

**Name:**N. Krishna Kumari

**Designation:**Associate Professor

**Department:** Electrical and Electronics Engineering

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**Experience (in years): Teaching:** 20 years **Research:** Nil **Others (If any, Specify):** Nil

### 1. Educational / Technical qualifications:

S. No	Level (UG / PG / Ph.D)	Year of passing	Specialization
1	B.Tech	1994	EEE
2	M.E	1997	Electrical Machines
3	PhD	Pursuing	Electrical Drives and Control

### 2. Teaching and Learning:

**2.1. Teaching Interests:** Power Electronics, Electrical Drives, Network Analysis, Circuit Theory, Modeling of Electrical Machines, Control Systems

**2.2. Novel Teaching & Learning Techniques adopted:** WIT and WILL

**2.3. Involvement in curriculum updating / Design:** As a Department Academic Member and BOS Member, participated in autonomous course design

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

**3.1. Interests and Hobbies:**Gardening

**3.2. CCA/ECA Organized:**

- “VLSI Workshop” 3 days at VNRVJiet during CORONA 2K9 along with the coordinator.
- Delivered a Guest Lecture on Hybrid Electric Vehicle in CORONA 2K11(Mech Dept)

**3.3. CCA/ECA participated:** Involved in Career vision activities for First year B.Tech students

**3.4. Counseling and Mentoring Activity:** Mentoring students for regularity and to improve academic performance

**3.5. Committees involved in:**

**Department level:**

- Coordinator, M.Tech Power Electronics
- Coordinator, PG NBA, Power Electronics
- Member, Project Review Committee, M.Tech (Power Electronics)
- Member, BOS (EEE)
- Member, Academic Committee
- Member, M.Tech Project Review Committee

**Institute Level:**

- Coordinator NBA
- Member, Refreshing Committee, IEEE Conference “IACC 2017”, VNR VJiet
- Member, Women’s Welfare Association and Grievances

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

**4.1 Conducted:**

- Two days Conference CIPS 2006 Feb. at SRM University, Chennai, Tamilnadu
- Conducted a 2 day’s Tutorial on “Networks and Fuzzy Logic; (From Fundamentals to Advanced Applications)” by Dr. Madan M Gupta, Professor,

Emeritus, Distinguished Chair, University of Saskatchewan, Canada **Feb. 27 & 28, 2012**, Organized by **Dept. of Electrical and Electronics Engg. (NBA Accredited & An Autonomous Institute under JNTUH)**.

#### **4.2 Attended:**

- ISTE Short Term Course on “Computer Simulation of Power Electronic Devices”,15 Days at Palakkad, N.S.S. College of Engineering, Kerala, during Dec1999-2000 Jan
- AICTE-ISTE Short Term Course on “Soft Computing Techniques for Engineering Applications”15 Days at March-April 2004
- Two day’s workshop on “Recent Trends on Power Electronic Drives” at Sairam Engineering College, Chennai, during Jan 2002.
- Attended a workshop on “Lighting 2002” conducted by CII, during June 2002 at Royal Le Meridian, Chennai
- Attended a ISTE sponsored Induction Training Program for 3 days at SRM Engineering College, Chennai in the year 1999
- Attended a ISTE sponsored workshop on “Perspectives in Nano Technology” for one days at SRM Engineering College, Chennai 22<sup>nd</sup> Oct,2005
- Attended a workshop on “Research Methodology and Skills” in National Conference on “Computational Intelligence in Power Apparatus and Systems”,17<sup>th</sup> Feb2006
- Attended 2 day’s workshop on” Special Electrical Machines”, Osmania University, April 2<sup>nd</sup> and 3<sup>rd</sup>, 2007.
- Attended a one day IEEE workshop on Power Electronics and Drives in Electric & Hybrid Vehicles at Vasavi College of Engineering, Hyderabad, 24<sup>th</sup> December,2008 (Jointly with Power Engineering Society and Industry Application Society)
- Attended a 3 day’s Workshop on Digital Signal Processor Applications to Electric Drives sponsored by TEQIP on 29<sup>th</sup> Feb – 2<sup>nd</sup> March 2008, NIT Warangal
- AICTE Sponsored 3 day’s workshop on “Recent Advances in Control of Power Electronic Drives (RACPED-2009), Jan 29<sup>th</sup> -31<sup>st</sup>, Andhra University, Vizag.
- Attended a one day tutorial on “Smart Distribution Grids for Future – Challenges & Possible Solutions “, by Professor S.S. Venkata, Professor Emeritus & Chair, Iowa State University, USA at VNRVJIET, Hyderabad on July 13, 2009
- Attended a 3day Workshop on “PSCAD / EMTDC Applications in Electrical Engineering” at VNRVJIET, Hyderabad during 05-05-2009 to 07-05-2009.
- Attended 3day workshop on “Simulation of Power Systems using Mi POWER Software” at VNRVJIET during 25-02-2010 to 27-02-2010.
- Attended Expert Lecture on “Real Time Ratings Applications in Transmission Networks” by Dr.SudhakarCherukupalli, Team Leader – Transmission Cable ( Design), British Columbia Hydro Power Corporation, Vancouver, Canada, on July 28<sup>th</sup>, 2010 at JNTU Hyderabad, Jointly organized by VNRVJIET and JNTU Hyderabad
- Attended CII sponsored tutorial on “Development of Massive Wind Power Plants: Integration Issues: Developer, Owner & Operators “Perspective”atCII\_GreenBusiness Center, Hyderabad, 23<sup>rd</sup>August, 2010.
- Attended 3day National Conference on “National Power Systems Conference (NPSC) “, during 15-12-1010 to 17-12-10 at Osmania University, Hyderabad
- Attended a 2 day’s Workshop on “Modeling and Control of Electrical Machines” at VNRVJIET, Hyderabad during 28-01-2011 to 29-01-2011
- Attended one day workshop on “Power Electronics and Embedded Engineering for Electric Vehicles “at PunjLiyod (PL) Engineering Mind Space Hitech City, Hyderabad, 11-02-2011

- Attended Shadow Engineering Program at HBL Power Systems, Shameerpet, Hyderabad on 08-06-11 to 11-06-11.
- Attended AICTE Sponsored Twelve day Staff Development Programme (SDP) on “Modern Control Techniques for Power Systems (MCTPS – 2012) “at VNR VJIIET, Hyderabad during 18-06-12 to 30-06-12
- Attended one week Shadow Engineering Program at Keerthi Industries, Kodad Nalgonda District, Andhra Pradesh during 29-07-12 to 05-08-12
- Attended and organized a two day **TEQIP-II sponsored** national level workshop on “**High Voltage Technology** “during **29<sup>th</sup> – 30<sup>th</sup> April 2013 at VNRVJIIET, Bachupally, Hyderabad**
- Attended one day **TEQIP sponsored** seminar on “**Research Publications and Documentation** “conducted by Department of Computer Science and Engineering, VNRVJIIET, Bachupally, Hyderabad on 04-05-13 under TEQIP-II.
- Attended 3 day’s work shop on “**Art of Teaching** “conducted, VNRVJIIET, Bachupally, Hyderabad during 06-05-2013 to 08-05-13 under TEQIP-II.
- Attended a work shop on “**POGIL** (Process Guided Inquiry Learning “by VNRVJIIET, Hyderabad during the year 2013
- Introduction to Solar Energy based systems by Mr.M.Jagadiswar Reddy, MD, Solaris Innovations & Systems, Hyderabad (Alumni, EEED, VNRVJIIET) 25/01/2014
- Operational Issues in Substations & Transmission Lines by Mr. S. Apparao, Additional Divisional Engineer, APTRANSCO, 04-02-2014
- Attended a three day **TEQIP Phase II sponsored** workshop on “Outcome Based Accreditation” from 15<sup>th</sup> to 17<sup>th</sup> February 2014 at JNTU, Hyderabad
- Outcome based Education and Accreditation Process under TEQIP, 19-07-2014
- “**Power Control**” ‘**How Technology has changed in the last 20 years**” by Dr.M.Ramamoorthy, Former Director General, CPRI, 27- 09-2014
- 3day’s work shop Mi Power Software Work Shop TEQIP II, EEED, VNRVJIIET, 05-01-2015 to 07-01-2015
- A day long interactive session on NBA outcome based Accreditation is arranged by Computer Science & Engineering department under TEQIP-II with Dr.N.K.Srinath, Professor & Dean, Department of Computer Science & Engineering, RV College of Engineering, Bangalore. 17-03-2015

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

**5.1. Invited Lectures:** Nil

**5.2. Articles/Chapters published in Books:** Nil

**5.3. Books published as single author or as editor:** Nil

**5.4. Projects Guided:**

- 20 M.Tech projects
- 20 B.Tech projects

**5.5. Research Interests:** Power Electronics and Drives

**5.6. Ph. D students:**

- Enrolled:** Nil
- Submitted:** Nil
- Awarded:** Nil

**5.7. Papers published in reviewed Journals:**

<b>S. No</b>	<b>Title of the Paper</b>	<b>Journal Name Vol. No. PP</b>	<b>ISBN/ISSN No.</b>	<b>Impact Factor/ Citation Index</b>	<b>National/ International</b>

1	Performance Analysis of Matrix Converter with Variable Voltage, Variable Frequency without DC Stage	International Journal of Computer Applications (IJCA), Vol-I, No.2, April-2010, Page:2-22.	ISSN-2250-1797	IF- 2.52 SJIF - 3.976 HI-4.9 Universal IF- 0.45 (as on 14-06-2015)	International
2	Analysis of Different Topologies for Passive Power Factor Correction in DC – DC Converters	International Journal of Electrical Systems and Control, IJESC: Vol. 4, No. 1, January-June 2012, pp. 21– 28	ISSN-0975-3508	1.04 (as on 14-06-2015)	International
3	Analysis of Different Topologies for Active Power Factor Correction in DC-DC Converter	Journal of Electrical Engineering (JEE), Vol 12, issue 3, 2012.	ISSN: 1582-4594;	0.967 (as on 14-06-2015) Scopus Indexed	International
4	Analysis of Direct Torque Control of Interior Permanent Magnet Synchronous Motor Using PID and Fuzzy Logic Controllers	Journal of Electrical Engineering (JEE), Vol 13, issue 2, 2013	ISSN: 1582-4594	0.967 (as on 14-06-2015) Scopus Indexed	International
5	Type-2 DG Optimal Placement Using Direct Search Algorithm for 33 Bus Loss Less Distribution	International Journal of Innovative Research in Advanced Engineering (IJIRAE), Volume 1, Issue 12, (December 2014), pp No-144-149	ISSN: 2349-2163 Paper ID: DCEE1008 7		International
6	Online Stator Reference Flux Approach to Torque Ripple Minimization for SPM Drive using Fuzzy and PI Controllers	ICGST-ACSE Journal, Volume 15, Issue 1, Delaware, USA, June 2015,	ISSN:1687-4811,	IF; 1.253	International
7	Field Oriented Control of PMSM with Model Reference Adaptive Control Using Fuzzy-PI Controller	IJCTA Vol.8, No.1, Jan-June 2015, Pp.96-108;	ISSN No: 0974-5572		International

8	Multilevel Inverter fed Permanent Synchronous Motor with Field Oriented Control Using Three Level Space Vector Modulation”	ICGST-ACSE Journal, Volume 15, Issue 2, Delaware, USA, June 2015.	ISSN:1687-4811,	IF; 1.253	International
9	Implementation of FPGA on SPM Drive Using PI Controller	ICGST-ACSE Journal, Volume 15, Issue 1, Delaware, USA, June 2015.	ISSN:1687-4811,	IF; 1.253	International
10	Simulation and Experimental Evaluation on PMSM with FPGA	Journal of Electrical Engineering (JEE), Vol 16, pp Nos: issue 3, 2016,	ISSN: 1582-4594	0.967 (as on 14-06-2015) Scopus Indexed	International
11	Sensor less Control of PMSM with FOC using MRAS	, published in ICGST-ACSE Journal, Volume 16, Issue 2, December, pp Nos:21-28, Delaware, USA, June 2015.	ISSN:1687-4811	IF; 1.253	International
12	Analysis of Interior Permanent Magnet Synchronous Motor with Modified Direct Torque Control using Fuzzy Logic Controller	World Journal of Modelling and Simulation Vol. 12 (2016) No. 4, pp. 292-306, England, UK	ISSN 1 746-7233	Scopus Indexed	International
13	Direct Torque Control of Permanent Magnet Synchronous Motor with Three Level Space Vector Modulation	ICGST-ACSE Journal, Volume 17, Issue 1, December, pp Nos:XXXX, Delaware, USA, June 2017,	ISSN:1687-4811,	IF; 1.253	International

#### 5.8. Papers presented at National / International Journals:

S. No	Title of the Paper	Names of the Conference/ Seminars	National/ International	Period
1	Direct Torque Control of Switched Reluctance Motor	National conference on Power Conversion and Industrial Controls at NSS College of Engineering, Palakkad, Kerala,	National	June 2004
2	AC to AC Converter with Constant Frequency Sinusoidal Input / Output Currents for Wind Generators	SEMS Conference held in BHEL R&D, Hyderabad	National	Feb 16 <sup>th</sup> & 17 <sup>th</sup> , 2010.
3	Speed Control of AC	NCEEE'10, Satyabhama	National	29th and

	Chopper fed Induction motor using PI Controller	University, Chennai,		30th July, 2010
4	Efficiency Optimization of DTC based Induction Motor by tuning stator Resistance using PI Controller	NPEC' 10, Madurai, Tamilnadu	National	2 <sup>nd</sup> & 3 <sup>rd</sup> December, 2010
5	Analysis of Wind Turbine Driven Doubly Fed Induction Generator	1 <sup>st</sup> International Conference on Electrical Energy Systems (ICEES – 2011), SSN College of Engineering, Chennai, Tamilnadu	International	3-5 January 2010.
6	Performance Analysis of Static Trippler used for electric furnaces	National Conference on Electrical Machines and Power Systems, (EMPS-2011). Pondichery Engineering College, Pondichery	National	Feb 11 <sup>th</sup> , 2011
7	Power Factor Correction Using Dual Boost Converter	AICTE Sponsored National Conference (NEST AEE-11), VNR VJIET, Bachupally, Hyderabad	National	29 <sup>th</sup> & 30 <sup>th</sup> August 2011
8	Maximum Power Point Tracking for Solar Charge Controller Using Microcontroller.	International Conference on Enhancements in Power Electronics and Controls (ICEPEC-2011), PSG College of Technology, Coimbatore, Tamilnadu	International Conference	Nov 24-25, 2011
9	Multiple Output AC-DC Converters with An Internal DC-UPS	International Conference on Renewable Energy Technologies iCORET 2011, PSG College of Technology, Coimbatore, Tamilnadu	International Conference	December 15-17, 2011
10	Simulation of High Step-Up Dc-Dc Converter Using Cascode Technique	National Conference on Methods Enriching Power and Energy Developments, MEPED'13, Vol. 1, Issue 1, pp 685 -688, at Jeppiaar Engineering College, Chennai, Tamilnadu.	National	12 <sup>th</sup> April 2013
11	Design of Switched Mode Power Supply for Charging Batteries	International conference on Innovations in Electrical & Electronics Engineering, GNI, Hyderabad,	International	05-09-2014 to 07-09-2914
12	Torque Ripple Minimization of a FOC fed PMSM with MRAS using Popov's Hyper stability criterion	Second International Conference on Intelligent and Efficient Electrical Systems 2017, ICIEES'17, PSG College of Technology, Coimbatore, Tamilnadu.	International	January 20-21, 2017

13	Hardware Implementation of Transformer Less High Voltage Gain Step-Up DC-DC Converter using Cascade Technique	PECCON-2017, 1st International Conference on Power Engineering, Computing and CONTROL held in VIT University, Chennai Campus,	International	March 2-4 <sup>th</sup> 2017.
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#### 5.9. Sponsored research Projects:

Title	Agency	Period	Sanctioned Amount	Ongoing / Completed
FPGA Implementation of Field Oriented Control for Permanent Magnet Synchronous Motor	UGC	Two years	Rs 3, 29,000/-	Completed

#### 5.10 Consultancy Projects:

S. No	Title	Agency	Period	Sanctioned Amount	Ongoing / Completed
1.	Nil	Nil	Nil	Nil	Nil

#### 6. Awards / Honors received:

Mrs. N. Krishna Kumari, Associate Professor and Mr. D. Ravi Kumar, Assistant Professor, EEE Department have received Best Paper Award in “ICIEES’17” Springer Conference held in PSG College of Technology, Coimbatore, during January 20-21, 2017, Best Paper Award: 300 Euros worth e books from Springer.

N. Krishna Kumari, D.S.G.Krishna and M.Prashanth Kumar, EEE Department has received Best Paper Award in “PECCON-2017”, 1st International Conference on Power Engineering, Computing and Control held in VIT University, Chennai Campus, during March 2-4<sup>th</sup>2017.

#### 7. Motto:

- A journey of a thousand miles begins with a single step
- Where there's a will there's a way