


FACULTY PROFILE

Name of Faculty	A KUMAR	
Department	Electrical & Electronics Engineering	
Qualification	B.E., M.S, M.Sc(Engg), (Ph.D)	
Designation	Associate Professor	
Area of specialization	Energy Management, Embedded System	
Date of Joining BNMIT	07-03-2005	
Nature of Association (Regular/Contractual/Adjunct)	Regular	
e-mail	akumar@bnmit.in, kumarbnmittee@gmail.com	
No. of years of Experience	Teaching:25 years	

Academic Qualifications

- **M.Sc (Engg) (2013)**, Research Center, Department of EEE, BNMIT, India.
- **M.S (1999)** in Electronics and Control, BITS Pilani, India (CGPA - 9.03).
- **B.E. (1993)** in Electrical & Electronics Engineering, GVIT, KGF (I Class), Affiliated to Bangalore University.

Working Experience Details

- Associate Professor, Dept. of EEE, BNMIT, Bangalore, India, (05/03/2012 - Till date).
- Asst. Professor, Dept. of EEE, BNMIT, Bangalore, India, (1/12-2005 - 04/03/2012).
- Senior Lecturer, Dept. of EEE, BNMIT, Bangalore, India, (7/3/2005 - 30/11/2005).
- Lecturer, Dept. of EEE, GVIT, KGF, India, (17/04/995 - 06/03/2005)

Courses taught

UG: Basic Electrical Engineering, Analog Electronics Circuits, Basic Electronics, Microprocessor, Microcontroller, OpAmp and Linear IC applications, Control Systems, Electrical Machine Design, Management & Entrepreneurship, Embedded System, Electrical power utilization, Energy Auditing & DSM, Peripherals and Microcontrollers, Unix and C, Computer organization

PG: Modeling and Analysis of Electrical machines, Microcontroller and application.

Research Experience Details

M. Sc(Engg) by Research:

Studied the effect of the switching elements on the harmonic level of circuits, As a part of the work build an Automatic power factor controller for a 3.7kW induction motor and studied its effect on power factor improvement of the machine

Ph.D:

Currently pursuing Ph.D in the area of Liquid dielectrics under VTU. As a part of the work an investigation on the dissolved gas concentration of various samples were done and the results were discussed in an IEEE International conference as a paper. The work has been published in IEEE Xplore.

Academic Positions and other Responsibilities (University Level)

1. Practical exam co-ordinator. co-opted member year odd semester 2019-20
2. External DCS for SJB School of Architecture and Planning, odd semester 2019-20.
3. Member BOE, VTU, Academic year 2014-2015.
4. Practical exam co-ordinator. co-opted member year 2016-17.
5. Video recording for VTU e-learning in the subject Electronics lab.(11/08/2016 - 22/08/2016)

Academic Positions and other Responsibilities (Institute Level)

1. **Faculty co-ordinator** for Skill development program - High frequency Transformer design and rotating machine design.
2. **NBA Co-ordinator**, Dept. of EEE, BNMIT (2017-18, 2018-19)
3. **NAAC CO-ordinator**, BNMIT (2016-17, 2017-18)
4. **Personality development program (T5 / TW5) mentor** (2017 - Till date).
5. **Personality development program (T5 / TW5) core committee member** (2017- Till date).
6. **Engineering Exploration Lab (EEL) core committee member** (March 2019 - till date)
7. **Member**, IQAC, BNMIT (2017-18).
8. **Op-AMP and LIC** lab incharge (2016 - Till date)
9. **Electronic lab** incharge (2016-17)
10. **Member**, Library Advisory Committee, BNMIT (3/2/2014 - Till date).
11. **Institute level test co-ordinator** for year 2014-2015.
12. **AMR** for ISO certification.(2010-2014)
13. **Microcontroller** lab incharge (2007 - Till date).

Instruments Handled/Software's handled

- Power quality analyzer Hioki PW3198.

- Matlab.
- Keil software for 8051 program development, Flash Magic, IDE Bench work for MSP430, Aurdino.
- Digital storage oscilloscope.

Awards/Achievements/Membership

- Awarded as Best Faculty of the year 2018-19 by M/s Cognizant
- Letter of appreciation from Management of BNMIT for securing faculty appraisal greater than 90% during academic year 2016-17 and 2017-18
- Awarded Best Paper of the conference for the paper titled, “**Implementation of digital PID for speed control of DC motor**”, at the National conference on Advanced Techniques in Electrical Engineering (NCATEE - 2008), SJBIT, Bangalore on 26th March 2008.

Professional Memberships

- **Life Member, Indian Society for Technical Education (ISTE)-LM20605**

Workshops /Seminars Organized

1. Convener for 1 week FDP on “AI application in Electric Power systems and locomotives”, from 20th to 24th Jan 2020.
2. Convener for 1 week workshop on “Modern power electronics drives: Design and future trends”, from 16th to 20th Jan 2018
3. Convener for 1 week workshop on “Role of IT in Power sector” from 9th – 13th Jan 2017.
4. Convener for 1 week workshop on “Integration of Green Energy to smart grids – opportunities and challenges”, from 11th to 16th July 2016.
5. Member of Organizing committee for 1 week workshop on “Recent Trends in Power Quality Issues and mitigation”, from 18th - 23rd Jan 2016.
6. Member of organizing team for ICPACE 2015 held between 12th – 14th Aug 2015 at BNMIT.
7. Convener for 1 week workshop on “PLC and SCADA systems” from 19th to 23rd January 2015.

Research Publications

International Journals

International Journals:

1. **A.Kumar, Vidya H A, “Application of k-Nearest Neighbour(kNN) machine learning algorithm for Transformer fault classification”, at IJAST(Scopus indexed), ISSN: 2005 - 4238, Vol. 29, No. 6, 2020 PP8441 - 8448**
2. **A.Kumar,” Demand side management: case study at educational institute”, at IJAERD, ISSN(online):2348-4470, ISSN(print):2348-6406, Volume 06, Issue 03, March-2019, pp 27- 30. [Impact factor: SJF:5.71]**
3. **Chetan.S. A.Kumar,” Mathematical modeling of three phase Induction motor and its speed control by SPWM and SVPWM techniques”, at IJAERD, ISSN(online):2348-4470, ISSN(print):2348-6406, Volume 04, Issue 05, May -2017, pp 393-401. [Impact factor: 4.72]**

4. Ashitha S Kumar, Dinari Kiran kumar, **A.Kumar**, Shruthi Vaidya, ” **Reduction Of Harmonics In Power Distribution Systems Using Hybrid Active Filter**”, at IJAERD, ISSN(online):2348-4470, ISSN(print):2348-6406, Volume 04, Issue 05, May-2017, pp 48-55. [Impact factor: 4.72]
5. **A.Kumar**,” **Energy conservation: a case study on energy conservation in residential apartment complex**”, at IJAERD, ISSN(online):2348-4470, ISSN(print):2348-6406, Volume 04, Issue 04, April-2017, pp 1056 – 1059. [Impact factor: 4.72]
6. Shishir Chandra, P Vivek, **A.Kumar**, “ **A smart system of a AC motor speed control based on room temperature**”, at IJRET, eISSN:2319-1163, pISSN:2321-7308, Vol 5, issue 9, Sept 2016, pp 212-216.
7. Chaitanya, **A.Kumar**, “ **A Novel High efficiency converter for renewable energy generation application**”, at IJRET, eISSN:2319-1163, pISSN:2321-7308, Vol 5, issue 5, May 2016, pp 290-294.
8. Champa P N, **Kumar A**, “**Implementation of interleaved soft switching boost converter with PV source**” at International Journal of Science and Technoledge, ISSN : 2321-919x, Vol 11, issue VI, June 2014.
9. Shravanthi, **Kumar A**, “**Implementation of synchronous buck converter with PV source**”, at International Journal of Science and Technoledge, ISSN : 2321-919x, Vol 11, issue VI, June 2014.
10. **A.Kumar**, Dr. G R Gurumurthy, “**Influence of Switching Elements on Harmonics and Power Factor Improvement**”, at International Journal of Engineering Research and Development, p-ISSN:2278-800x, vol 7, issue 12, July 2013, pp 18-24.

Papers presented in International/National Conferences

International

1. **A.Kumar**, Dr. Vidya H A, Bala Gopal Reddy G, “**Modified Fuzzy logic technique for Power Transformer fault prediction**” at IEEE-ICSPACE-2017 held at GAT, Bangalore between 17-19th August 2017. The paper was published in IEEE Xplore.
2. Shashidhar, **A.Kumar**, “**Smart DC micro-grid for effective utilization of solar energy**” at IC on RTPES-2016 held at AMC Engineering college, Bengaluru on 4th April 2016
3. Archana, **A.Kumar**, “**Modelling of Industrial Drives for Simulation and PQ considerations**”, at ICICE-2013 held at Bangalore on 28th June 2013.
4. Kruthi Jayaram, **A.Kumar**, “**Design and implementation of Drive control for electric vehicle**”, at ICICE-2013 held at Bangalore on 28th June 2013.

National

1. Nivedhita, Shobitha, Sushme, **A.Kumar**,”**Energy efficient lighting system**”, at National conference on Advanced Techniques in EEE-15 held on 9th May 2018 at SJBIT, Bengaluru
2. Chaitanya, **A.Kumar**, “**High Efficiency wide input range LLC resonant converter for Renewable energy generation system with fixed frequency PWM control method**” at NCEM – 2016 held on 23rd and 24th March 2016 organized by SIET, Tumukuru

3. Meghana, **A.Kumar** “ **Simulation of dynamic voltage restorer during 3-phase fault**” at National conference on Advanced Techniques in EEE-15 held on 9th May 2015 at SJBIT, Bengaluru
4. Champa, **A.Kumar**, “**Simulation study of single and Interleaved soft switching boost converter with PV source**”, National Conference on Advanced techniques in EEE (NCATEEE – 14), SJBIT, Bangalore on 10th May 2014.
5. Shravanthi, **A.Kumar**, “**Soft switching synchronous buck converter with PV source**”, National Conference on Advanced techniques in EEE (NCATEEE – 14), SJBIT, Bangalore on 10th May 2014.
6. Deepak K Srivatsa, Preethi B, Parinitha R, Sumana G, **A.Kumar**, “**Smart Street Lights**”, India Educators Conference (TIIEC) – 2013, Texas Instruments, between 4th – 6th April 2013, Published in IEEE Explore
7. Manjunath H P, **A.Kumar**, “**PF improvement and its effects on harmonic distortion for a 1-phase fully controlled rectifier with RL-load**”, at NCRE³CT-2011 held at BNMIT on 14th October 2011.
8. **A.Kumar**, Dr. G.R.Gurumurthy, “**Power factor improvement and its effect on Harmonic Distortion**”, at National Conference on Energy Systems and Energy Issues (ESEI – 2011) at BMSCE, Bangalore held on 18th and 19th February 2011.
9. **A.Kumar**, K.Venkatesha, “**Implementation of Digital PID for speed control of DC motor**” at National conference on Advanced Techniques in Electrical Engineering (NCATEE - 2008), SJBIT, Bangalore on 26th March 2008.
10. K.Venkatesha, **A.Kumar**, “**Fuzzy logic based closed loop speed control of separately excited DC motor**” at National symposium on “Scenario of scientific and information technology in power and electronic systems(SSITPES-2008)” at DSCE, Bangalore held on 3rd and 4th April 2008.

Invited Talks Delivered

1. **Analog Electronics and applications** “at Sairam College, Anekal on 05th Dec 2019
2. **Analog Electronics and applications** “at Sairam College, Anekal on 09th Nov 2017.
3. ”**Analog Electronics and applications** “at Sairam College, Anekal on 20th Oct 2016.
4. “**Analog Electronics**” at SSEC, Anekal on 15th Sept 2015.
5. “**DSM customer perspective**” at AMCCE, Bengaluru on 11/02/2015.
6. “**Control Engineering applications in Electrical Engineering**” at SJBIT, Bangalore on 12/04/2014.
7. “**Energy Auditing and Demand side management**” at DSCE, Bangalore on 28/09/2011.

Chairmanships at National/ International Conference / Seminars / Project exhibitions

1. **Auditor** for Mock NBA at BIT, Bengaluru on 18th July 2019.
2. **Jury member** for the project exhibition “Pradarshana 2019” held at MSRIT, Bengaluru on 25th May 2019.
3. **Chair person** for the National conference on Power control and signal processing at GCE, Ramanagaram on 8th April 2015

4. **Jury member judge** for the Final Project Exhibition held at BMSCE, Bangalore on 21st May 2014.
5. **Jury member** for the project and paper contest at CIT Gubbi in the National level symposium “KNEW 2011” on 30th March 2011
6. **Jury member** for the project and paper contest at CIT Gubbi in the National level symposium “KNEW 2008” on 7th November 2008.

Participation in Training courses / Seminars / Workshops

1. 5 day International virtual FDP on “Upskilling for the future: Technology innovations and Research opportunities in Power Engineering” organized by BNMIT, Bangalore from 10th to 14th August 2020
2. 5 day online FDP on “Power convertors for Transportation Electrification application” organized by MSRIT, Bangalore from 27th to 31st July 2020 One Week online Faculty Development Programme - “International Webinar on AI applications in Industrial Evolution 4.0”, organized by Dept. of Electrical & Electronics Engineering, BIT, Bangalore, from 13th to 17th July 2020
3. 5 day online FDP on “Role of IoT, Embedded, Electric Vehicles and Power Electronic Converters for Smart World”, from 18th to 22nd May 2020 organized by Dept of EEE, St. Joesph’s College of Engineering, Chennai
4. One Week online Faculty Development Programme - “International Webinar on AI applications in Industrial Evolution 4.0”, organized by Dept. of Electrical & Electronics Engineering, BIT, Bangalore, from 13th to 17th July 2020
5. 1 week FDP on “AI application in Electric Power systems and locomotives”, from 20th to 24th Jan 2020 at BNMIT, Bengaluru.
6. 1 week FDP on “**Working model of Industry 4.0**” from 08th July to 12th July 2019 at NTTF, Bangalore.
7. 1 week short term course on “**Introductory course on Machine learning**” from 21st to 26th Jan 2019 at TKMCE, Kollam
8. 1-day workshop on “**Patenting**” on 11th April 2018 at BNMIT
9. 2-day workshop on “**A to Z of Transformer Design**”, from 17th and 18th February 2018 at BNMIT.
10. 1-week FDP on, “**Modern Power Electronic Drives: Design and Future trends**”, from 16th to 20th January 2018 at BNMIT.
11. 1-week workshop on “**Role of IT in power sector**”, from 9th – 13th Jan 2017 at BNMIT.
12. 1-week workshop on “**Integration of Green Energy to smart grids – opportunities and challenges**”, from 11th to 16th July 2016 at BNMIT.
13. 3-day CWF-2016 conference on, “ **Cities in Transition**”, from 28th - 30th November, 2016 at Palace Ground, Bengaluru
14. 1-week FDP on “**Recent trends in Power quality issues and mitigation**” from 18th to 23rd Jan 2016.
15. 3-day workshop on “**Quality initiative in technical and higher educational institutions through accreditation and assessment**”, from 5th – 7th Nov 2015, at GEC, Hassan.
16. 1-week workshop on “**Programmable logic controller and SCADA systems**” from 19th to 23rd January 2015 at BNMIT, Bengaluru

17. 1-week workshop on “**Energy Management & Energy Audit**” organized by RVCE, Bangalore on 20th – 24th Jan 2014.
18. 3-day workshop on “**Microcontroller MSP 430 and its applications**” held from 30th Jan to 1st Feb 2012 at HKBK College of Engineering, Bangalore.
19. 1-week SDP on “**LabVIEW and its applications in Engineering**” organized by BMSCE, Bangalore between 11th July 2011 to 16th July 2011.
20. 2-day FDP on “**Energy auditing and DSM**” at JNNCE, Shimoga on 24th and 25th August 2010.
21. 2-day workshop on “**Research methodologies and report writing**” organized by VTU at MSRIT, Bangalore on 28th and 29th May 2009.
22. 1-day seminar on “**Introduction to research investigations in recent years in Electrical and Electronics Engineering**”, at BNMIT, Bangalore held on 16th March 2009.
23. 2 – day workshop on “**Recent trends in power electronics**” at UVCE, Bangalore conducted on 25th and 26th September 2008.
24. 3-day short term training programme on “**Microcontrollers and HDL lab**” at RNSIT, Bangalore held on 30th Jan to 1st Feb 2008.
25. 5- day workshop on “ **Soft Skills**” held at Infosys, Bangalore from 21st to 25th January 2008.
26. 3-day workshop on “**State of Art Approaches to power system modeling and simulation**” at NMIT, Bangalore between 22nd to 24th Feb 2007
27. 3-day FTP on “**RF measurements**” at East West Institute of Technology, Bangalore between Aug 10 -12 2005.
28. 15-day course on “ **DIGITAL CONTROLLER DESIGN & APPLICATION**” at BMSCE, Bangalore between 15th June 2002 to 28th June 2002
29. 2-day Workshop on “**Control system laboratory**” held on 22nd and 23rd March 2001 at RVCE, Bangalore.

Training undergone

1. Internal auditor training for ISO 9001:2008 by TUV Rheinland, India.

Personal Details

- **Date of Birth:** 22 - 09 –1969; **Gender:** Male.
- **Family Details:** **Wife:** Mrs. A.Rajasree and **Two sons:** Arun Ganesh and Naren Karthik.
- **Languages known:** English, Hindi, Kannada, Telugu, Tamil

27th Jan 2020

A.KUMAR