

# National Institute of Technology, Tiruchirappalli

## Curriculum Vitae

**Dr. Karthik Thirumala**, Assistant Professor, Department of Electrical and Electronics Engineering, National Institute of Technology Tiruchirappalli, Tamil Nadu, India



Dr. Karthik Thirumala is an Assistant Professor in the Department of Electrical & Electronics Engineering, National Institute of Technology Tiruchirappalli, India. He was temporary faculty in EEE department of NIT Tiruchirappalli from July 2013 to March 2018. He did research in the field of Power Quality Monitoring from the Electrical Engineering discipline of Indian Institute of Technology Indore, India. He is awarded POSOCO Power Systems Award 2018 for his excellent Ph.D. thesis. He completed his M.Tech from VNR Vignana Jyothi Institute of Engineering and Technology, Hyderabad with specialization in power electronics. His current research interests include power quality monitoring and mitigation, and power electronic applications to power systems.

1.	Name:	Karthik Thirumala
2.	Designation:	Assistant Professor
3.	Office Address:	Dept. of EEE, NIT Tiruchirappalli
4.	Telephone:	--
5.	Email:	Primary: <a href="mailto:karthikt2707@gmail.com">karthikt2707@gmail.com</a> Secondary: <a href="mailto:thirumala@nitt.edu">thirumala@nitt.edu</a>
6.	Field(s) of Specialization:	Power Quality, Power Electronic applications to Power Systems

## 7. Employment Profile

From	To	No. of Years	Name of the Institute	Position Held
June 2018	Till date	-	National Institute of Technology Tiruchirappalli	Assistant Professor
July 2017	March 2018	9 months	National Institute of Technology Tiruchirappalli	Temporary Faculty
January 2013	March 2013	2 months	Muffakham Jah College of Engineering & Technology, Hyderabad	Lecturer
Total		11 months		

# National Institute of Technology, Tiruchirappalli

---

## 8. Academic Qualifications (From Highest Degree to High School):

Degree	Year	Institute	University/Board	Specialization
Ph.D.	2017	Indian Institute of Technology Indore (IITI)	IIT Indore, India	Electrical Engg. (Power Quality Monitoring)
M.Tech.	2012	VNR Vignana Jyothi Institute of Engineering & Technology, Hyderabad	JNTU Hyderabad, India	Power Electronics 80.81 %
B.Tech.	2010	Jayamukhi Institute of Technological Sciences, Warangal	JNTU Hyderabad, India	Electrical and Electronics Engg. 76.1 %
Intermediate	2006	S.R. Junior College for Boys, Warangal	Board of Higher Education, Andhra Pradesh, India	Maths, Physics, Chemistry 86.5%
X (SSC)	2004	Sputnik High School, Warangal	Board of Secondary Education, Andhra Pradesh, India	81.3 %

## 9. Academic/Administrative Responsibilities within the Institute

Position	Faculty/Department/Centre/Institution	From	To

## 10. Academic/Administrative Responsibilities outside the University:

Position	Institution	From	To

## 11. Awards, Associateships etc.

Year of Award	Name of the Award	Awarding Organization
2018	POSOCO Power System Award	POSOCO and FITT, IIT Delhi
2017	Best Research Paper Award	IIT Indore
2012	Best M.Tech Project Award	VNR Vignana Jyothi Institute of Engineering & Technology, Hyderabad
2010	Academic Topper and Gold Medal	Jayamukhi Institute of Technological Sciences, Warangal
2008	Visveswaraya Best Student Award	ABVP Warangal

## 12. Fellowships

Year of Award	Name of the Fellowship	Awarding Organization	From (Month/Year)	To (Month/Year)
2013 -2017	Institute Fellowship	MHRD, GOI at IIT Indore	July 2013	June 2017
2010 - 2012	GATE Scholarship	MHRD, GOI at VNR VJIET, Hyderabad	October 2010	November 2012

**13. Details of Academic Work**

- (i) **Curriculum Development :-**
- (ii) **Courses taught at Postgraduate and Undergraduate levels :-**
  - *Post Graduate level*
    1. Power Quality
    2. Switched Mode Power Converters
  - *Undergraduate level*
    1. Linear Integrated Circuits
    2. Basics of Electrical & Electronics Engineering
- (iii) **Projects guided at Postgraduate level :-**
- (iv) **Other contribution(s) :-**

**14. Details of Major R&D Projects**

Title of Project	Funding Agency	Duration		Status
		From	To	Ongoing/ Completed

**15. Number of PhDs guided**

Name of the PhD Scholar	Title of PhD Thesis	Role(Supervisor/ Co-Supervisor)	Year of Award

**16. Participation in Workshops/ Symposia/ Conferences/ Colloquia /Seminars/ Schools etc. (mentioning the role)**

Date (s)	Title of Activity	Level of Event (International/ National/ Local)	Role (Participant/ Speaker/ Chairperson, Paper presenter)	Event Organized by	Venue
19 – 21 December 2016	19th National Power Systems Conference (NPSC)	International	Presenter	IIT Bhubaneswar	Bhubaneswar, India
15 – 17 September 2016	2016 IEEE International Conference on Power System Technology (POWERCON),	International	Presenter	University of Wollongong	Wollongong, Australia

## National Institute of Technology, Tiruchirappalli

20 – 22 April 2015	Training Workshop on Real Time Digital Simulator	National	Participant	IIT Kanpur	Kanpur, India
18 – 20 December 2012	17th National Power Systems Conference (NPSC)	International	Presenter	IIT Varanasi	Varanasi, India
5 – 17 June 2012	AICTE sponsored twelve-day Staff Development Program	National	Participant	VNR VJIET, Hyderabad	Hyderabad, India
10 – 11 February 2012	Tutorial on Neural Networks and Fuzzy Logic: from Fundamentals to Advanced Applications	National	Participant	VNR VJIET, Hyderabad	Hyderabad, India
22 – 24 December 2011	International Conference on Renewable Energy Technologies (iCORET 2011)	International	Presenter	PSG College of Tech., Coimbatore	Coimbatore, India

### 17. Workshops/ Symposia/ Conferences/ Colloquia/Seminars Organized (as Chairman/ Organizing Secretary/ Convenor / Co-Convenor)

Title of Activity	Level of Event (International/ National/ Local)	Date (s)	Role	Venue

### 18. Invited Talks delivered

Topic	Date	Inviting Organization

### 19. Membership of Learned Societies

Type of Membership	Organization	Membership No. with date
Member	IEEE (Institute of Electrical & Electronic Engineers)	M 00 (2013)

# National Institute of Technology, Tiruchirappalli

--	--	--

## 20. Academic Foreign Visits

Country	Duration of Visit	Programme

## 21. Publications

### (A) Refereed Research Journals:

S.No	Author(s)	Title of Paper	Journal	Volume, Pages & Year	Impact Factor
1	K. Thirumala, A. Kanjolia, T. Jain, A. C. Umarikar	Empirical Wavelet Transform and Dual Feed Forward Neural Network for Classification of Power Quality Disturbances	Int. Journal of Power and Energy Conversion	2018 (accepted)	-
2	K. Thirumala, M. S. Prasad, T. Jain, A. C. Umarikar	Tunable-Q Wavelet Transform and Dual Multiclass SVM for Online Automatic Detection of Power Quality Disturbances	IEEE Transactions on Smart Grid	November 2016 (Early access)	6.645
3	K. Thirumala, Shantanu, T. Jain, A. C. Umarikar	Visualizing Time-Varying Power Quality Indices using Generalized Empirical Wavelet Transform	Electric Power Systems Research	vol. 143, pp. 99-109, Oct 2016	2.688
4	K. Thirumala, A. C. Umarikar, T. Jain	Estimation of Single-phase and Three-phase Power Quality Indices using Empirical Wavelet Transform	IEEE Transactions on Power Delivery	vol. 30, no. 1, pp. 445-454, Feb 2015	3.218

### (B) Conferences/Workshops/Symposia Proceedings

S.No	Authors	Title of Paper	Title of the Proceedings	Venue and year of proceedings
1	K. Thirumala, A. C. Umarikar, T. Jain	DSP Implementation of the Empirical Wavelet Transform for Measurement of Power Quality Indices	2017 7th International Conference on Power Systems (ICPS)	College of Engineering, Pune, India, December 21 - 23, 2017, pp. 698-703
2	K. Thirumala, A. C. Umarikar, T. Jain	A New Classification Model based on SVM for Single and Combined Power Quality Disturbances	19th National Power Systems Conference (NPSC)	IIT Bhubaneswar, December 2016
3	K. Thirumala, A. C. Umarikar, T. Jain	A Generalized Empirical Wavelet Transform for Classification of Power Quality Disturbances	2016 IEEE International Conference on Power System Technology (POWERCON)	Wollongong, NSW Australia, September 2016, pp. 1028-1032

## National Institute of Technology, Tiruchirappalli

---

4	K. Thirumala, M. S. Prasad, T. Jain, A. C. Umarikar	Tunable-Q Wavelet Transform Based Approach for Recognition of Power Quality Disturbances	2015 IEEE Int. WIE Conf. on Electrical and Computer Engineering	BUET, Dhaka, Bangladesh, December 2015, pp. 317-320
5	K. Thirumala, A. C. Umarikar, T. Jain	Empirical Wavelet Transform based Single Phase Power Quality Indices	18th National Power Systems Conference (NPSC)	IIT Guwahati, December 2014, pp. 1-6
6	K. Thirumala, G. S. Raju	New Criterion for Stator Inter-turn Fault Detection of Synchronous Generator	17th National Power Systems Conference (NPSC)	IIT Varanasi, December 2012
7	N. K. Kumari, K. Thirumala, and C. S. Swaroop	Multiple Output AC-DC converters with an Internal DC-UPS	Int. Conf. on Renewable Energy Technologies (iCORET 2011)	PSG College of Technology, Coimbatore, December 2011

### (C) Books & Monographs

Author(s)	Title of Book/Monograph	Name of Publishers	Year of Publication	ISSN/ISBN Number