


# Faculty Profile

<b>Dr. Francis M Fernandez</b>		
Professor and Head, Dept. of Electrical & Electronics Engineering		
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<b>Qualifications</b>		
	B.Tech – Electrical and Electronics Engineering M.Tech – Electrical Machines PhD – Power Quality	
<b>Area of Interest</b>		
	Power quality, Machines and Drives	
<b>Professional Experience</b>		
	Scientist, ANERT (1994 - 1999) Faculty in College of Engineering Trivandrum (1999 -2022) Faculty in Government Engineering College Barton Hill (2022 onwards)	
<b>Recently taught courses</b>		
	Power Quality, Electrical Machines, Power Electronics, Professional Communication	
<b>Other responsibilities</b>		
<b>Membership in Professional Organizations:</b>		
	Senior Member, IEEE Member, IEEE Power and Energy Society Life Member ISTE	
<b>Important Publications:</b>		
	1. Francis M. Fernandez, P. S. Chandramohan Nair, "Method for separation of customer and utility contributions of harmonics at point of common coupling",	

IET Transactions on Generation, Transmission and Distribution , vol. 7, no. 4, pp. 374-381, April 2013.

2. Francis M. Fernandez, P. S. Chandramohanan Nair, "A New Expression for Power Factor under Nonsinusoidal Conditions", 2011 IEEE-PES International Conference on Innovative Smart Grid Technologies (ISGT-2011), Kollam, Kerala.
3. Francis M. Fernandez, P. S. Chandramohanan Nair, "Estimation of Supply Side Harmonics by Using Network Impedance Data", 2010 Joint International Conference on Power Electronics, Drives and Energy Systems (PEDES), New Delhi.
4. Francis M. Fernandez, P. S. Chandramohanan Nair, "Influence of Power Factor Compensating Capacitors on Estimation of Harmonic Distortion", 9th International Conference on Power Quality and Utilisation (EPQU-2007), Barcelona, Spain
5. Harikrishnan R., Francis M. Fernandez, "Improved online torque-sharing-function based low ripple torque control of Switched Reluctance Motor Drives", IEEE International Conference on Power Electronics, Drives and Energy Systems (PEDES), Thiruvananthapuram, 2016
6. Rijo Rajan, Francis M Fernandez, "Fuzzy-Based Control of Grid-Connected Photovoltaic System for Enhancing System Inertial Response", 53rd International Universities Power Engineering Conference, IEEE Power and Energy Society (PES), Glasgow, Scotland, 2018
7. Rijo Rajan, Francis M Fernandez, "Grid Inertia Based Frequency Regulation Strategy of Photovoltaic System Without Energy Storage", IEEE International Conference on Control, Communication, and Computing (IC4), Thiruvananthapuram, 2018
8. Athira Venugopal, Francis M. Fernandez, "Solar Powered Switched Reluctance Motor Drive for Hybrid Electric Boat", International Conference for Convergence of Technology (I2CT), Mangalore, India, Oct 2018
9. M S Sujith, Francis M Fernandez, "Minimisation of Torque Ripple and Power Factor Correction of Low Cost BLDC Motor drive", International Conference for Convergence of Technology (I2CT), Mangalore, India, Oct 2018
10. Rijo Rajan, F. M. Fernandez, "Impact of Increased Penetration of Photovoltaic Sources on Small-Signal Stability of Hybrid and Multi area Power Systems," IEEE Bangalore Section, Innovations in Power and Advanced Computing Technologies (i-PACT), Vellore, India, Mar. 2019, pp. 1-6
11. Rijo Rajan, Francis M.Fernandez, "Power control strategy of photovoltaic plants for frequency regulation in a hybrid power system", International Journal of Electrical Power & Energy Systems, Volume 110, September 2019, Pages 171-183
12. Rijo Rajan, F. M. Fernandez, "Impact of Distributed Virtual Inertia from Photovoltaic Sources on Frequency Regulation in Hybrid Power System," IEEE Industry Application Society, 2nd International Conference on Innovative

Mechanisms for Industry Applications (ICIMIA), Bangalore, India, Mar. 2020, pp. 13-18

13. Anu G, Francis M Fernandez, "Identification of Harmonic Injection and Distortion Power at Consumer Location", 19th International Conference on Harmonics and Power Quality (ICHQP 2020), Hosted online by University of Wollongong in Dubai, 6-7 July 2020
14. Rijo Rajan, Francis M.Fernandez, "Small-signal stability analysis and frequency regulation strategy for photovoltaic sources in interconnected power system", Springer Journal of Electrical Engineering. Issue 6/2021
15. Rijo Rajan, Francis M Fernandez, Yongheng Yang, "Primary frequency control techniques for large-scale PV-integrated power systems: A review", Elsevier Journal - Renewable and Sustainable Energy Reviews, Volume 144, July 2021, <https://doi.org/10.1016/j.rser.2021.110998>