General Information

Name	**Dr. G. Yesuratnam**
Date of Birth	01-07-1972
Designation	Professor
Phone No	Mobile: 9963905932
	(Off): 0407098628
Email ID	ratnamgy2003@gmail.com

Areas of Research Interest

Computer aided power system analysis, Reactive power optimization, Power systemsecurity, Voltage stability, AI applications in power systems and Gas Insulated Substations

Academic Qualifications

- **Ph.D.** in Electrical Engineering from Indian Institute of Science, Bangalore in 2007
- **M.Tech.** in Power Systems Engineering, Regional Engineering College, Warangal in 1997
- **B.Tech.** in Electrical and Electronics Engineering, JNTU, Hyderabad in 1995

Teaching Experience - 24 years

- 2013 –till date**Professor**, Department of Electrical Engineering, Osmania University, Hyderabad.
- 2007-2013 **Associate Professor**, Department of Electrical Engineering, Osmania University,Hyderabad,
- 1997-2007 **Assistant Professor**, Department of Electrical Engineering, Osmania University, Hyderabad.
- January1997 to August 1997 **Associate Lecturer**, SRRS Government Polytechnic, Sircilla, Telangana

Administrative Assignments

- Head of the Department of Electrical Engineering in Osmania University from March 2021 to till date.
- Director, BC Cell of Osmania University from December 2020 to till date, Hyderabad.
- NBA coordinator,University College of Engineering, Osmania University, from 2016 to 2020 foroutcome-based education.
- Director, Diamond Jubilee Library of the University College of Engineering,Osmania University from 2017 to 2018
- Head of the Department of Electrical Engineering in Osmania University from Jan 2011 to 2013.
- Nodal Officer (Procurement) of University College of Engineering, OU for TEQIP World Bank Project from 2008 to 2013.

Chairman, Board of Studies of Electrical Engineering, Osmania University from 2009 to 2011.

Research Guidance

No. of Ph.D.s awarded - 04

- **Mr. V. Punnaiah:** Ph.D. thesis entitled "Performance Analysis of Solar Thermal Powered Systems and its Impact on Electrical Distribution Feeders, March 2018.
- **Mr. K. Rayudu**: Ph.D. thesis entitled "Optimal reactive Power Dispatch using GA, ACO, AC and BAT Algorithms", June 2019.
- **Mr. G. Mahender:** Ph.D. thesis entitled "Effect of On-Load tap changer transformer operation on voltage stability under various operating conditions, October 2019.
- **Mrs. N Srilatha:** Ph.D. thesis entitled "Congestion Management in Power System Using Artificial Intelligence", August 2021.

No. of Ph.D.sguiding - 08

Interaction With Outside World Member of National Bodies:

- Expert committee member of National Board of Accreditation (NBA) for evaluation of electrical engineering programs in Tier I and Tier II formats.
- Expert committee member of National Board of Accreditation (NBA) for evaluation of electronics engineering programs.
- Expert committee member of National Board of Accreditation (NBA) for evaluation of Polytechnic electrical engineering programs
- Resource person for training of Master Trainers/Evaluators across the country in Workshops organized by NBA, Delhi.
- Nominated as an External Expert for DRTC Assessment Board -2017 Defense Research and Development Organization (DRDO), Delhi,
- Nominated as an External Expert for ISRO Selection Committee,

Member of State Bodies:

- Member of Board of Studies of Electrical Engineering, Jawaharlal Nehru Technological University (JNTU), Hyderabadseveral affiliated colleges of Osmania University.
- Member of Board of Studies of Electrical Engineering, Kakatiya University (KU), Warangal.
- Member of Board of Studies of Electrical Engineering, Sri Venkateswara University(SVU), Tirupathi.
- Member of Board of Studies of Electrical Engineering, Rajeev Gandhi University of Knowledge Technologies (RGUKT), Basara.
- Chairman, Board of Studies of Electrical Engineering, Mahatma Gandhi University(MGU), Nalgonda.
- Selection committee member of Andhra Pradesh Public Service Commission and   Telangana State Public Service Commission.
- Member of selection committee of JNTU, RGUKT, Mahatma Gandhi University, Andhra University and Colleges affiliated to Osmania University, Kakatiya   University and JNTU
- Subcommittee member of Mahatma Gandhi University, Nalgonda for identifying the equipment to establish laboratories and to finalize the solar tender documents.

Serving as Peer Reviewer of International Journals

- IEEE Transactions on Evolutionary computation
- International Journal of Applied Energy, Elsevier publications
- International Journal of Neural Computing and applications, Springer publications
- International Journal of Advances in Electrical and Electronics Engineering
- International Journal of Power and Energy Conversion (Inderscience Journal)
- International Journal of Advances in Electrical and Electronics Engineering

List of Research Publications
Journals

- "**Comparison of Optimum Reactive Power Schedule with Different Objectives Using LP technique,**" *International Journal of Emerging Electric Power Systems*, CANADA, and Vol.7: No.3, Article 4, 2006.
- "**Optimum Reactive Power Dispatch and Identification of Critical On Load Tap Changing (OLTC) Transformers**" *International Journal of Electric Power Components and Systems*. Taylors and Francis Group, UK, Vol.35, Issue 6, 2007, pp. 655-674.
- "**Congestion management in open access based on relative electrical distances using voltage stability criteria,**" *International Journal of Electric Power Systems Research* USA, Vol.77, No.12, October 2007, pp.1608-1618
- "**Fuzzy Expert Approach with Curtailed Controllers for improved Reactive Power Dispatch,**" *International Journal of Emerging Electric Power System*, CANADA, and Vol.8: No.3, Article 7, 2007.
- "**Optimal Reactive Power Dispatch in a Large Power System with AC/DC and FACTS controllers**" *IET Generation, Transmission and Distribution*, USA, Vol.2, issue 1, January 2008, pp: 71-81.
- "**Risk/Return Profile and Input/Output Variables of Solar Water Heating (SWH) System and Policy Frame work in India,**" *International Journal of Electrical Engineering* ISSN 0974-2158 Vol.4 Number 1 (2011), pp.115-129.
- "**Estimation of Annual Solar Radiation from measured temperatures by using Temperature-based (TB) approach in different cities in India**". *Sustainable Cities and Society, Elsevier,*1 (2011) pp.187-194.
- "**Genetic Algorithm optimization of Generator Reactive Power**" *an International Journal of AASRI Procedia, Elsevier Publications* Vol.2, pp.192-198, 2012

- "**Energy-Efficiency Potential in the Building Sector and Potential for Energy-Efficiency Improvements in India**" *International Journal of Advanced Renewable Energy Research,* Vol.1, Issue.8, pp.452-460, 2012.
- "**Analysis of opportunities and challenges of solar water heating systems (SWHS) in India: Estimates from the energy audit surveys & review**", *Renewable & Sustainable Energy Reviews, Elsevier*, Vol.16, January 2012 pp.668-676.
- "**Bing-Bang and Big-Crunch (BB-BC) and Firefly Optimization (FFO): Application and Comparison to Optimal Power Flow with Continuous and Discrete Control Variables**", *International Journal on Electrical Engineering and Informatics*, Volume 4, number 4, December 2012.
- "**Emission Constrained Optimal Power Flow by Big-Bang and Big-Crunch Optimization**", *Journal of Electrical Systems*, Vol.9, no. 2, pp 256-266, June 2013.
- "**Optimal Power Flow with Valve Point Loading effects of Cost Function and Mixed–Integer Control Variables using Big-Bang and Big-Crunch Optimization**", *Journal of Advanced Computer Science & Technology*, Vol.2 ,no.1,2013.
- "**Significance of design for energy conservation in buildings: building envelope components**", *Int. J. Energy Technology and Policy*, Vol. 9, No. 1, 2013, pp.34-52. Copyright © 2013 Inderscience Enterprises Ltd.
- "**Optimal Design & Analysis of Solar Water Heating System using Solar Factors for Energy Efficiency & Thermal Performance**". *Universal Journal of Renewable Energy* 2 (2014), 112-125 www.papersciences.com
- "**Reactive Power Optimization of Power System based on Particle Swarm Optimization and Non-Linear Programming**", *International Journal of Recent Trends in Engineering & Technology* no.11, 2014.
- "**Performance Analysis of Solar Water Heating System in Centre for DNA Fingerprinting and Diagnostics (CDFD)**", Southern Region of India, Environment, Development and Sustainability Vol.16, no.6, pp 1223-1234, 2014.
- "**Analysis of Yearly Solar Radiation by Using Correlations based on Ambient Temperature: India**", *Sustainable Cities and Society, Elsevier*. Vol.11, pp 16-21, 2014.
- "**Harnessing Clean WATTS from SUN: India's Contribution, a Techno Economic Analysis and Empowering the Future of Energy Sector**", *Sustainable Cities and Society, Elsevier*. Vol.12, pp 69-75, 2014.
- "**Multi-Objective optimization using Big-Bang Big-Crunch based Optimization: Application to optimal Economic Environmental Dispatch**",*Journal of Electrical Systems,* 2015, Vol. 11, Issue 4, p476-492.
- "**Optimisation of Electrical Distribution System by Using Solar Thermal Powered Systems and Its Impact on Electrical Distribution Feeders**", *EPE Journal*,Vol.8, No.4, April 2016.
- "**Performance analysis of Flat Plate Solar collector by using Al2O3Nanofluid at different concentrations with different Aspect Ratios**". *International Journal of Engineering Research and Management (IJERM)* ISSN: 2349-2058, Volume-03, Issue-05, May 2016.
- "**Congestion Management Technique Using Fuzzy logic Based on Security and Economy Criteria**". *WSEAS Journal on Recent Researches in Artificial Intelligence and Database Management.*
- "**Application of Ant Colony Optimization Algorithm for Voltage profile Improvement**". *The Journal of CPRI* ,Vol.12, No.4, December 2016 pp.655-663.
- "**BAT algorithm and Ant Colony Optimization based Optimal Reactive Power Dispatch to Improve Voltage Stability**", *European Journal of Engineering Research and Science* Vol.2 ,No.6 ,June2017.
- "**Hybrid Bacteria Foraging Particle Swarm Optimization based Optimal Reactive Power Dispatch for the Alleviation of Voltage Deviations**", *International Journal of Engineering and Advanced Technology*, ISSN:2249-8958, Volime-9, Issue-2, December 2019
- "**Optimal Location of multi-type FACTS for Power System Security Enhancement**," *International Journal of Engineering and Advanced Technology,* Volme-9, Issue-2, December, 2019, ISSN:2249-8958
- "**Congestion Management Considering Economic and Efficient Generation Rescheduling**," *International Journal of Recent Trends in Engineering*, Volume-8, Issue-1S4, June 2019. ISSN: 2277-3878
- "**Machine Learning Based Prediction Model for Monitoring Power System Security**," *Advances in Decision Sciences, Image Processing, Security and Computer Vision, Springer,* pp. 443-450, 2019.
- "**Congestion Management in Deregulated Environment Aided by Demand Side Response**," *International Journal of Advanced Science and Technology*, Vol. 29, No. 8, pp. 1351-1362, 2020. ISSN:2005-4238, E-ISSN:2207-6360.
- "**Chaotic Darwinian Particle Swarm Optimization for Real-Time Hierarchical Congestion Management of Power System Integrated with Renewable Energy Sources**," *International Journal of Electrical Power and Energy Systems, Elsevier*, Vol. 128, January 2021

Conferences

- "**Monitoring the effects of On-Load Tap Changing Transformers on Voltage Stability**", *IEEE International Conference on Power System Technology – POWERCON 2004,* Singapore, 21-24 November 2004.
- "**Identification of critical On-Load Tap Changing Transformers based on Voltage stability criteria**", *International Conference on Computer Applications in Electrical Engineering Recent AdvancesIIT, Roorkee,* September 28th to Oct 1st, 2005.
- "**Reactive Power Scheduling with different objectives**", *International Seminar and Tutorial on Power Transmission Research Interests and Challeng*es, *CPRI, Bangalore,* 20-22 December 2005.
- "**Utilization of Transmission Network by Individual Generators: A case study on part of Indian system**", *International Conference on Power System Operation in Deregulated Regime,* ICPSODR-2006, Varanasi. 06-07 March 2006.
- "**Fuzzy – Expert Approach for Voltage-Reactive Power Dispatch**", *2006IEEE* Power India Conference, Delhi, April 10-12, 2006.
- "**Generators Contribution towards loads and Line Flows- A Case study**", *2006 IEEE Power India Conference*, Delhi, April 10-12, 2006.
- "**Optimal Reactive Power Dispatch based on Voltage Stability Criteria in a Large Power System with AC/DC and FACTS Devices,**" *2006 International Conference on Power Electronics, Drives and Energy Systems*, PEDES-2006, New Delhi, 12-15 December 2006.
- "**Congestion Management In Open Access Based On Relative Electrical Distances Approach,**" *14th National Power System Conference NPSC-2006* at the Department of Electrical Engineering, *IITR, Roorkee,* during December 27-29, 2006.
- "**Multi-Objective comparison of GA and LP techniques for generator reactive power optimization,**" IEEE fifth Power India Conference at the Department of Electrical Engineering, DheenbandhuChhotu Ram University of Science and Technology, Murthal, Haryana, during December 19-22, 2012.
- "**An Expert System Approach of Congestion Management for Security and Economy Oriented Power System Operation**", An *IEEE sponsored9th international conference on Power and Energy (IPEC 2010)* during 27th to 29th October, 2010 in Singapore.
- "**Congestion Management for Security oriented power System operation using Generation Rescheduling**", An *IEEE sponsored11th international conference on Probabilistic Methods Applied to Power Systems (PMAPS 2010)* during 14th to 17th June, 2010 in Singapore.
- "**Radial load bus voltage control and distribution VAR Dispatch**" *16th National Power System Conference NPSC-2010* at the Department of Electrical Engineering, University College of Engineering, Osmania University during December 15-17, 2010.
- "**Impact of Voltage and Power Factor change on Primary Distribution Feeder Power Loss in Radial and Loop Types of Feeders**" An *IEEE sponsored International conference on Emerging Trends in Electrical Engineering and Energy Management* organized by *IEEE-* Power and Energy Society Chapter AVIT at Chennai during 13-15 December 2012.
- "**RBF Neural Network Approach for Security Assessment and Enhancement**", *IEEE PES T&D Conference and Exposition, 2014, USA.*
- "**Security Assessment and enhancement using RBFNN with Feature selection**", *IEEE sponsored North American Power Symposium (NAPS), 1-5, 2014, USA*
- "**Genetic Algorithm and Linear Programming Approach for Minimizing Power Loss**" *IEEEInternational Conference on Electrical, Electronics, Signals, Communication and Optimization (EESCO)* –2015
- "**PSO based optimal reactive power dispatch for voltage profile improvement**",*2015 IEEE Power, Communication and Information Technology Conference (PCITC),*15-17 Oct. 2015
- "**Improving Voltage Stability by Optimal Reactive Power Dispatch Based on Genetic Algorithm and Linear Programming Technique**", IEEE International Conference on Electrical, Electronics, and Optimization Techniques (ICEEOT), 3rd-5th March, 2016
- "**Role of Measurements set in WLS State Estimation**", *3rd International Conference on Electrical, Electronics, Engineering Trends, Communication, Optimization and Sciences (EEECOS)-2016*, 1st – 2nd June, 2016.
- "**Improving Voltage Stability by Optimal Reactive Power Dispatch Based on Genetic Algorithm and Linear Programming Technique**" IEEE International Conference on Electrical, Electronics, and Optimization Techniques (ICEEOT) – 2016
- "**Artificial Bee Colony Algorithm for optimal Reactive Power Dispatch to Improve Voltage Stability***2016 IEEE International Conference on Circuit, Power and Computing Technologies [ICCPCT]*
- "**Optimal Reactive Power Dispatch Based On Particle Swarm Optimization and LP Technique**"*2016 IEEE International Conference on Emerging Technological Trends [ICETT]*
- "**Voltage Stability Enhancement Based on Particle Swarm Optimization and LP Technique**" *2016 IEEE International Conference on Emerging Technological Trends [ICET*
- "**Fault Tolerant Control For Static Synchronous Series Compensator Using ANN**" *IEEE International Conference on Electrical, Electronics, and Optimization Techniques (ICEEOT) – 2016*
- "**An Approach to Identify Critical On Load Tap Changing (OLTC) Transformers under Network Contingencies**" *IEEESeventh POWER INDIA International Conference 2016*
- "**Ant Colony Optimization Algorithm Based Optimal Reactive Power Dispatch to Improve Voltage Stability**" IEEE 2017 International Conference on circuits Power and Computing Technologies [ICCPCT]

- **"Locational Marginal Price Based Optimal Location of UPFC for Power System Security Improvement,"** *International Conference on Innovative Technologies in Engineering, Hyderabad, 11th - 13th April, 2018.*
- **"A Modified Algorithm for Power System State Estimation"**, *International Conference on Innovative Technologies in Engineering*, 2018
- **"Comparison of State Estimation Process on Transmission and Distribution Systems"**, *International Conference on Emerging Trends in Engineering (ICETE)*, 2019
- **"A Modified Bacterial Foraging Algorithm Based Optimal Reactive Power Dispatch**", *Indonesian Journal of Electrical Engineering and Computer Science* Vol. 13, 201

Seminars Organized

- Coordinator for a Three-day National online workshop on Outcome Based Education andNBA Accreditation" from 12-08-2020 to 14-08-2020 organized by the University College of Engineering, Osmania University Hyderabad.
- Coordinator for a One day "Awareness workshop on Outcome Based Education and Accreditation" on 18-12-2016 organized by the University College of Engineering, Osmania University in association with National Board of Accreditation, New Delhi.
- Coordinator for a two-day workshop on "Teaching, Learning and Assessment Methodologies" from 13-12-2016 to 14-12-2016 organized by the University College of Engineering, Osmania University.
- Chairman of National Level Technical Symposium Techsonance 2012.
- Chairman for organizing first Diamond Jubilee Endowment Lecture on 16th Jan, 2012.
- Chairman of National Level Technical Symposium Techsonance 2011.
- Technical Committee Member of National Power System Conference (NPSC)-2010.
- Coordinator for Two-day workshop on power system security on 14th-15th Sep, 2009 under TEQIP.
- Coordinator for Two-day workshop on power system operation, dynamics and control under TEQIP during 04-05 July 2008.
- Coordinator for two-day workshop on power quality on 28th-29th Sep, 2007 under TEQIP.

Resource Person in Seminars/Workshops/ /Training Programs

- Delivered an expert lecture at Illinois Institute of Technology, Chicago.in the year 2014.
- Delivered an Expert lecture in a Two-day national workshop on ***"Preparing for NBA Accreditation & SAR filling"***, during 18th -19th February 2019 organized by JNTU, Hyderabad.
- Delivered an expert lecture on ***"Assessment tools and SAR filling"*** in a Two day National Workshop on NBA – 'Outcome Based Education and SAR Filling' during 24-25 May 2019 organized by JNTU Hyderabad.
- Delivered an expert lecture on **"CO-PO attainment"** in a Two-day National Workshop on NBA – ***'Outcome Based Education and SAR Filling'*** during 24-25 May 2019 organized by JNTU Hyderabad.
- Delivered an Expert lecture in a Three-day workshop on ***"Outcome based Technical Education towards Achieving NBA/ABET Accreditation"*** organized by the ***Institute of Electrical and Electronics Engineering (IEEE)***, Hyderabad during 7-9 September 2017.
- Resource person for training of Master Trainers/Evaluators across the country in Workshops organized by NBA Delhi for the years 2013 and 2014,
- Delivered an Expert lecture on **"Fuzzy logic applications in reactive power dispatch"** in a National Level Student Technical Symposium during 22 to 23 December 2008 at JNTU College of Engineering, Ananthapur.
- Delivered an Expert lecture on **"Fuzzy logic applications in reactive power dispatch"** in an AICTE Sponsored National Seminar on Emerging Trends in Electrical Engineering during 24-26 November 2008 at Gudlavalleru engineering college.
- Delivered an Expert lecture on **"Fuzzy Expert approach for curtailed controllers in reactive power dispatch"** for Engineers week celebrations during 15-20 February 2009 at GE C&I, India Innovation centre, Hyderabad.
- Delivered an Expert Lecture on the topic **"Power System Protection & Power System Operation & Control"** in a Career Training Program on "Electrical Power Systems and Machines" Organized by JNTUH College of Engineering, Hyderabad. On 26th March, 2009.
- Delivered a couple of Lectures in a AICTE Sponsored a Two Week Staff Development Program on the topic **"Soft Computing Application to Power System and Control MATLAB"** Organized by Aditya Institute of Technology & Management, Tekkali, Srikakulam (Dist). During 16th to 29th April, 2012.
- Delivered a lectures in a AICTE Sponsored a Two Week Staff Development Program on the topic **"Soft Computing Application to Power System and Control Matlab"** Organized by Aditya Institute of Technology & Management

Place: Hyderabad
Date: 30.10.2021

(Dr. GuduriYesuratnam)

University College of Engineering ,Osmania University