



## Dr. Gaddam Mallesham

Professor, Dept of EE, UCE, OU

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### Education

- **Yale University** New Haven, USA  
*Post Doctoral* 2015 - 2016
- **Indian Institute of Technology (IIT) Delhi** New Delhi, India  
*PhD* 2009 - 2013  
Doctor of philosophy (Ph.D.) in Electrical Engineering from Indian Institute of Technology, Delhi (IIT -Delhi) with the thesis title: " Frequency Control of a Smart Microgrid"- based on Renewable Energy and control strategy.
- **Indian Institute of Technology (IIT) Delhi** New Delhi, India  
*M.Tech* 2000 - 2002  
Master of Technology Degree (M. Tech.) in Control Engineering and Instrumentation from Indian Institute of Technology, Delhi (IIT - Delhi) with thesis title: "Short Term Load Forecasting Using Neuro Fuzzy Systems"- based on Forecasting of Load for the proper power generation.
- **University College of Engineering, Osmania University** Hyderabad, India  
*B.E* 1996 - 2000  
Bachelors Engineering degree (B.E.) in Electrical and Electronics Engineering, University College of Engineering, Osmania University, Hyderabad.
- **Board of Intermediate Education** Hyderabad, India  
*Intermediate* 1993 - 1995  
Intermediate, Board of Intermediate Education, Ideal Junior College, Dilsukh Nagar, Hyderabad, Telangana
- **Board of Secondary Education** Nalgonda, India  
*S.S.C* 1986 - 1993  
SSC, Board of Secondary Education, AP Residential School Sarvail, Nalgonda, Telangana,

### Areas of Research Interests

- Soft Computing Applications to Design/ Control of a microgrid/ smart grid based systems and power quality problems
- Renewable Energy, Power System Control, Optimization
- Control , Automation and Optimization

## Awards, Grants & Honours

1. **Postdoctoral Fellowship** position in the **Center for System Science in the Electrical Engineering Department at Yale University, USA.**
2. **Raman Fellowship for Postdoctoral Research** for Indian Scholars in the United States to be awarded by **University Grants Commission (UGC), 2014.**
3. **POSOCO power system award 2013 (Power System Operation Corporation)** under the doctoral category for the work on **Frequency Control of Smart microgrid and a future necessity of Indian power system.**
4. **ISCA Young engineer presentation (2013)**, on Photovoltaic based Green Sources for Addressing the Energy Needs and Enhancing Energy Security to the Agricultural Sector.

## Administrative Experience in University/Other

- **Convener**, International Conference on Innovative Technologies in Engineering (ICITE 2018), to be held in 11th-13th April 2018, Organizing by University College of Engineering, Osmania University, Hyderabad.
- **Special Officer**, Automation, Osmania University (2017- Till date).
- **Vice Chair, IEEE PES/IAS/PELS Joint Chapter**, Hyderabad Section, India (2018- Till date).
- **Member of Governing Body**, Adarsha Degree College, Siddipet, Medak. (2016- Till date)
- **Member, Building Advisory Committee**, ICMR - National Institute Nutrition, Hyderabad. (2016- Till date)
- **Secretary, IEEE PES/IAS Joint Chapter**, Hyderabad Section, India (2005-2007).
- **Assistant Chief Warden**, University College of Engineering, Osmania University (2007-2008).
- **Warden**, University College of Engineering, Osmania University (2004-2007).
- **Student Adviser**, University College of Engineering, Osmania University (2003-2008).
- **General Secretary**, Alumni Association, University College of Engineering, Osmania University (2005-2008).
- **Secretary**, Anti-ragging committee, Osmania University (2003-2008).
- **Faculty Coordinator**
  - National Level Student Annual College Cultural Fest: ALLGORYTHMS (2003-2006).
  - National level Student Annual Technical Symposiums : Techsonance (2002-2008).
  - State level Renewable Energy Day, (2004 -2005) by the NEDCAP, Govt. of Andhra Pradesh.
- **Organizing Secretary**, EAMCET MOCK COUNSELLING (2006-2008).
- **Organizing Secretary**, 5 K RUN, at the state level in 2008.

- **Organizing Secretary**, 5 K RUN Save Energy, at the state level in 2017.

### Reviewer

- IEEE Systems Journal
- IET Renewable Power Generation
- International Journal of Electric Power Energy Systems
- International and National Conference Proceedings

### Workshops / Training Programs / Lectures Organized/Coordinated

- **Fifth Diamond Jubilee Endowment Lecture on From Complexity to Mutual Adaptation**, by **Prof. Kumpati S. Narendra**, Harold W. Cheel Professorship of Electrical Engineering at Yale University, USA, on 7th Dec., 2017.
- **Fourth Diamond Jubilee Endowment Lecture on Diamond Jubilee Endowment Lecture** on Distribution Systems with High Photovoltaic (PV) Penetration Modeling , Analysis and Main Findings, by **Prof. Vijay Vittal, Ira A. Fulton Chair Professor** in the School of Electrical, Computer and Energy Engineering at Arizona State University, on 6th Oct., 2017.
- **A three-day workshop on Solar Photovoltaic Training Program** from 2nd - 4th March 2015, Department of Electrical Engineering, University College of Engineering, OU.
- **A two-day workshop on Artificial Intelligence Techniques in Electrical Engineering**, under TEQIP from 20th - 21st Feb., 2009.

### List of Research Publications

1. **G. Mallesham** and D. Krishna, “Optimal Frequency Control of a Microgrid”, International Conference on Recent Innovations in Electrical and Electronic Engineering-2017 (ICRIEEE-2017), Helix Vol. 8(2), pp.3079-3086, 28<sup>th</sup> February, 2018.
2. **G. Mallesham**, B. Priyadarshini, G. Balaji and D. Krishna, “Tuning of Microgrid Controllers using Cuckoo Search Algorithm”, International Conference on Recent Innovations in Electrical and Electronic Engineering-2017 (ICRIEEE-2017), Helix Vol. 8(3): pp.3330-3335, 30<sup>th</sup> April 2018.
3. **G. Mallesham** and CH. Siva Kumar, “A Comprehensive Review on Control Strategies of Series and Shunt Active Filter Based Custom Power Device : UPQC to Improve Power Quality”, IJRECE Vol.6 Issue 2 APR.- JUNE 2018 ISSN: 2393 - 9028 (PRINT) — ISSN: 2348 - 2281 (Online) International Journal of Research in Electronics and Computer Engineering.
4. **G. Mallesham** and CH. Siva Kumar, “Enhancement of Power Quality using UPQC for A Environmentally Clean and Efficient Hybrid PEMFC and PMSG Based Wind Energy System Connected to Weak Grid”, IJRECE V OL . 6 ISSUE 2 April-June 2018 ISSN: 2393 - 9028 (P RINT ) — ISSN: 2348 - 2281 (Online) International Journal of Research in Electronics and Computer Engineering.

5. **G. Mallesham** and CH. Siva Kumar, "Enhancement of power quality using UPQC for a hybrid SOFC and PMSG based wind energy system connected to weak grid," International Conference on Recent Innovations in Electrical and Electronic Engineering-2017 (ICRIEEE-2017), HELIX. Vol 8(3): pp. 3313-20, 2018 Jan 1.
6. **G. Mallesham** and CH. Siva Kumar, "Enhancement of power quality using UPQC for hybrid PEMFC and DFIG based wind energy system connected to weak grid," International Conference on Technological Advancements in Power and Energy (TAP Energy) 2017 Dec 21 (pp. 1-6). IEEE.
7. **G. Mallesham** and CH. Siva Kumar, "Multiobjective Microgenetic Algorithm Based Planning and Sizing of Distributed Generation with Different Load Models," IEEE International Conference on Innovative Technologies in Engineering 2018(ICITE-2018), OU.
8. **G. Srikanth**, **G. Mallesham** and **M. Sudhakar**, "Neuro Fuzzy Inference TCSC Based Multi Machine System Stability Enhancement of DFIG Off shore Wind Farm," IEEE International Conference on Innovative Technologies in Engineering 2018(ICITE-2018), OU.
9. **S. Mishra**, **G. Mallesham** and **A.N.Jha**, Design of Controller and Communication for frequency regulation of a Smart Microgrid, IET Renew. Power Gener., vol. 6, no. 4, pp. 248258, July 2012.
10. **G. Mallesham**, **S. Mishra**, **A. N. Jha**, Automatic Generation Control of Microgrid using Artificial Intelligence techniques, Proc. of 2012 IEEE Power & Energy Society General Meeting, San Diego, USA, July 2012.
11. **G. Mallesham**, **S. Mishra**, **A. N. Jha**, Automatic Generation Control of Microgrid using Artificial Intelligence techniques, Proc. of 2012 IEEE Power & Energy Society General Meeting, San Diego, USA, July 2012.
12. **S. Mishra**, **A.N. Jha**, **G. Mallesham**, Ziegler-Nichols based controller parameters tuning for load frequency control in a microgrid, IEEE International Conference on Energy, Automation, and Signals (ICEAS-2011),(28th 30th December, 2011).
13. **G.Mallesham**, **S.Mishra**, **A.N.Jha**, Tuning Of Parameters In Microgrid Using Biogeography Based Optimization (BBO)", Southern African Universities Power Engineering Conference (SAUPEC 2011), University of Cape Town, South Africa, 13 to 15 July 2011. Year 2010
14. **S.S. Murthy**, **S. Mishra**, **G.Mallesham**, **P. Chandra shekar**, Voltage and Frequency Control of Wind Diesel Hybrid System with Variable Speed Wind Turbine, Proc. Of IEEE International Conference on Power Electronics, Drives and Energy Systems for Industrial Growth, India, December, 2010.
15. **G. Mallesham**, **S. Mishra**, and **A. N. Jha**, "Optimization of Control Parameters in AGC of Microgrid using Gradient Descent Method," in 16th National Power Systems Conf. (NPSC-2010), Hyderabad, 2010, pp. 37-42 Year 2009
16. **G. Mallesham**, **S. Mishra**, and **A. N. Jha**, "Maiden Application of Ziegler- Nichols Method to AGC of Distributed Generation System Proc. Of Int. Conf. Power Systems Conf. and Exposition, Seattle, March 2009, pp. 1-7 Year 2008
17. **G.Mallesham**, **Vineela**, **Suraj** Load Frequency Control Using Artificial Intelligence Method, 2nd National Conference on Advances in Energy Conversation Technologies (AECT-2008), IEEE PES, Bangalore Chapter, 18th 19th April 2008.
18. **G.Mallesham**, **B. Mangu**, **A.Suresh**, **Dinesh Reddy** Non Linear Dynamic Systems and Chaos- A Case Study in Electrical Engineering, 2nd National Conference on Advances in Energy Conversation Technologies, AECT-2008, MIT Manipal, Manipal, 18th 19th April 2008. Year 2007

19. **G.Mallesham**, K.B.Venkata Ramana, Improvement in Dynamic Response of Electrical Machines with PID & Fuzzy Logic Based Controllers, World Congress on Engineering and Computer Science 2007, WCECS 2007, San Francisco, USA, 24 - 26 October 2007.
20. **G.Mallesham**, K.B. Venkata Ramana, Speed Control of DC Motor Using Fuzzy Logic Based Set-Point Weight Tuning of PID Controllers, at International Conference on Electrical Engg. Design and Technology, Hamamet, Tunisia, 5-6 November 2007.
21. A.Rajani, **G.Mallesham**, Flight Vehicle Stabilization Using Fuzzy Logic Controller, National Systems Conference, Manipal, 14 -15, December 2007. Year 2006
22. **G.Mallesham**, A.Rajani, Automatic Generation Control Using Fuzzy Logic, Proceedings of the eighth IASTED International Conference on Control and Applications (CA 2006), pp:188-194, Montreal, Canada, May 24 - 26, 2006.
23. **G.Mallesham**, A.Rajani, Automatic Tuning of PID Controller Using Fuzzy Logic, 8th International Conference on Development and Application Systems, (DAS 2006), pp: 122-127, Suceava, Romania May 25 - 27, 2006.
24. **G. Mallesham**, Anand Keerti, Inrush Current Control of a DC-DC Converter using MOSFET at IEEE International Conference on Power Electronics, Drives and Energy Systems for Industrial Growth 2006 (PEDES-2006) to held in December 2006. Year 2005
25. **G. Mallesham**, A.N.Jha, A fine short term load forecasting using neural networks and fuzzy neural networks-WSEAS-Transactions on Information science and Applications, Issue 10, Volume 2, p 1589- 1594, Corfu Island, Greece, 2005.
26. **G. Mallesham**, A.N.Jha, Artificial Intelligence techniques and application in electrical power systems, Proceedings of the 5th Int. Conf. on Power Systems and Electromagnetic Compatibility, p 224-229, Corfu, Greece, 2005. Year 2003
27. **G. Mallesham**, A.N.Jha, A short term load forecasting using Fuzzy Logic- presented in International Conference on Digital Aided Modelling and Simulation (An evolutionary approach) held at Coimbatore Institute of Technology, Coimbatore in Jan 2003. Year 2002
28. **G. Mallesham**, A.N.Jha, Short term load forecasting using Artificial neural networks, National Conference on Sensors and Instrumentation ,5-6th January,2002 at Hyderabad.

### Foreign Assignments

Visited different countries for the exchange of research work. {Canada, USA, Greece, Finland, Tunisia, South Africa}.

### Extra Curriculum Activities

#### PROFESSIONAL MEMBERSHIPS:

- IEEE Member/ Power and Energy Society (94405316)
- ISC Life Member (L 34528)
- IET Member

**REVIEWER:**

- IEEE Systems Journal, IET Renewable Power Generation, International Journal of Electric Power Energy Systems.
- International & National Conference proceedings. Chaired, International Conference Sessions.

**GUEST LECTURES AND WORKSHOPS ORGANIZED:**

- Two day training program on MATLAB to researchers Indian Institute of Technology Delhi, New Delhi, India during 22-23rd January 2010.
- One week workshop on MATLAB to beginners at Indian Institute of Technology Delhi, New Delhi, India during 5-12th November, 2010.
- Guest Lectures on MATLAB and its applications in Electrical Engineering (Power systems and Control Engineering) at Sreenidhi Institute of Technology, Ghatkesar.
- Conducted training programs on MATLAB, Fuzzy Logic, Neural Networks etc., in various Engineering colleges (MJIT, MVSR, CBIT, Sri Indu, Bharat, St. Maries, CVSR, CMR etc.) in Andhra Pradesh, India Guest lecture on Adaptive Control systems at BHEL, Hyderabad.

**SPORTS AND GAMES:**

- Represented Andhra Pradesh and participated in National Level-Cross Country Athletics twice at Bangalore and Haridwar.
- Participated in State Level Foot-ball championship twice in Andhra Pradesh.

**Personnel Details**

**Fathers Name:** Late Sri. Gaddam Yellaiah  
**Mothers Name:** Late Smt. Gaddam Mutthamma  
**Date of Birth:** 20th August 1977  
**Nationality:** Indian  
**Permanent Address :**  
Gaddam Mallesham  
Room Number:108,  
Department of Electrical Engineering,  
University College of Engineering,  
Osmania University, Hyd -7, Telangana.  
**Languages Known:** Telugu, English and Hindi  
**Phone:** +91 9502133334

( Gaddam Mallesham)