerala
Job profile : In- house servicing of biomedical equipments.

Educational Qualifications

PhD. (Electrical Engineering)

Title	:	Predictive Models for Power Management of a Hybrid Microgrid
University	:	Visvesvaraya Technological University, Karnataka
Year of Passing	:	2018

M.Tech (Power Electronics)

College University	:	BMS College of Engineering, Bangalore Viswesvaraya Technological University, Belguam
Marks Obtained	:	77.20%
Year of passing	:	2005
GATE score	:	92.29 %

PGDSSA(Post Graduates Diploma In Systems Software Administration)

	Institution	:	Winsoft Advanced School For Information Technology (WASIT), Thiruvananthapuram,
	Marks Obtained	:	76.17%
	Course duration	:	5 months (July 2001 to November 2001)
	B.Tech (Electrical & Electronics Engineering)		
	College	:	NSS College Of Engineering, Palakkad.
	University	:	Calicut University
	Marks Obtained	:	73%
	Year of passing	:	2001
	Pre Degree		
	College	:	Govt. College for women, Thiruvananthapuram
	University	:	Kerala University
	Marks Obtained	:	77%
	Year of passing	:	1997
	SSLC		
	School	:	Fort Girls Mission High School, Thiruvananthapuram
	Board	:	Board of Secondary Education, Kerala
	Marks Obtained	:	87%
	Year of passing	:	1995
Computer Proficiency	Operating System		WIN 3.2, WIN '95/'98/ 2000
	Packages	:	MS Office 2000
	Language	:	C, C++, VISUAL BASIC 6.0, Java Script,Java2.0,
		:	JDBC, ASP and HTML
	Database	:	Oracle 7.0, Access '98, SQL-SERVER-7

Research Activities:

Research Activities

PhD Details

- Registration: November 2012
- Completion of Course Work: May 2015
- Comprehensive Viva: August 2015
- Submission of Thesis: July 2017
- Final Viva Voce: July 2018

Publications

- International Journal: 16
- International Conference: 21
- National Conference: 02
- Books: 1
- Book Chapters: 2
- Attended 12 International conferences in India and 2 conferences abroad (Malaysia and Macau) in the past 5 years. A special session was proposed, conducted and chaired in TENCON 2015 at Macau.

Google Scholar citations	✦ Citations: 112 ✦ h-index-5 ✦ i10 index-3
Role as a reviewer	✦ Reviewed many papers in various journals and conferences. Received invitation to join the Editorial Board in the journal entitled Journal of Autonomous Intelligence published by EnPress Publisher. Reviewed papers in the following journals and conferences in the year 2018. ✦ Journal of Applied Energy ✦ Journal IEIB-Springer ✦ ICTIEE ✦ CoDIT ✦ NEFES ✦ IEEE Access
Funded Project	✦ Title: High Performance Self-cleaning solar PV Microgrid Funding Agency and Scheme: VGST, RGS Duration: 1 Year (2019-20) Amount: 5 Lakhs ✦ Title: Development of Novel Const effective Microgrid Funding Agency and Scheme: Dassault Systemes La Fondation Duration: 18 Months (2020-22) Amount: 9.5 Lakhs

Guest Lectures Delivered

1. Delivered a guest lecture on 'An Introduction to the software- R' at The Oxford College of Engineering, Bangalore on 11-02-2015
2. Chaired the special session on forecast and power management of Renewable Sources in a Micro Grid at TENCON 2015, Macau, China
3. Delivered one day hands-on training on signal processing toolbox as a part of 1week workshop on 'MATLAB for Electrical Engineers' at Global Academy of Technology, Bangalore on 29-07-2016
4. Delivered two days hands-on training on MATLAB for power system applications as a part of 2weeks workshop on 'MATLAB in Power systems' at BLDEA's CET, Vijayapur on 21st and 22nd Nov 2017
5. Delivered two days hands-on training on MATLAB toolboxes for neural network, fuzzy logic and GUI applications as a part of 2weeks workshop on 'MATLAB in Power systems' at MIT, Manipal on 30th Nov and 1st Dec 2017
6. Delivered technical talk on "Renewable Energy Forecasting" at JSS Science & Technology University, Mysore on 18th December 2018 as a part of one week workshop on "Recent Trends in Power Sector for Sustainable Development"
7. Delivered talk on "LATEX for Thesis Writing" at Dayanandasagar Academy of Technology & Management, Bangalore on 23th Feb 2019 as a part workshop on Research Methodology
8. Delivered 2 days hands-on training on 'ICT Enabled Teaching" at Basavakalyan College of Engineering. Bidar on 29th and 30th April 2019
9. Technical talk on software tools for renewable energy forecast at Malnad College of Engineering, Hassan on 12th July 2019 as a part on AICTE sponsored short term training program on 'Smart Grid and Smart City: Recent Trends'
10. Technical talk on 'Fuzzy controllers for Power Converters' at SJB Institute of Technology, Bangalore on 16th July 2019 as a part of one week workshop
11. One day hands-on training on 'Fuzzy Logic Controllers for Power Converters' at NMAM Institute

of Technology, NITTE, Karnataka on 17th July 2019 as a part of AICTE sponsored short term training on 'Control of power Electronic Converters for Smart Power Systems'.

12. Two days hands-on training on 'AI Applications to power system' at Osmania University, Hyderabad on 20-21 Nov 2019
13. Delivered 2 days hands-on training on 'ICT Enabled Teaching" at BNM Institute of Technology, Bangalore on 27-28 Jan 2020
14. Delivered lecture sessions through online on the topics "Artificial Neural Networks – Concepts", "ANN Applications" and Hands-on-sessions on "Fuzzy Logic using MATLAB" and "ANN using MATLAB" in the Faculty Development Programme on "AI Techniques to Electrical Engineering" held during 06th – 10th July 2020, organized by UGC-HRDC, JNTUH, Hyderabad on 07-07-2020 and 08-07-2020
15. Delivered 2 days hand-on sessions on "Introduction and advanced skills using Latex" for the workshop on "Technical Report Writing and LaTeX" conducted by RV College of Engineering, Bangalore on 25th and 26th August 2020.
16. Delivered expert sessions through online on the topics "Applications of ANN in Electrical Engineering" and "Fuzzy Controllers and "ANN using MATLAB" in the two weeks refresher Programme on "Soft Computing Techniques- Electrical Engineering" during 05th – 16th October 2020, UGC-HRDC, JNTUH, Hyderabad on 07-10-2020 and 08-10-2020
17. Delivered hand-on training on "Design of fuzzy logic controllers using MATLAB" in the three week online workshop on "MATLAB in interdisciplinary Engineering Research" held during 14th December 2020 to 2nd January 2021 at Vimal Jyothi Engineering college, Kerala
18. Delivered a hands-on session of 'Fundamentals of Control Systems', for the workshop on Simulation and Modeling of Control Systems using MATLAB and Simulink&; conducted by the Department of Electronics and Instrumentation, RVCE in association with IEEE RVCE Communications Society. On 27th May 2021
19. Delivered a talk on "Application of AI for forecasting and MPPT of renewable energy" as a part of AICTE Sponsored Online STTP on "Application of Machine Learning and Artificial Intelligence Techniques for Control of Future Grid" organized by the Department of Electrical and Electronics Engineering, NMAM Institute of Technology, Nitte, Mangalore on 5th August 2021
20. Delivered the following talk on "Introduction to Machine Learning & Applications in Power Systems" as a part of ATAL sponsored 5-day Online FDP on "Artificial Intelligence And Machine Learning Applications In Electrical Engineering", Organized by Department of EEE, CVR College of Engineering, Hyderabad on 10th August 2021
21. Delivered the following talk on "AI Based Forecasting techniques for wind and solar power generation" as a part of ATAL sponsored 5-day Online FDP on "Artificial Intelligence And Machine Learning Applications In Electrical Engineering", Organized by Department of EEE, CVR College of Engineering, Hyderabad on 11th August 2021

PUBLICATIONS:

International Journal

1. Prema V, Uma Rao K, "Development of statistical time series models for solar power Prediction", Renewable Energy, Elsevier, Volume 83, April 2015, DOI: 10.1016/j.renene.2015.03.038, pp. 100-199, 5 year Impact Factor 3.982

2. Prema V, Uma Rao, "Time series decomposition model for accurate wind speed forecast", Renewables: Wind, Water and Solar, Springer Open journal, (2015)2:18, DOI:10.1186/s40807-015-0018-9

3. Prema V, Uma Rao K, "Interactive Graphical User Interface (GUI) for Wind Speed Prediction Using Wavelet and Artificial Neural Network", Journal of The Institution of Engineers (India): Series B, 99(5), 467-477, May 2018, ISSN 2250-2106, https://doi.org/10.1007/s40031-018-0339-3

4. Uma Rao K., Prema, V., "An Innovative Multi-Disciplinary Active Learning Task Towards OBE-A Case Study" Journal of Engineering Education Transformations, [S.l.], jan. 2016. ISSN 2394-1707. Pp: 584-588 Available at: http://www.journaleet.org/index.php/jeet/article/view/85677, doi:10.16920/jeet/2016/v0i0/85677.
5. Uma Rao K., Prema, V., "Personalized assignments to address skills in a heterogeneous classroom: A case

study of a course on 'Smart grid technologies", Journal of Engineering Education Transformations, [S.l.], jan. 2017. ISSN 2394-1707, Vol.30 Issue 3, Pp: 584-588 Available at: http://www.journaleet.org/index.php/jeet/article/view/110591/77726 doi:10.16920/jeet/2016/v0i0/85677.

6. Shantha kumari K. Meena P. Uma Rao K. Prema V., " Modeling , Parametric estimation and testing of a low power PV panel", International Journal on Energy Conservation (IRECON), Vol.1, N.4, July 2013, ISSN 2281-5295, pages 196-202, indexed by Copernicus
7. Prema V and Uma Rao K, "Application of Curve Fitting and Surface Fitting Tools for High Leverage Points and Outliers of Wind Speed Prediction", International Journal of Science and Research (IJSR), Volume 4 Issue 4, April 2015, pp. 2585-2588, Impact Factor 4.43
8. Sarkara, S., K, U. R., V, P., Bhargav, J., & T.R, S. (2019). Novel Modular LS-SVM Based Regression Model for Prediction of Solar Power. VTU Journal of Engineering Sciences and Management, 1(1), 1-7.
9. V. Prema, Sushmita Sarkar, Uma Rao and Amrutha Umesh, "LSTM Based Deep Learning Model For Accurate Wind Speed Prediction", ICTACT Journal On Data Science And Machine Learning, December 2019, Volume: 01, Issue: 01
10. Uma Rao, Prema V, K N Subramanya, "Plickers: An ICT tool for formative assessment and feedback", Journal of Engineering Education Transformations, Volume 33, January 2020, Special issue, eISSN 2394-1707, pp 290-295
11. C. Ramachandra Rao, V. Prema, A.N. Nagashree, R.S. Geetha, Development of virtual lab module for wind and solar energy systems using 3DEXPERIENCE platform of Dassault Systemes, Materials Today: Proceedings, May 2021, ISSN 2214-7853, https://doi.org/10.1016/j.matpr.2021.04.339. (https://www.sciencedirect.com/science/article/pii/S2214785321032594)
12. Sushmita Sarkar, M.S. Bhaskar, K. Uma Rao, Prema V, Dhafer Almakhles, Umashankar Subramaniam, Solar PV network installation standards and cost estimation guidelines for smart cities, Alexandria Engineering Journal, 2021, ISSN 1110-0168, https://doi.org/10.1016/j.aej.2021.06.098.
13. Mr.Ramachandra Rao C., Prema V, "Design and Development of stand-alone PV/WIND Microgrid using 3DEXPERIENCE" in Zeichen Journal (Scopus Indexed), Volume 7, Issue 10, ISSN: 0932-4747
14. Rajalakshmy N., Prema V, "MPPT in PV array under Partial Shading using GWO,PSO and P&O" in The International Journal of Analytical & Experimental Modal Analysis(Scopus Indexed), ISSN 0886-9367
15. P. Meena, V. Prema, M. S. Bhaskar and D. Almakhles, "Bi-Furcated Stator Winding Configuration in Three-Phase Induction Generators for Wind Power Generation," in IEEE Access, November 2021 doi: 10.1109/ACCESS.2021.3127526.
16. V. Prema, M. S. Bhaskar, D. Almakhles, N. Gowtham and K. U. Rao, "Critical Review of Data, Models and Performance Metrics for Wind and Solar Power Forecast," in IEEE Access, vol. 10, pp. 667-688, 2022, doi: 10.1109/ACCESS.2021.3137419, January 2022

International Conference

1. Prema V, Dr. K Uma Rao and Amit Closepet, "Optimisation of Stand-Alone Solar Plant with GUI Support", 7th international Conference on Advanced Computing and Communication Technologies (ICACCT-2013) on 16th Nov 2013 at APIIT, Panipat, India. ISBN: 978-93-83083-38-1, Volume-4, page 210-216
2. Shanta Kumari, K, Prema V., Uma Rao K. and P.Meena, "Efficient MPPT for a Stand-alone Photovoltaic System", 2013 International Conference on Renewable Energy and Sustainable Energy [ICRESE'13] on 5th & 6th December 2013 at Karunya University, Coimbatore, India. ISBN 978-1-4799-2075-4/13, page 103-110
3. Prema V., Uma Rao K, "Predictive Models For Power Management Of A Hybrid Microgrid-A Review", 2nd International Conference on Advances in Energy Conversion Technologies (ICAECT 2014) on 23rd -25th Jan 2014 at Manipal Institute of Technology, Manipal. ISBN 978-1-4799-2206-2/14, page 7-12
4. Prema V, Dr. K Uma Rao and Amit Closepet, "A Novel Predictive DSM Strategy to Match Power Outage Pattern for Optimal Cost with Solar and Diesel Power", IEEE Innovative Smart Grid Technologies Conference - Asia (ISGT ASIA 2014) on 20 - 23 May 2014 at Berjaya Times Square Hotel, Kuala Lumpur, Malaysia.
5. Smitha K., Prema V, Uma Rao K, Nalina U. and Bake Harsha, "Improvement of time series models to handle extreme data in solar irradiance prediction", Second International Conference on Emerging Research in Computing, Information, Communication and Applications (ERCICA-2014) on 1-2 Aug 2014 at NITTE Meenakshi Institute Of Technology, Bangalore, ISBN-9789351072638
6. Nalina U., Prema V, Smitha K, and Uma Rao K., "Multivariate Regression for Prediction of Solar Irradiance",International Conference on Data Science & Engineering (ICDSE-2014) on 26-28 Aug 2014 at Cochin University of Science & Technology, Kerala
7. Arjun N.N., Prema V., Krishna Kumar D., Prashanth P., Sumantha Preekshit V. and Uma Rao K., "Multivariate Regression models for prediction of wind speed", on 26-28 Aug 2014 at Cochin University of Science & Technology, Kerala

8. Rajananda Kishore G, Prema V and Dr. K. Uma Rao, "Multivariate Wind Power Forecast using Artificial Neural Network", at IEEE Global Humanitarian Technology Conference - South Asia Satellite (GHTC-SAS-2014) on 26-27 September 2014 at Hotel Uday Samudra, Thiruvananthapuram
9. Uma Rao K and Prema V., "Simulation Tools for Introduction of DSP in a UG Program : A Teaching Experience", at 2nd International Conference on Transformations in Engineering Education (ICTIEE 2015) on 6-8 Jan 2015 at BMSCE, Bangalore
10. Prema V., Swagata Dutta, K. Uma Rao, Shriya Shekhar and B.S Kariyappa. "Effective Battery Usage Strategies for Hybrid Power Management", 2015 International Conference on Power and Advanced Control Engineering (ICPACE), 12-14 Aug 2015, BNMIT, Bangalore, pp 99-102
11. Prema V., K. Uma Rao, Jnaneswar B.S., Badarish C.A., Patil Shreenidhi Ashok, Siddarth Agarwal, "Application of Hybrid Neuro-Wavelet Models for Effective Prediction of Wind Speed", International Symposium on Intelligent Systems Technologies and Applications (ISTA 2015), 10-13 Aug 2015, Kochi
12. Prema V., Swagatha Datta, Uma Rao K, "An Effective Dispatch Strategy for Hybrid Power Management", TENCON 2015, 1-4 Nov 2015, Macau, China
13. Prema V., Jnaneswar B.S., Badarish C.A., Patil Shreenidhi Ashok, Siddarth Agarwal, Uma Rao K, "Novel Training Strategies for Wavelet-Neuro Models for Wind Speed Prediction", TENCON 2015, 1-4 Nov 2015, Macau, China
14. Prema V, Uma Rao K, "Sizing of Microgrids for Indian Systems using HOMER", IEEE First International Conference on Power Electronics, Intelligent Control and Energy Systems (ICPIECES 2016), Delhi Technological University, Delhi, 4-5 July 2016, pp 995-999
15. Uma Rao K, Prema V, "Personalized assignments to address skills in a heterogeneous classroom: A case study of a course on 'Smart grid technologies", at 4th International Conference on Transformations in Engineering Education (ICTIEE 2017) on 6-8 Jan 2017 at Vardhaman College of Engineering, Hyderabad.
16. Deepak Vasanth Kallanavar, Prema V, Ganesh Shankar, "Power Supply for Smart Meters", at International Conference on Smart Grids, Power and Advanced Control Engineering (ICSPACE 2017) at GATT, Bangalore on 17 – 19 Aug 2017. Pp 76 to 81
17. Prema V, Uma Rao K, "Integrated Intelligent Power Management Strategy (IIPMS) to optimize green energy usage in standalone microgrid", Proceedings of the 20th National Power Systems Conference (NPSC) - 2018, December 14-16, NIT Tiruchirappalli, India
18. Uma Rao, Prema V, K N Subramanya, "Plickers: An ICT tool for formative assessment and feedback", The Seventh International Conference on Transformations in Engineering Education (ICTIEE' 2020), Jan 5-8 2020, Hyderabad
19. Uma Rao, Prema V, K N Subramanya, "Design of an effective Flipped Classroom session for enhanced learning in Electrical Engineering", The Seventh International Conference on Transformations in Engineering Education (ICTIEE' 2020), Jan 5-8 2020, Hyderabad
20. Ramachandra Rao C, Prema V., Dr. A.N. Nagashree and Dr.R.S. Geetha, 'Development of Virtual Lab Module for Wind and Solar Energy Systems using 3DEXPERIENCE Platform of Dassault Systemes' in the International conference iSMaRT 2021.
21. M. Raman, V. Champa and V. Prema, "State of Health Estimation of Lithium Ion Batteries using Recurrent Neural Network and its Variants," 2021 IEEE International Conference on Electronics, Computing and Communication Technologies (CONECCT), 2021, pp. 1-6, doi: 10.1109/CONECCT52877.2021.9622557.

Book & Book Chapter

1. Sushmita Sarkar, K. Uma Rao, V Prema, Sharma C A Anirudh, Jayanth Bhargav, Shrikesh Sheshaprasad 'User Interactive GUI for Integrated Design of PV Systems', Chapter 9, Intelligent Renewable Energy Systems, Wiley- Scrivener Publishing LLC, Print ISBN:9781119786276 |Online ISBN:9781119786306 |DOI:10.1002/9781119786306, Jan 2022, pp 243-265
2. Uma Rao K, Prema V. 'Smart Grid-Fundamentals, Design, Technology, Applications, Communications and Security', published by Wiley India Pvt. Ltd. ISBN: 978-93-5425-321-9
3. Berretti, S. and Thampi, S.M. and Srivastava, P.R., "Intelligent Systems Technologies and Applications", Volume 1, pages 345-354, Year 2015, Springer International Publishing, ISBN 9783319230368, url: https://books.google.co.in/books?id=D111CgAAQBAJ

Date of Birth	20-05-1980 **Sex** : Female
Marital Status	Married
Nationality	Indian.
Languages Known	English, Hindi, Malayalam, Tamil, Kannada.

I do hereby declare that the above information is true to the best of my knowledge

Date: 19 January 2022

Place: Bangalore