

Faculty Bio data

Dr. K.Radha Rani

Professor

Electrical & Electronics Engineering Department

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Educational Qualifications:

- **Ph.D** in the Faculty of Electrical Engineering, J.N.T U, Hyderabad..
- **M.Tech** in Electrical Power Engineering, M.S. University, Baroda, 2001.
- **B.Tech** in EEE, J.N.T.U. College of Engineering, Kakinada, 1998.

Date of Joining: 23-10-2003

Research Interests: Electrical power systems, Power quality, Smart grids, Renewable Energy, Deregulated systems etc...

Teaching Experience: - 21 Years, 6 Months.

- Presently working as Professor at Department of Electrical & Electronics Engineering RVR & JC College of Engineering, Guntur, since 01-03-2017.
- Worked as Associate Professor at Department of Electrical & Electronics Engineering RVR & JC College of Engineering, Guntur, since 01-02-2006 to 28-02-2017.
- Worked as an Assistant Professor at Department of Electrical & Electronics Engineering, RVR & JC College of Engineering, Guntur, during 23-10-2003 to 31-01- 2006.
- Worked as a Lecturer at Department of Electrical & Electronics Engineering, Bapatla Engineering College, Bapatla, Guntur-Dt., during 22-10-1998 to 26-07-2000 & 03-01-2002 to 22-10-2003.

Patent Applications Published:

- A Patent application published on the title "BIDIRECTIONAL DC-DC POWER CONVERTER CIRCUIT TO REDUCE CURRENT RIPPLES", Patent Application No: 202041052197 A, on December 11th, 2020.

Research Work/Research Papers Published:

JOURNALS:

1. Shaik Yalavarthi Hussain, Dr. K. Radha Rani, Dr. N. Chaitanya, entitled 'SRM Drive for Electric Vehicle Application Driven by SPV System with Energy Control Technique' in Solid State Technology Journal, Vol.63, Issue.5, 2020, ISSN:0038-111X, pp.10355-10363. **(Scopus)**
2. S. Vijayaraju, N. Chaitanya, K. Radha Rani, entitled 'Hybrd Optimization Model for Solar Wind Systems using Fuzzy Logic Control' in Journal of critical reviews, Vol.7, Issue.15, 2020, ISSN: 2394-5125, pp.6311-6318. **(Scopus)**
3. K. Radha Rani, N. Chaitanya, entitled 'Voltage Stability Enhancement with Optimal Placement of IPFC' International Journal of Rececnt Technology and Engineering(IJRTE), Vol.8, Issue.4, Nov.2019, ISSN: 2277-3878, pp.9465-9471.**(Scopus)**
4. Dr. K. Radha Rani, T. Satyam, 'Optimal Location of IPFC for Improving Power System Performance', International Journal of Electrical and Computer Communication Engineering IJECEC, Vol.5, Issue.3, June 2019, ISSN: 2533-8945, pp.63-76.
5. P. Lalitha Devamani, **Dr.K. Radha Rani**, entitled "DSTATCOM based load compensation of a diesel generator using Fuzzy Logic", published in International Journal IJCRT, Vol.6, Issue.2, April 2018, ISSN:2320-2882, pp.572-577.
6. Sirisha Annam, **Dr.K.Radha Rani**, J.Srinu Naick, entitled 'Automatic Generation Control of Three Area Power System with Artificial Intelligent Controllers' was published in the International Journal of Advanced Research in Electrical, Electronics and Instrumentation

Engineering (An UGC Approved Journal), Vol.6, Issue 8, August 2017, ISSN (Print):2320-3765, ISSN(Online):2278-8875, pp.6576 – 6591, Impact Factor:6.392, DOI:10.156. (google scholar).

7. A.Raghunath, **Dr. K.Radha Rani**, N.Surya, P.Sindhu ‘Development of Assistive Technology Tools for Visually Challenged to their Better Life’ was published in the International Journal of Control Theory and Applications (IJCTA) Vol-09, Issu 10, PP:4859-4869, August 2016.**(Scopus)**
8. **Dr. K.Radha Rani** , J.Divya ‘Power Quality Enhancement in Grid Connected Wind Power System Based on DFIG using Fuzzy Controlled UPQC’ was published in the International Journal of Research in Advanced Engineering Technologies, Volume 5,Issue 3, August 2016.
9. Sk Salma, **K. Radha Rani**, “ Transient stability Enhancement using matrix converter based UPFC with intelligent controlling techniques” in Journal of International Association of Advanced Technology & Science(JIAATS) , ISSN: 4265-0578, Vol-16, August-2015.
10. **K. Radha Rani**, Sk.Salma, A.Raghunath, K.Praveen Kumar, "Comparative Study of Speed Control of 6/4 Switched Reluctance Motor using Hybrid Fuzzy Logic Controller" in International Journal of Control Theory and Applications(IJCTA) Vol.08, No.01, June 2015, 259-269. **(Scopus)**
11. A. Raghunath, Dr.M.Sashi, Dr.N.Veeranjaneyulu, **K.Radha Rani**, "Design and Development of Online Web Based Self Learning Tool for Bisually Challenged Students in Information Technology and Computer Science Skills" in International Journal of Control Theory and Applications(IJCTA) Vol.08, No.01, June 2015, 75-83. **(Scopus)**
12. S. Durga Prasad, **K.Radha Rani**, D. Shyamala Devi, "Improvement of Power Quality Features using Cascaded H-Bridge Multilevel Inverter Based DSTATCOM under Fault Condition" in International Journal of Scientific Engineering and Technology Research(IJSETR) Vol. 04, Issue 08, April 2015, 1535-1541, ISSN: 2319-8885, Impact Factor:3.59
13. P. Sravanthi, **K. Radha Rani**, "Transient Stability Improvement of SCIG Based Wind Farm with STATCOM" in International Journal of Electrical and Electronics Engineering Research

(IJEER) Vol. 4, Issue 2, April 2014, 47-58, ISSN: 2278-943X, Impact Factor(JCC):5.6397, IC value:3.0.

14. J. Naga Sowjanya, **K. Radha Rani**, "Power quality Improvement in wind& PV source by using STATCOM" in IJEE International Journal of Electrical, Electronics and Telecommunication Engineering, Vol-3, Issue-2, July-2013.
15. G. Veeranjanyulu, **K. Radha Rani**, , "Cluster Based Algorithm for Optimal Power Flow Solution" in IFRSA's International Journal of Computing, Vol.2, Issue.2, April 2012, PP.435-442.
16. **K. Radha Rani**, J. Amarnath, S. Kamakshaiah, "Contingency Analysis under Deregulated Power Systems" in ICGST International Journal on Automatic Control & System Engineering(ACSE), Volume(11), Issue(II), November, 2011, pp.1-8.
17. **K. Radha Rani**, J. Amarnath, S. Kamakshaiah, "Transient Stability and Contingency Analysis of Power System in Deregulated Environment" in International Review on Modelling and Simulations (IREMOS), Vol.4, N.3, June 2011, pp.1257-1265, Impact Factor:6.55. (**Scopus**)
18. **K. Radha Rani**, J. Amarnath, S. Kamakshaiah, "Allocation of FACTS Devices for ATC enhancement using Genetic Algorithm" in ARPN journal of Engineering and Applied Sciences, Vol.6, N.2, February 2011, pp.87-93. (**Scopus**)
19. **K. Radha Rani**, N. Chaitanya, G. Veeranjanyulu, "An Algorithm for Unit Maintenance Scheduling" in ANU Journal of Engineering& Technology, Vol.2, No:1, June 2010, PP.33-40.
20. **K. Radha Rani**, J. Amarnath, "Application of FACTS Devices for ATC enhancement in competitive market" in Journal of Electrical & Electronic Systems Research,ISSN:1985-5389, Vol.3, June 2010, pp.42-48.

CONFERENCES:

1. **Shaik Yalavarthi Hussain, Dr. K. Radha Rani**, “Z-SOURCE INVERTER FOR RES-EVS WITH FLEXIBLE ENERGY CONTROL FUNCTIONS” in proceedings of International Conference on Smart and Intelligent Systems (SIS-2021), 25th to 26th February 2021.
2. A.Raghunath, **Dr. K.Radha Rani**, N.Surya,P.Sindhu “Development of assistive technology tools for visually challenged to their better life” proceedings in IIR international virtual conference on science, Engineering and Technology Applications(IIRVCSETA 2016) April 14th 2016, Chennai.
3. **K. Radha Rani**, Sk.Salma, A.Raghunath, K.Praveen Kumar, "Comparative Study of Speed Control of 6/4 Switched Reluctance Motor using Hybrid Fuzzy Logic Controller" in International Conference on Emerging Areas of Power Electronic Applications(ICEAPEA), 24th to 25th April 2015.
4. A. Raghunath, Dr.M.Sashi, Dr.N.Veeranjaneyulu, **K.Radha Rani**, "Design and Development of Online Web Based Self Learning Tool for Bisually Challenged Students in Information Technology and Computer Science Skills" in International Conference on Emerging Areas of Power Electronic Applications(ICEAPEA), 24th to 25th April 2015.
5. **K. Radha Rani**, Dr. J. Amarnath, Dr. S. Kamakshaiah, "Application of STATCOM to improve Critical Clearing Time & Transient Stability of SCIG Based Wind Farm" in National Conference on Smart Grids for Smart Cities (SGSC-2014), 7th to 8th Nov-2014.
6. P. Sravanthi, **K. Radha Rani**, Dr. J. Amarnath, Dr. S. Kamakshaiah "Critical Clearing Time and Transient Stability Analysis of SCIG based Wind Farm with STATCOM" in IEEE Proceedings of International conference on Smart Electric Grid-2014 (ICSEG - 2014), 19th& 20th Sept 2014.
7. J. Naga Sowjanya, **K. Radha Rani**, " STATCOM in improving Power Quality of a Grid connected Renewable Energy System" in National Conference on Emerging and Innovative Trends in Electrical Engineering NEITE 27th to 28th Sept-2013.

8. **K.Radha Rani**, Dr J. Amarnath, Dr S. Kamakshaiah "ATC Enhancement under Deregulated Systems using TCSC" in Proceedings of National conference on "Power System Planning , Operation & Optimization" (PSPOO), 17th June 2011.
9. **K.Radha Rani**, Dr J. Amarnath, Dr S. Kamakshaiah "Optimal Power Flow Solution using Cluster Technique" in Proceedings of International conference on Control, Communication and Power Engineering-2010(CCPE-2010), 28th & 29th July 2010.
10. **K.Radha Rani**, Dr J. Amarnath, Dr S. Kamakshaiah "Enhancement of ATC using UPFC" in Proceedings of National Conference on Recent Trends in Electrical Engineering-2007.

Professional Memberships:

- Member, ISTE
- Member Institute of Engineers (India)
- Member, Solar Energy Society of India (SESI)
- Member of IAENG

Workshops / Seminars / Courses Participated:

1. Attended One week FDP on “**Smart Grid Markets: Key Trends, Challenges and Opportunities**” conducted by Department of Electrical Engineering of NIT, Warangal, from 27th July 2021 to 31st July 2021.
2. Attended and successfully completed **AICTE Training And Learning (ATAL) Academy Online FDP on “Electric Vehicles: Technologies and Challenges**” from 20-07-2021 to 24-07-2021 at A.D.PATEL Institute of Technology, Gujarat.
3. Attended a webinar on “**Solar Grid Tied System using WAVECT**” on 16-06-2021 organized by Entuple Technologies, Bangalore.
4. Attended a webinar on “**DFIG based Wind Emulator using WAVECT**” on 02-06-2021 organized by Entuple Technologies, Bangalore.

5. Attended a webinar on **“FPGA Controller for Electrical Engineering - WAVECT”** on 19-05-2021 organized by Entuple Technologies, Bangalore.
6. Attended and successfully completed **“AICTE-NITTT Mentor Orientation Training Program (MOTP) 5th cycle”** from 19-04-2021 to 23-04-2021 organized by NITTTR Kolkata.
7. Attended and successfully completed **“AICTE Training And Learning (ATAL) Academy Online FDP on Electric Vehicles”** from 02-11-2020 to 06-11-2020 at Jawaharlal Nehru National College of Engineering, Shimoga, Karnataka.
8. Attended and successfully completed **“AICTE Training And Learning (ATAL) Academy Online FDP on Energy Storage”** from 05-10-2020 to 09-10-2020 at Jawaharlal Nehru National College of Engineering, Shimoga, Karnataka.
9. Attended **“One week FDP on RESEARCH PERSPECTIVES OF ARTIFICIAL INTELLIGENCE IN ELECTRICAL ENGINEERING”** organized by Department of EEE of Sri Ramakrishna Institute of Technology, Tamilnadu from 27th July 2020 to 31st July 2020.
10. Attended **“One week FDP on RECENT TRENDS IN ELECTRICAL ENGINEERING”** organized by Department of EEE and IEEE PES & IAS Jt Student branch Chapter of AMRITA SCHOOL OF ENGINEERING, BANGALORE, from 20th July 2020 to 26th July 2020.
11. Attended **“One-Week workshop on Introduction to PLECS Tool for Power Electronics Application”** organized by Department of EEE, V.R.Siddhartha Engineering College, Vijayawada in Association with PLEXIM, Switzerland and sponsored by AICTE-Margadarshan Scheme, held during 2nd July to 6th July 2020.
12. Attended a webinar on **“Webinar on Virtual Labs for Science and Engineering”** Organized by IEEE Education Society Chapter of IEEE Hyderabad Section held on 22 April 2020.

13. Attended a **“TWO DAY FACULTY DEVELOPMENT PROGRAM ON VIRTUAL TEACHING”** on April 20 & 21, 2020 THROUGH ON-LINE MODE” Conducted by CIT-TLC (Coimbatore Institute of Technology-Teaching Learning Centre), Coimbatore.
14. Attended a webinar on **“IEEE Xplore Digital Library: Delivering Research Better Than Ever”** Organized by IEEE Education Society Chapter of IEEE Hyderabad Section held on 05 April 2020.
15. Attended a webinar on **“Smart Cities – Challenges and Opportunities”** Organized by IEEE Education Society Chapter of IEEE Hyderabad Section held on 02 April 2020.
16. Attended **LaTeX101x LaTeX for Students, Engineers, and Scientists** Conducted by IIT Bombay X from Sept 24th, 2019 to Dec. 02nd, 2019.
17. Attended ‘One day workshop on eSim, a First Course in the IoT Series for Teachers’ held at R.V.R & J.C. College of Engineering, Chowdavaram, on 21st September 2019, organized by the Teaching Learning Centre ICT at IIT Bombay.
18. Attended NPTEL Workshop conducted by IIT Madras, at R.V.R & J.C. College of Engineering on 07-12-2018.
19. Attended Short Term Training Programme through ICT Mode on **“Outcome Based Education and Accreditation”** organized by National Institute of Technical Teachers Training and Research(NITTTR), Kolkata from 24-09-2018 to 28-09-2018.
20. Attended **“IUCEE International Engineering Educator workshop(phase1)”**, conducted by Andhra Pradesh State Skill Development Corporation(APSSDC), at VIT-AP University, Amaravathi, from 12th July to 14th July, 2018.
21. Attended **“Mentoring Educators in Educational Technology”**, Conducted by IIT Bombay X - FDP301x Pandit Madan Mohan Malaviya National Mission for Teachers and Teaching (PMMMNTT), MHRD, GoI May 17th, 2018 to June 27th, 2018.
22. Completed an online course **“ET701X: Elements of Learner – Centric MOOCS”** an online course offered by IIT BombayX as an online learning initiative of Indian Institute of Technology Bombay, from 3rd May 2018 to 23rd May 2018.

23. Attended **“Pedagogy for Online and Blended Teaching – Learning Process”**, conducted by IIT Bombay X – FDP201X from 14th September to 20th November 2017.
24. Attended **“Foundation Program in ICT for Education”**, conducted by IIT Bombay X – FDP101X from 3rd August to 17th September 2017.
25. Acted as a Coordinator for conducting **Two week ISTE STTP on “Electric Power System”** from 10th July to 15th July 2017, conducted by NMEICT, IIT Kharagpur.
26. Attended **one week ISTE STTP for Coordinators on “Electric Power System”** from 1st May to 5th May 2017 at IIT Kharagpur, conducted by NMEICT, IIT Kharagpur.
27. Dr. K. Radha Rani, Professor, attended a one week national workshop on **“Artificial Neural Network and Fuzzy Logic through ICT”** organised by NITTTR, Chandigarh at remote centre(1353) of RVR&JC college of Engineering during 24-28 April 2017.
28. Dr. K.Radha Rani , Assoc. Professor, attended a two day National Seminar on **‘March To Make In India Through Engineering Technologies (MMIEA)’** organised by RVR&JC college of Engineering during 29-30 September 2016.
29. A Short Term Course on **“RECENT TRENDS AND APPLICATIONS IN SMART AND MICRO GRIDS”**organised by Department of EEE, K.L. University, Vaddeswaram, during 10th-12th July 2015.
30. A three day National Workshop on **“ADVANCEMENTS IN GREEN ENERGY AND AUTOMATION CONTROL OF ELECTRICAL POWER”** conducted by Department of EEE, Vignan's University, Vadlamudi during 16th -18th Oct 2014.
31. AICTE sponsored three_day National Workshop on **“Signal And Image Processing using labview ”** Conducted by Department of ECE , RVR JC college of Engineering, chowdavaram ,Guntur-19 during 11th -13th Nov 2013.
32. A two day national seminar on **FUTURISTIC TRENDS OF NANOCOMPOSITES AND THEIR FABRICATIONS** on 6-7th September 2013 conducted by department of mechanical engineering RVR JC college of Engineering , chowdavaram ,Guntur-19.

33. UGC sponsored National Seminar on "SOLAR ENERGY HARVESTING THROUGH PHOTOVOLTAIC CELLS AND STORAGE (SEHTPVAS-13)", 21-22 June, 2013, R.V.R. & J.C. College of Engineering, Guntur.
34. "Advances in Control and Operation of Distributed Systems" on 29th-30th, March 2013, V.R. Siddhartha Engineering College, Vijayawada.
35. "Trends in research & development-academic perspective" 22nd, Aug 2009, JNTU, Hyderabad.
36. "Advanced power system simulation and analysis with ETAP (SPARKS 2007)", 12-13, Sept 2007, CRR Engg. college, Eluru.
37. "Real Time Power Systems", 27-28, Feb 2006, JNTU, Kakinada.
38. AICTE-ISTE Short Term Training Programme on "Computer Applications in Power Systems, Control Systems and Networks", at RVR & JC CE, Guntur.
39. Two day workshop on Mipower applications to power systems by PRDC, Bangalore, 28-29, NOV 2003 at RVR & JC CE, Guntur.

Workshops / Conferences Organized:

- Member of organizing committee of "Electric Tarang – 2020", on 5th & 6th January, 2020, RVR & JCCE, Guntur.
- Member of organizing committee of **AICTE Sponsored One week Short term training program (STTP) on "Energy management of smart grids and microgrids using IOT"** 29th July to 3rd August, 2019, RVR & JCCE, Guntur.
- Member of organizing committee of Two Day workshop on **"Industry Practices In Power System Engineering"** is organized during 30th Nov. 2018 - 01st Dec. 2018, RVR & JCCE, Guntur.
- Member of organizing committee of "Electric Tarang – 2018", on 5th & 6th January, 2018, RVR & JCCE, Guntur.
- **Coordinator for Two week ISTE STTP on "Electric Power System"** from 10th July to 15th July 2017, conducted by NMEICT, IIT Kharagpur.
- Member of organizing committee of "Electric Tarang – 2017", RVR & JCCE, Guntur.

- “Electric Tarang – 2015”, on 2^{8th} February 2015, RVR&JCCE, Guntur.
- Workshop on "Model Based Design for Power Electronics & Embedded Systems", during 12th-13th December 2013, RVR&JCCE, Guntur.
- Co-convener for the work shop on "Computer Applications to Power Systems using MiPower", 4th-6th, Dec2008, RVR&JCCE, Guntur.

Administrative Roles & Responsibilities:

- Member, Board of studies - EEE, R.V.R& J.C. College of Engineering (Autonomous).
- Member of Lady Advisory & Internal Complaints Committee (LA&ICC) of R.V.R& J.C. College of Engineering (Autonomous).
- ISO Coordinator of EEE Department
- Incharge Computer Centre
- Programme Coordinator PG
- RAJEEA Staff Advisor
- Member of Department Development Committee
- Member of Department Advisory Board
- Member of Program Assessment Committee
- Member FIST Committee
- Physics Department Equipment purchase committee member

Achievements/ Recognitions/Appreciations:

- Acted as “**Reviewer**” for the National Conference on Emerging Technologies in Energy Systems (NCETES-2020) conducted in virtual mode organized by Department of Electrical and Electronics Engineering of Prasad V. Potluri Siddhartha Institute of Technology, Vijayawada, India held on 11th September 2020.

- Received letter of Appreciation from IIT Bombay, for contribution as a **Discussion Forum Moderator** in the successful completion of the AICTE approved Five week MOOC(two week equivalent): **FDP 101X: Foundation Program in ICT for Education**, conducted by IITBombayX between September 13th to October 21st, 2018.
- Received letter of Appreciation from IIT Bombay, for contribution as a **Discussion Forum Moderator** in the successful completion of the AICTE approved Ten-week MOOC(two week equivalent): **FDP 201X:Pedagogy for Online and Blended Teaching-Learning Process**, conducted by IITBombayX between October 30th, 2018 to January 6th, 2019.
- **Selected for National Merit scholarship (NMS) in SSC**
- **Selected for Telugu Vignana Parithoshakam**

Projects Guided: B.Tech Projects – 35 nos

M.Tech Projects – 15 nos

Sponsored Projects:

- 1) **Principal Investigator** for Industry Sponsored Research Project on “**Bidirectional DC-DC Power Converter Circuit**” Sponsored by M/s Incap limited, worth of Rs.3,50,000/-.

(Sponsored by Management, R.V.R & J.C.C.E)

- Modeling and simulation of power network with FACTS controllers using PSCAD
- Voltage stability analysis in power systems using MiPower