


## FACULTY PROFILE

1	Name of Faculty	Dr. Jaison Mathew			
2	Designation	Assistant Professor			
3	Department	Electrical & Electronics Engineering			
4	Contact No.	9447414981			
5	Email	<a href="mailto:jaison@ieee.org">jaison@ieee.org</a>			
6	Academic Qualifications				
	<b>Degree</b>	<b>Year</b>	<b>Specialization</b>	<b>Institution</b>	
	B.Tech.	1998	Electrical & Electronics Engineering	RIT Kottayam, Mahatma Gandhi University Kottayam	
	M.Tech	2003	Power Systems	College of Engineering Trivandrum, Kerala University	
	Ph.D.	2014	Power Electronics	Indian Institute of Science Bangalore	
7	Professional Experience				
	<b>Period Served</b>	<b>Name of institution</b>		<b>Designation</b>	
	14-12-2005 to 31-12-2005	RIT Kottayam		Lecturer	
	01-01-2006 to 24-07-2013	RIT Kottayam		Assistant Professor	
	25-07-2013 till date	Govt. Engg. College, Thrissur		Assistant Professor	
	Date of Joining the in Technical Education Department:	14-12-2005			
8	Publications (List is attached)				
	International Journals	8 Nos.			
	International Conference	8 Nos.			
	National Conference	4 Nos.			
9	No. of STTPs attended from 2012 to 2016	8 Nos. (List is attached)			
10	Membership in professional Bodies	IEEE, I.S.T.E.			
11	No. of M.Tech. projects guiding/guided	Guided		Guiding	
		7		2	
	No. of PhD Scholars guiding	3			

12	Field of interest	Power Electronics & Motor Drives, Multilevel Inverters, Power Quality
13	Additional Responsibilities	<ul style="list-style-type: none"> <li>➤ Lab in charge Research Lab</li> <li>➤ Executive Member - Academic Autonomy</li> <li>➤ Group Tutor - 2014 B-Tech. Electrical admissions (A Batch)</li> <li>➤ Faculty Advisor IEEE IAS chapter GEC</li> </ul>

## LIST OF INTERNATIONAL JOURNALS/CONFERENCES/NATIONAL CONFERENCES

### DETAILS OF INTERNATIONAL JOURNAL PUBLICATIONS

Name of publication/paper presentation	Details of journals/publications	Date & year of publication & Co-author	Is On-line available? (Yes/No)	Impact Factor
<b>2012-13</b>				
"Multilevel dodecagonal space-vector generation for induction motor drives by cascading three-level and two-level inverters,"	IET Power Electronics	Vol. 5, no. 8, PP. 1324-1332, September 2012.  (with K. Mathew, Najath Abdul Azeez, Anubrata Dey, L. Umanand and K. Gopakumar)	Yes	2.2

**2013-14**

<p>"A Multilevel Inverter Scheme With Dodecagonal Voltage Space Vectors Based on Flying Capacitor Topology for Induction Motor Drives"</p>	<p>IEEE Transactions on Power electronics</p>	<p>Vol. 28, no. 1, PP. 516-525, January 2013 (With P. P. Rajeevan, K. Mathew, Najath Abdul Azeez, and K. Gopakumar)</p>	<p>Yes</p>	<p>4.6</p>
<p>"A hybrid multilevel inverter system based on dodecagonal space vectors for medium voltage IM drives"</p>	<p>IEEE Transactions on Power electronics</p>	<p>Vol. 28, no. 8, PP. 3723-3732, August 2013 (With P. P. Rajeevan, K. Mathew, Najath Abdul Azeez, and K. Gopakumar)</p>	<p>Yes</p>	<p>4.6</p>
<p>"Medium voltage drive for induction motors using multilevel octadecagonal voltage space vectors"</p>	<p>IEEE Trans. Power Electronics</p>	<p>Vol. 6, no.7, July 2013 (With K. Mathew, N.A. Azeez, P.P. Rajeevan, Umanand L. and K. Gopakumar)</p>	<p>Yes</p>	<p>4.6</p>
<p>"A Nearly Constant Switching Frequency Current Error Space Vector Based Hysteresis Controller for an IM Drive with 12-sided</p>	<p>EPE Journal</p>	<p>Vol. 23 , No 4 December 2013</p>	<p>Yes</p>	<p>0.8</p>

Polygonal Voltage Space Vectors"				
<b>2014-15</b>				
"A Medium Voltage Inverter Fed IM Drive using Multilevel 12-sided polygonal Vectors, with Nearly Constant Switching Frequency Current Hysteresis Controller"	IEEE Transactions on Industrial Electronics	Vol. 61, No.4, 1700 - 1709, April 2014  (With Najath Abdul Azeez, Anubrata Dey, K. Mathew, K. Gopakumar, Marian P. Kazmierkowski)	Yes	5.6
"A Harmonic Suppression Scheme for Open-End Winding Split-Phase IM Drive Using Capacitive Filters for the Full Speed Range,"	IEEE Transactions on Industrial Electronics,	Vol.61, no. 10, PP. 5213 - 5221, October 2014 (N.A. Azeez, K. Gopakumar, C. Cecati)	Yes	5.6
<b>2015-16</b>				
"Medium-Voltage Drive for Induction Machine With Multilevel Dodecagonal Voltage Space Vectors With Symmetric Triangles"	IEEE Transactions on Industrial Electronics	Year: 2015, Volume: 62, Issue: 1  Pages: 79 - 87  (R. Sudharshan Kaarthik; K. Gopakumar; Tore Undeland)	Yes	5.6

## DETAILS OF INTERNATIONAL CONFERENCE PUBLICATIONS

Name of publication/paper presentation	Details of journals/publications	Date & year paper presentation & Co-Auther	Is On-line available? (Yes/No)
<b>2012-13</b>			
"Multilevel dodecagonal voltage space vector generation using flying capacitor topology for induction motor drives"	Energy Conversion Congress and Exposition (ECCE), 2012 IEEE	pp.1136-1142, 15-20 September 2012  (P. P. Rajeevan, K. Mathew, Najath Abdul Azeez and K. Gopakumar)	Yes
<b>2013-14</b>			
"A multilevel Inverter Topology for the Generation of Dodecagonal Space Vectors for Medium Voltage Induction Motor Drives with a modied SVPWM strategy for reduction of THD,"	EPE 2013 - 15th European conference on Power electronics and applications,	September 2013, Lille, France  ( K. Mathew, P. P. Rajeevan, Najath Abdul Azeez, K. Gopakumar)	Yes
"A 5th and 7th Order Harmonic Suppression Scheme for Open-end Winding Asymmetrical Six phase IM Drive Using Capacitor-fed Inverter,"	IECON 2013 - 39th Annual Conference on IEEE Industrial Electronics Society	November 2013, Vienna, Austria, (Najath Abdul Azeez, Gopakumar K, Carlo Cecati)	Yes

"A nearly constant switching frequency current hysteresis controller with generalized parabolic boundaries using 12-sided polygonal voltage space vectors for IM drives"	XXth International Conference on Electrical Machines (ICEM),	pp. 810-815, 2-5 September 2012. (Najath Abdul Azeez, Anubrata Dey, K. Mathew, and K. Gopakumar)	
"Multilevel octadecagonal space vector generation for induction motor drives by cascading asymmetric three-level inverters,"	IECON 2012 - 38th Annual Conference on IEEE Industrial Electronics Society	pp. 1915-1920, 25-28 October 2012. (K. Mathew, K. Gopakumar, Najath Abdul Azeez, Anubrata Dey and L. Umanand)	Yes
<b>2014-15</b>			
"Cuk Converter based bridgeless power factor Pre-regulator"	Power India International Conference (PIICON), New Delhi, 2014 December	5-7 December 2014, pp.1-6 (Merry Mathew Padayattil)	-
"An open-end winding IM drive with multilevel 12-sided polygonal vectors with symmetric triangles"	16th European Conference on Power Electronics and Applications (EPE'14-ECCE Europe), 2014	6-28 Aug. 2014 (S. Kaarthik, Gopakumar K, Undeland T)	Yes
<b>2015-16</b>			
"Review of current control strategies for a vector controlled three	2015 IEEE International Conference on Power, Instrumentation, Control and	Pages: 1 - 7, DOI: 10.1109/PICC.2 (Praveen Joseph)	Yes

phase UPF rectifier"	Computing (PICC)		
"Capacitor balancing of a Modular Multilevel Inverter using a Modulation Strategy",	IEEE International Conference on Next Generation Intelligent Systems 2016- ICNGIS-2016	Kavitha S Nair	

**Publications in National Conferences:**

1. Jyothi G. K. and Jaison Mathew, "Electronic Welding Power Source with Hybrid Resonant Inverter," 10th National Conference on Technological Trends (NCTT09) 6-7 Nov 2009, PP. 80-84
2. Deepa M.U and Jaison Mathew, "Sensorless Control of Brushless DC Motor Drive Using Line-Line Voltage Detection," 10th National Conference on Technological Trends (NCTT09) 6-7 Nov 2009, PP.100-105
3. Liza Joe Mathew and Jaison Mathew, "Power Compensation using Instantaneous Reactive Power Theory and Capacitive Voltage Balance," 10th National Conference on Technological Trends (NCTT09) 6-7 Nov 2009, PP.156-160
4. Arya Prakash and Jaison Mathew, "Speed control of BLDC motor using digital signal controller," National conference on Recent Innovations in Technology (NCRIT)- RIT Kottayam, 2009

**LIST OF STTP'S COORDINATED**

1	Modeling and Control in Power Electronics	14-07-2015	17-07-2015	4	Govt. Engineering College, Thrissur
2	Applications of Microcontrollers, Artificial Intelligence and Simulation tools in Power Electronics	04-02-2008	15-02-2008	12	RIT Kottayam

## LIST OF STTP'S ATTENDED

2015-16					
1	Preparation of Research Proposals to Funding Agencies sponsored by TEQIP II and organized by Engg. Staff College off India	10-08-2015	13-08-2015	4	Govt. Engineering College, Thrissur
2	Development of Smart Power Grid (Sponsored by FSTDC)	27-07- 2015	31-07- 2015	5	Govt. Engineering College, Thrissur

2014-15					
1	Power Electronics for Grid Connected Renewable Energy System	14-05-2015	16-05-2015	3	NIT Calicut

2013-14					
1	Applications of Power Electronics (sponsored by TEQIP Phase II)	07-10-2013	11-10-2013	5	Govt. Engineering College, Thrissur
2	Workshop on Magnetic Simulator, Simplorer and PExpert (sponsored by TEQIP Phase II)	13-08-2013	14-08-2013	2	Govt. Engineering College, Thrissur
3	Preparing Academic Institutions for academic autonomy	18-06-2014	20-06-2014	3	Govt. Engineering College, Thrissur
4	Potential research areas in Drives and Power system	08-07-2014	12-07-2014	5	RIT Kottayam



**INTERACTION WITH EXTERNAL WORLD/INVITED TALKS etc.**

<b>2013-14</b>				
1	Invited Talk: RIT Kottayam	Short Term faculty training Program on " Potential Research areas in Drives and Power System"	Topic: Multilevel Inverters	9/7/2014
<b>2014-15</b>				
1	Invited Talk: Jyothi Engg. College Cheruthuruthi, Thrissur	ISTE SRM Sponsored National Level Short Term Training Programme (STTP) on "Power System Control Using Power Electronics" during	Topic: Multi-level Inverters	16th - 21st June 2014.
<b>2015-16</b>				
1	Invited Talk: College of Engineering Thalassery	Short Term faculty training Program on " Potential Research areas in Drives and Power System"	Topic: Space Vector Modulation for Two Level and Multilevel Inverters	29/1/16 to 4/2/16
2.	Invited Talk: CAPE College of Engineering Thrikaripur, Kasaragod	STTP- Power Quality: Issues, Challenges and Solutions	Topic: Multilevel Inverters and Modulation Techniques	15/3/16 to 21/3/16

## LIST OF M TECH PROJECTS GUIDED

1	Capacitor balancing of a Modular Multilevel Inverter using a Modulation Strategy	Kavitha S Nair	M Tech	July 2016
2	Vector Control of Three Phase Unity Power Factor Rectifier	Praveen Joseph	M Tech	July 2015
3	Design and Implementation of a Bridgeless Power factor Pre-regulator	Merry Mathew Padayattil	M Tech	July 2014
4	Five level cascaded H-Bridge Multilevel inverter using sampled amplitude SVPWM	Jojin Thomas	M Tech	Nov. 2010
5	Sensor less Control Of BLDC motor	Deepa M.U.	M Tech	Nov. 2009

## LIST OF PHD STUDENTS

1	Antony K Peter	Full Time Student	Electric Drives for reactive power compensation
2.	Anitha P	Part Time Student	Thermo electric module
3.	Vasudha V	Part Time Student	Smart DC Microgrid

## LIST OF R&D/ CONSULTANCY PROJECTS

2014-16				
1	Sensorless control of BLDC Motor for Indian Railways	Kerala Electricals LTD. (KEL)	Project Amount: 70000/-	Principal Investigator: Dr. Jaison Mathew Co-Investigator: Prof. Jiji K.S.
2	Single phase, Single stage unity power factor PWM rectifier	TEQIP Phase II	Project Amount: 2 Lacs	Principal Investigator: Dr. Jaison Mathew

## PROFESSIONAL SOCIETY ACTIVITIES

Sl. No	Name of Conference	Period	
1	<b>General Chair</b> , IEEE International Conference on Power Electronics, Drives and Energy Systems ( <b>IEEE PEDES2016</b> ), Trivandrum	14 Dec. 2016	17 Dec. 2016
2	<b>Steering Committee Chair</b> , IEEE PEDES2018 to be held in IIT Madras in 2018	18 Dec 2018	21 Dec 2018
3	Secretary, IEEE Kerala Section IA/IE/PELS joint Technical chapter	2008	2010
4.	Vice Chair, IEEE Kerala Section IA/IE/PELS joint Technical chapter	2014	2016
5.	Staff-in-Charge, IEEE IAS society, GEC Thrissur	2015	Till date