

Name: **DR. ANURADHA KOTAPATI**

Designation: Professor & Dean, Academics

Department: Electrical and Electronics Engineering

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Experience (in years): Teaching: 19 Research: 12 Others (If any, Specify):



### 1. Educational/ Technical Qualifications:

S. No	Level (UG / PG / Ph.D)	Year of passing	Specialization
1.	Ph.D	2011	Electrical Engineering
2.	M.E	1997	Industrial Drives and Control
3.	B.E	1992	Electrical and Electronics Engineering

### 2. Teaching, Research, and Consultancy Profile

#### 2.1 Teaching Interests

- Electrical Circuit Theory, Power Electronics, Power Semi-Conductor Drives, Network Analysis, Electrical Machines, Micro Processors and Micro Controllers.

#### 2.2 Novel Teaching & Learning Techniques adopted: Learning By Doing (LBD)

#### 2.3 Involvement in curriculum updating / Design:

- As a BOS Chairman involved in UG & PG Curriculum Design and updation of Syllabus

### 3. Co-curricular and Extra-Curricular Activities

#### 3.1 Interests and Hobbies:

- To promote healthy work environment which will help the Institute growth

#### 3.2 CCA/ECA Organized:

- Acted as Judge in the successful conduct of technical events like Paper Presentations, Project Expos in various technical events (CORONA, CONVERGENCE, VECTOR) at VNRVJIET, and PRAGNA2k9 at JNTU, Kukatpally, Hyderabad.
- Conducted a Three-Day Workshop on “Simulation of Power Systems Using MiPower Software” for faculty and Research Scholars. Resource Persons are from PRDC, Bangalore, during 25.02.10 to 27.02.10. Venue: Simulation Laboratory, EEE Dept, VNR VJIET, Hyderabad.
- Conducted a Tutorial on “Smart Distribution Grids for Future-Challenges & Possible Solutions” by Professor S.S. (Mani) Venkata, Professor Emeritus & Chair, Iowa State University, Affiliate Professor, University of Washington on July 13, 2009. Venue: ‘B’ block seminar hall, EEE Dept., VNRVJIET.

#### 3.3 CCA/ECA Participated:

- Involved in various seminar activities for B.Tech and M.Tech students.

#### 3.4 Counseling and Mentoring Activity:

- Actively involved in counseling and mentoring the students
- Mentor for 8 students of I, II & III-B.Tech
- Mentor for 6 students for IV-B.Tech

#### 3.5. Committees involved in:

Department level:

- Chairman, BOS, EEE Dept.
- DAC, PAC, DDC, ASP

Institute Level:

- Dean, Academics

- Member, Academic Council
- Member, Institute Academic Committee

#### **4. Conference / Workshop / Seminar / Guest Lectures:**

##### **4.1 Conducted:**

- Conducted AICTE Sponsored International Conference on “International Conference on Innovations in Electrical, Electronics, Power, Smart grids & Advanced Computing Technologies (IEEPS-18) during 9<sup>th</sup> to 10<sup>th</sup> March, 2018.
- Conducted a One Week National Workshop on Emerging Trends in Power Electronics & Power Systems during 16<sup>th</sup> to 20<sup>th</sup> May, 2016 under Teqip-II.
- Conducted a Three Day Workshop on MATLAB (Simulink/Programming) during 26<sup>th</sup> to 28<sup>th</sup> May, 2014 under TEQIP-II.
- Conducted a Two Day Workshop on “High Voltage Technology” during 29<sup>th</sup>& 30<sup>th</sup> April, 2013 under TEQIP-II.
- Conducted AICTE Sponsored Staff Development Program (SDP) on “Modern Control Techniques for Power Systems MCTPS-2012” during 18<sup>th</sup> to 30<sup>th</sup> June, 2012.
- Conducted a two-day Workshop on “Neural Networks and Fuzzy Logic:(From Fundamentals to Advanced Applications)” by Dr.Madan M Gupta, Professor Emeritus, Distinguished Chair, University of Saskatchewan, Canada on 27<sup>th</sup> February, 2012
- Conducted AICTE Sponsored 2-day National Conference on “National Economy and Social Transformation through Advances in Electrical Engineering (NEST-AEE-2011)” during 29-30, August. 2011.
- Conducted a two-day Workshop on “Modeling and Control of Electrical Machines” for faculty of various Engineering Colleges during 28<sup>th</sup>& 29<sup>th</sup> January, 2011.
- Conducted Guest Lecture on “Real Time Ratings Application in Transmission Networks” by Dr.Ch.Sudhakar, Team Leader-Transmission Cable (Design), British Columbia Hydro Power Corporation, Vancouver, Canada on 27<sup>th</sup> July, 2010.
- Conducted a Three-Day Workshop on “Simulation of Power Systems Using MiPower Software” for faculty and Research Scholars. Resource Persons are from PRDC, Bangalore, during 25.02.10 to 27.02.10. Venue: Simulation Laboratory, EEE Dept, VNR VJIET, Hyderabad.
- Conducted a Tutorial on “Smart Distribution Grids for Future-Challenges & Possible Solutions” by Professor S.S.(Mani)Venkata, Professor Emeritus &Chair , Iowa State University, Affiliate Professor, University of Washington on July 13, 2009. Venue: ‘B’ block seminar hall, EEE Dept., VNRVJIET.
- Conducted a one-day professional training programme on “Application of Digital Signal Processors for Induction Motor Speed Control” for Faculty and M.Tech. Students, on May 14, 2007 Venue: SES Laboratory, VNRVJIET.

##### **4.2 Attended:**

- Hands on Workshop on “AMPLE” (Learning Management) from 20-01-2021 to 22-01-2020.
- Five Day Online Short-Term Course (e-STC) on Advancements in Optimization of Power Generation, Drives and Control System organized by Department of Electrical Engineering, NIT Hamirpur from 16th - 20th November, 2020.

- Participated “Panel Discussion – Engineering Education Charting the Right Career Choice” organized by admission section, VNRVJIET on 23-09-2020.
- Conclave on “Transformational Reforms in Higher Education” organized by MHRD and UGC on 07-08-2020.
- ISTE Short Term Training Programme “Electric Power System” in association with IIT Kharagpur under NMEICT project funded by MHRD at VNRVJIET on from 10-07-2017 to 15-07-2017.
- Half Day Conference on Transformation in Engineering Education by Global Engineering Deans Council at Vardhaman College of Engg., Hyderabad on 07-01-2016.
- One Day Workshop on “Awareness Workshop on Outcome Based Education and Accreditation” at *IETE Seminar Hall, OU, Hyderabad & OUCE* on 18-12-2016.
- Half Day Workshop on “Mind Education Programme” at JNTU Hyderabad with TSCHE – International Youth Fellowship (IYF) on 20-04-2016.
- One Day TED Event “TEDxVNRVJIET” at VJIM, Hyderabad on 02-04-2016.
- One Day Training Program on “Evaluators/Resource Persons on Outcome Based Accreditation” at Osmania University, Hyderabad on 5<sup>th</sup> July, 2013.
- Three Day Workshop on “Art of Teaching” at VNRVJIET from 13<sup>th</sup> to 15<sup>th</sup> May, 2013.
- Half Day Tutorial on “Smart Grid Technology and Business Opportunities” by PES/IAS/PELS Hyderabad Chapter supported by FAPCCI, Hyderabad on 29<sup>th</sup> July, 2010
- Half Day Tutorial on “Development of Massive Wind Power Plants” by PES/IAS/PELS Hyderabad Chapter supported by FAPCCI, Hyderabad on 23<sup>rd</sup> Aug, 2010
- IEEE sponsored workshop on “Emerging trends in Application of Power Electronics to Drives”, IIT Kanpur, January 22-23, 2003
- ISTE sponsored workshop on “Application of Power Electronics to Power Systems”, GVP, Visakhapatnam, December 12-16, 2005
- A three day Workshop on Digital Signal Processor Applications to Electric Drives sponsored by TEQIP during 29<sup>th</sup> Feb – 2<sup>nd</sup> March 2008, NIT Warangal

## **5. Academic Contribution and Research & Consultancy:**

### 5.1 Invited Lectures

1. A Two Day Online Workshop on Quality in Engineering Education – An Outcome Based Education (OBE) Approach Under AICTE MARGADARSHAN SCHEME from **26-27, Feb, 2021**.
2. NBA Accreditation Process and Pre-qualifiers under AICTE-Margdarshan Scheme (Share and Mentor Institutions) on 04-06-2020 organized by Mother Teresa Institute of Science and Technology (Mentee Institution).
  1. Control of High Power Electric Drives” in Two Day National Seminar “Recent Innovative Trends in Electrical Motors and its Industrial Applications” on 20<sup>th</sup> Feb, 2014 / PVPSIT (Siddhartha), Vijayawada.
  2. Flicker Mitigation in Electric Arc Furnaces using Cascaded Multilevel Converter based DSTATCOM” in Three Day Workshop on “Recent Trends in Power Electronics and Renewable Energy Sources” during 27<sup>th</sup> to 29<sup>th</sup> January, 2014 at Muffakham Jah College of Engineering & Technology, Hyderabad.

3. Power Quality Improvement using DSTATCOM” in AICTE Sponsored 3 day Workshop on Power System Dynamics on 30<sup>th</sup> January, 2014 at Sagar Institute of Technology, Hyderabad.
  4. Flicker Mitigation in Electric Arc Furnaces Using DSTATCOM” on 19-06-2012 in the Two Weeks AICTE Sponsored SDP on “Modern Control Techniques for Power Systems” (MCTPS) during 18-06-12 to 30-06-12 in VNRVJIET.
  5. Delivered an expert talk on “Inverters” in a three week (09-08-2010 to 28-08-2010) refresher course on “Advances in Power Electronics and Electric Drives” conducted by JNTUH-UGC ASC on 12-08-2010.
  6. Delivered an expert lecture on “DSTATCOM for Power Quality Improvement” in the workshop on “Power Quality” organized by MJCET, Hyderabad on 31-08-2009.
  7. Delivered a Guest lecture on “Power Electronics and its Applications” in SNIST, Hyderabad in Sep’ 2009.
  8. Delivered an expert lecture on “Design, Controls and Applications of Multi Level Converters” in an AICTE sponsored Staff Development Programme at GRIET, Hyderabad on 14-05-2009.
  9. Delivered an expert lecture on “Performance analysis of single phase and three phase AC to DC Converters “in an ISTE sponsored Staff Development Programme at JNTU, Hyderabad in November, 2008.
  10. Guest lecture on “Application of Power Electronics in Electrical Engineering”, for Under Graduate students of Electrical and Electronics Engineering, SNIST, Hyderabad in February 2009.
  11. Resource for the Short term course on “Power Electronics and Drives “Conducted at VNRVJIET in June, 2003.
- 5.2 Articles/Chapters published in Books: -
- 5.3. Books published as single author or as editor: -
- 5.4. Projects Guided:
- a) UG: 17
  - b) PG: 23
- 5.5. Research Interests: Power Electronics and Drives
- 5.6. Ph.D students:
- a) Enrolled: 04
  - b) Submitted: -
  - c) Awarded: -
- 5.7. Papers published in reviewed Journals:

S. No	Title of the Paper	Journal Name Vol.No. PP	ISBN/ISSN No.	Impact Factor/ Citation Index	National/ International
1.	Modeling and Control of Laptop Computer Voltage Regulator Module with Multiple Power Sources	Journal Européen des Systèmes Automatisés pp.421-427		Scopus	International
2.	Performance enhancement of	International Journal of Advanced Science	ISSN: 2005-	Scopus	International

	the induction motor hybrid drives through common mode voltage compensator	and Technology Vol. 29, No.4, (2020), pp.751-763	4238		
3.	A Novel Topology for Fast Charging of Electric Vehicle Battery	The International Journal of Analytical and Experimental Modal Analysis Vol. IX, Issue IX	ISSN NO: 0886-9367	Scopus	International
4.	A Novel Shunt Active Power Filter Topology for Driving huge Power Drive Applications	International journal of creative research thoughts - ijert	Volume 6, Issue 1 February 2018   ISSN: 2320-2882	Scopus	International
5.	Harmonic Minimization in Multilevel Inverter using SHEPWM Technique	International Journal of Electronics, Electrical and Computational System(IJEECS), Vol. 6, Issue 9, pp. 281-290	ISSN : 2348-117X	UGC Listed	International
6.	DC link capacitor voltage balance and neutral point stabilization in diode clamped multi level inverter	International Journal of Control Theory and Applications, Vol. 9, Issue 29, 2016, pp. 361-367	ISSN: 09745572	Scopus, UGC Listed	International
7.	Fuzzy Logic Controller based Unity Power Factor Correction of Boost Converter	IOSR Journal of Electrical and Electronics Engineering Volume 12, Issue 6 Ver. II (Nov. – Dec. 2017), PP 52-58	e-ISSN: 2278-1676,p-ISSN: 2320-3331	Scopus	National
8.	AN IMPROVED METHODOLOGY FOR ENHANCING THE POWER FACTOR OF BRIDGELESS BUCK PFC CONVERTER	Journal of Engineering Sciences, Vol 10, Issue 11, Nov /2019	ISSN NO:0377-9254	UGC Listed	National
9.	Switching Frequency Effects	Journal of electrical engineering, Vol. 16,	ISSN1582-4594	GIF-2.5682	National

	and Efficiency Analysis of Quadratic Buck Converter for Low Output Voltage and High Current Applications	No. 3, 2016, pp. 262-271.		Scopus	
10	Comparative study of switched-mode power supplies for low voltage and high current applications	Journal of electrical engineering, Vol. 16, No. 1, pp. 316-329	ISSN1582-4594	GIF - 2.5682 Scopus	National
11	Wavelet Modulated Z-Source Inverter	International Journal of Electrical and Electronics Engineering Research (IJEEER) Vol. 5, Issue 5, Oct 2015, pp. 1-10	ISSN(P): 2250-155X;ISSN(E): 2278-943X		International
12	Modeling and design of a novel multilevel inverter for a Grid connected Photo Voltaic System	International Journal of Electrical and Electronics Engineering Research (IJEEER), Vol. 5, Issue 5, Oct 2015, pp. 51-58	ISSN(P):2250-155X; ISSN(E):2278-943X		International
13	Simulation of hybrid power sources for industrial LED lighting systems	Journal of electrical engineering, Vol. 15, No. 4, 2015, pp. 156-167	ISSN1582-4594	IF2.5682 Scopus	International
14	Analysis and Simulation of Solar PV Based Multi Level Converters	International Journal of Professional Engineering studies, Vol.4, pp.124-136		IF 3.825	International
15	A fast-response sliding-mode controller for quadratic buck converter	International Journal of Power Electronics, Vol. 6, No. 2, pp.103-130	ISSN online: 1756-6398, ISSN print: 1756-638X	IF 4.9823	International
16	An efficient sliding-mode current controller with reduced flickering for quadratic buck converter used as LED lamp driver	International Journal of Power Electronics, Vol.6, No.4, pp.345 – 375	ISSN online: 1756-6398, ISSN print: 1756-638X	IF 4.9823	International

17	Spectral analysis of Inverter Output Voltage waveform using different PWM techniques	National Journal on Power Engineering and Industrial Drives			National
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5.8. Papers presented at National / International Conferences:

S. No	Title of the Paper	Names of the Conference/ Seminars	National/ International	Period
1.	Analysis of Bidirectional DC-DC converter with Wide Voltage Gain for charging of Electric Vehicle	7th International Conference on Electrical Energy Systems (ICEES) - 2021	International	11-13 Feb, 2021
2.	A Simplified Filter Topology for Compensating Common Mode Voltage and Electromagnetic Interference in Induction Motor Drives	Elsevier, Energy Procedia, Vol. 117, pp. 377-384	International	2-4 Mar, 2017
3.	DC Level Stabilization in Multilevel Inverters	Emerging Trends in Electrical Systems and Engineering	International	3-4, July 2015
4.	Performance Analysis of Inverter Fed Induction Motor with Minimum Settling Time Control	IEEE International Conference on "Power Electronics, Drives and Energy Systems (PEDES-2012)	International	16-19, December, 2012
5.	Voltage flicker mitigation by DSTATCOM for voltage source Arc furnace model	IEEE-Recent Advances in Intelligent Computational Systems (RAICS)2011	International	22-24 Sept. 2011
6.	Control of Cascaded H-Bridge Converter based DSTATCOM for High Power Applications	ICPS	International	
7.	Electric Arc Furnace Modeling and Voltage Flicker mitigation by DSTATCOM		International	December 8-12, 2008
8.	Control of Cascaded H-Bridge Converter based DSTATCOM for High Power Applications	PEDES	International	December 8-10, 2006

9.	Novel Control Strategy for Cascaded H-Bridge Converter based DSTATCOM	ICIIS	International	August, 2006
10.	Simulation of Cascaded H-Bridge Converter based DSTATCOM	ICIEA	International	May 23-24, 2006
11.	Control Techniques for Three Phase Active Front End Converter		International	
12.	Spectral analysis of Inverter Output Voltage waveform using different PWM techniques	Power Engineering and Industrial Drives	National	May 18-19,2012
13.	Control Techniques for Three Phase Active Front End Converter	NPSS-2012	National	3 <sup>rd</sup> & 4 <sup>th</sup> April, 2012
14.	Modeling of Electric ARC Furnace and control algorithms for voltage flicker mitigation using DSTATCOM	NPSC-2010	National	15,16 and 17 December, 2010
15.	Single Phase Active Front End Converter	Recent Innovations in Technology (NCRIT)	National	March 26-28, 2009
16.	A Single Phase Power Factor corrector with Boost Rectifier	Recent Developments and emerging trends in electrical engineering	National	November 21-23,2008
17.	Independent DC link Voltage Controllers for Cascaded H- Bridge Converter based DSTATCOM	NPSC	National	December 10-12, 2006

#### 5.9. Sponsored research Projects:

S.No	Title	Agency	Period	Grant amount	Ongoing / Completed
1	Data Acquisition based Design and control of special and regur electrical machine	AICTE	2years	Rs.12,00,000/-	Ongoing
2	Power System SCADA under MODROBS	AICTE	2years	Rs.13,27,000/-	Completed
2.	Establishment of Advanced Digital	DST	5 years	Rs.11,10,000/-	completed

	Signal Processing and Drives Laboratory				
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5.10 Consultancy Projects:Nil

**6.Awards / Honors received:**

- Patents Published for a title“A Simple and economical Passive filter configuration to reduce THD produced by Non-Linear loads” in Patent office Journal, Issue No: 51/2012, Dec. 2012, pp. 26322application number:2029/CHE/2011,Inventors : Dr. M. Ramamoorthy,Dr. G. S. Raju, Dr.K. Anuradha , D. Ravi Kumar
- Patents Published for a title“An efficient DC-to-DC converter configuration by soft switching devices” in Patent office Journal, application number:2028/CHE/2011 dated 21/12/2012, Inventors : Dr. M. Ramamoorthy,Dr. G. S. Raju, Dr.K. Anuradha , G. Sasikumar, A.Rajeshwar

**7. Motto:** Work hard and get success