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Work Experience

Name of Employer	Designation	Duration		Total Years of Experience
		From	To	
Mahendra Engineering College	Sr. Lecturer / Asst. Prof.	24.06.2005	28.04.2012	6 Years 10 Months 5 Days
RMD Engineering College	Assistant Professor	04.06.2012	18.05.2013	11 Months 15 Days
Panimalar Engineering College	Asst. Prof. (Grade 1)	05.06.2013	27.11.2017	4 Years 5 Months 23 Days
GMR Institute of Technology	Sr. Asst. Prof.	01.02.2018	14.05.2018	3 Months 14 Days
	Associate Professor	15.05.2018	Till Date	1 Year 4 months (As on 11.09.2019)
Total Years of Experience			13 Years 8 Months	

Subjects Handled: Electrical Machines (EI6402 & EE6401), Electromagnetic theory (EE6302), Special Electrical Machines (EE6703), Solid State Drives (EE6601), Electrical Drives and Controls, Computer Control of Industrial Drives, Power Electronics, Digital Logic Circuits, Control Systems, Circuit Theory & Basic Electrical Engineering.

Labs Handled: Electrical Machines Lab (EI6411 & EE6411), Power Electronics and Drives Lab (EE6611), Engineering Practices Lab (GE6162), DC machines and Transformers lab, Microprocessors and Microcontrollers Lab, Control Systems Lab, Electrical Circuits Lab, Measurements and Instrumentation Lab, Linear Integrated Circuits & Digital ICs Lab, & Electric Drives and Control Lab.

Membership in Professional Organization / Social Institutions

- Professional Member of Indian Society for Technical Education (**MISTE**), Membership No. LM 72894.
- Professional Member of Indian Society of Electrical & Electronics Engineers (**MISEEE**), Membership No. M / FR091085

List of online courses completed

Course Code / Name : RENBOC_1 - Can renewable energy sources power the world?

University / Institute : The Open University,

Issue date : 5 February 2019

Duration : 8 Weeks

Project Proposal Submitted

Funding Agency & Scheme: Science and Engineering Research Board (SERB) & CRG

File No.: CRG/2019/000117

Title: Development of Optimized MPPT Algorithm to Mitigate Partial Shading Effects in PV Arrays

PI Name : Karthick K

Duration : 3 years

Total Budget : 25,42,195 INR

List of Publications

ORCID id: <https://orcid.org/0000-0001-7755-5715>

Scopus Author ID: 57188561436

Web of Science ResearcherID: J-5007-2019

Journals

1. **Karthick, K** & Kavaskar, S 2019, 'Text detection and Recognition in Raw Image Dataset of Seven Segment Digital Energy Meter Display', *Energy Reports*, **Elsevier**. Vol. 5, November 2019, pp. 842-852, (ISSN 2352-4847) (**SCI-E & Scopus Indexed**) (**Impact Factor: 3.830**)
2. **Karthick, K**, Ravindrakumar, K.B., Manikandan, R & Cristin, R 2019, 'Consumer Service Number Recognition Using Template Matching Algorithm for Improvements in OCR Based Energy Consumption Billing', *ICIC Express Letters, Part B: Applications*, **ICIC International**, Vol. 10, No. 10. October 2019. (**Scopus & IET Inspec Indexed**)
3. Premkumar, M, Sowmya, R & **Karthick, K** 2018 'A Dataset of the Study on Design Parameters for the Solar Photovoltaic Charge Controller', *Data in Brief*, **Elsevier**, Vol. 21, pp. 1954-1962 (**Scopus & ESCI Indexed**)
4. **Karthick, K** & Chitra, S 2017, 'Novel Method for Energy Consumption Billing Using Optical Character Recognition', *Energy Engineering: Journal of Association of Energy Engineers*, **Taylor & Francis**, vol. 114, no. 3, pp. 64-76, ISSN:1998595 (**Scopus Indexed**).
5. **Karthick, K** & Chitra, S 2015, 'A Bilingual Numeral OCR System for Creating Uni-Lingual Digitized Numeral Document', *Modern Applied Science Journal*, **Canadian Center of Science and Education**, vol. 9, no. 13, pp. 148-153, ISSN 1913-1844, E-ISSN 1913-1852.
6. **Karthick, K** & Chitra, S 2016, 'Review of Optical Character Recognition and Its Applications', *ARPJ Journal of Engineering and Applied Sciences*, **Asian Research Publishing Network (ARPJ)**, vol. 11, no. 5, pp. 3441-3444, ISSN 1819-6608 (**Scopus**

Indexed).

7. **Karthick, K** & Chitra, S 2016, 'Performance Prediction of DC Constant Flux Machine Using Optical Character Recognition', *Asian Journal of Research in Social Sciences and Humanities*, **Asian Research Consortium**, vol. 6, no. 6, pp. 78-90, ISSN 2249-7315.
8. Premkumar, M, **Karthick, K** & Sowmya, R 2018, 'A Comparative Study and Analysis on Conventional Solar PV Based DC-DC Converters and MPPT Techniques' *Indonesian Journal of Electrical Engineering and Computer Science*, **Institute of Advanced Engineering and Science**, vol. 11, no. 3. pp.831.838 p-ISSN: 2502-4752, e-ISSN: 2502-4760 (**Scopus Indexed**).
9. Premkumar, M, **Karthick, K** & Sowmya, R 2018, 'A Review on Solar PV Based Grid Connected Microinverter Control Schemes and Topologies', *International Journal of Renewable Energy Development*, **Center of Biomass and Renewable Energy**, Vol. 7, no. 2, pp. 171-182. ISSN 2252-4940. (**Scopus & ESCI Indexed**)
10. Gladiss Merlin, N, Karthika, K, Cristin, R & **Karthick, K** 2018, 'Survey of Image Forgery Detection Methods – a Passive Approach', *Journal of Advanced Research in Dynamical and Control Systems*, **Institute of Advanced Scientific Research**. Vo. 10, No.12, pp. 88-94. (**Scopus Indexed**).
11. **Karthick, K**, Premkumar, M, Manikandan, R & Cristin, R 2018, 'Survey of Image Processing Based Applications in AMR', *Review of Computer Engineering Research*, **Conscientia Beam**, Vol. 5, No. 1, pp. 12-19.
12. SaiAmbhika, K & **Karthick, K** 2018, 'Smart Grid-The Upcoming Era', *International Journal of Engineering Development and Research*, **IJEDR Publisher**, Vol. 6, No. 7, pp. 66-73.
13. **Karthick, K**, Premkumar, M, Manikandan, R & Cristin, R 2018, 'Study on Diverse Automatic Identification Techniques', *International Journal of Engineering & Technology (UAE)*, **Science Publishing Corporation Inc.**, Vol.7 No.4, pp. 2895-2898 (**Scopus Indexed**).
14. Premkumar, M, Mohan Kumar, R, **Karthick, K** & Sowmya, R 2018, 'State of Charge Estimation and Monitoring of Li-ion Cell using Kalman Filter Algorithm', *Indonesian Journal of Electrical Engineering and Informatics*, **Institute of Advanced Engineering and Science (IAES) Indonesia**, Vol. 6, No. 4, pp. 418~427 (**Scopus Indexed**).
15. **Karthick, K**, Ravindrakumar, K.B., Francis, R. and Ilankannan, S 2019, 'Steps Involved

- in Text Recognition and Recent Research in OCR; A Study', *International Journal of Recent Technology and Engineering (IJRTE)*, **Blue Eyes Intelligence Engineering & Sciences Publication**, Vol. 8, No.1, pp. 3095-3100, May 2019. (**Scopus Indexed**)
16. Loheswaran, K, Daniya T & **Karthick K** 2019, 'Hybrid Cuckoo Search Algorithm with Iterative Local Search for Optimized Task scheduling on cloud computing environment' *Journal of Computational and Theoretical Nanoscience*, **American Scientific Publishers**, Vol. 16, No. 5/6, pp.2065–2071 (**Scopus Indexed**)
 17. Uma Sabareesh, V & **Karthick, K** 2019, 'Solar PV based Permanent Magnet Synchronous Motor Drive for Water Pumping Application', *International Journal of Innovative Technology and Exploring Engineering (IJITEE)*, **Blue Eyes Intelligence Engineering & Sciences Publication**, Vol. 8, No. 9, pp. 837-843. (**Scopus Indexed**)
 18. Uma Sabareesh, V & **Karthick, K** 2019, 'Review on Solar PV based Drives for Water Pumping Application', *International Journal of Science and Research*, **IJSR Publishers**, Vol. 8, No. 7, pp. 1168-1170.
 19. K.B.Ravindrakumar, **K.Karthick**, D.Sivanandakumar, S .Sivarajan 2019, 'Fuzzy based approach for direct torque control of three phase induction motor', *International Journal of Scientific & Technology Research*, **IJSTR Publishers**, Vol. 8, No. 10, pp. 1687-1693. (**Scopus Indexed**)
 20. Yamaka Thosma & K Karthick 2019, 'Study on optimization techniques for PV-Wind based hybrid renewable energy system', *International Journal of Research in Engineering*, **Prime Publications**, Vol. 1, No. 4, pp. 05-08.

Conference

1. B. Santhosh Kumar, R. Cristin, **K. Karthick** and T. Daniya 2019, 'Study of Shadow and Reflection based Image Forgery Detection', 2019 International Conference on Computer Communication and Informatics (ICCCI), Coimbatore, Tamil Nadu, India, **IEEE Publisher**, Date Added to IEEE Xplore: 02 September 2019, pp. 1-5. doi: 10.1109/ICCCI.2019.8822057
2. **Karthick, K** & Chitra, S 2014, 'A Survey of OCR algorithms for Tamil handwritten character recognition', National Conference on Recent Trends in Electrical and Electronics Engineering, P.B. College of Engineering, Chennai-117.
3. **Karthick, K** 2012, 'Two stage grid connected Photovoltaic Power System', National Conference on Innovative Challenges in Electrical Engineering (ICEE-2K12) on 19th March, 2012 organized by Department of EEE, Jayalakshmi Institute of Technology,

Thoppur.

4. **Karthick, K** 2012, ‘Optical Character Recognition (OCR) using Image Processing’, National Conference on Innovative Challenges in Electrical Engineering (ICEE-2K12) on 19th March, 2012 organized by Department of EEE, Jayalakshmi Institute of Technology, Thoppur.
5. **Karthick, K** 2005, ‘A Novel high performance resonant converter ASD to eliminate the adverse effects of PWM operation’, National Level Conference on “Emerging Technologies in Electrical Systems” on 10th & 11th March 2005, organized by N.J. College of Engineering, Kumaracoil.

Participation in Short Duration Courses, Seminar, Technical Forum, Workshop & QIP

S. No.	Seminar / Workshop / SDP / Others	Title	Date	Organized by
1	Workshop	Digital Marketing	22.06.2019 to 23.06.2019	Department of CSE, GMR Institute of Technology
2	Workshop	Emerging trends on smart grid technology and computing	15.03.2019 to 16.03.2019	Department of EEE, GMR Institute of Technology
3	Workshop	Workshop on Research Methodology	05.06.2015	Department of CSE, Panimalar Engineering College
4	Hands-on workshop	Programmable system on chip with cypress PSoC	22.06.2012	Department of ECE, RMK Engineering college, Chennai
5	AICTE sponsored SDP	Content based video retrieval	19.06.2012 to 20.06.2012	Department of EEE, RMD Engineering College, Chennai
6	National Level Seminar	Recent trends in Smart Grid	18.02.2012	Association of EEE, M.P.Nachimuthu M.Jaganathan Engineering college, Erode
7	Special Seminar	Environmental Issues in Energy Technologies with a focus on Renewable Energies	10.08.2011	Mahendra Engineering College
8	Wipro Mission 10X Workshop	High Impact Teaching Skills	11.10.2010 to 15.10.2010	Mahendra Engineering College

9	ICMR sponsored National Seminar	Smart Medical Diagnosis Systems Using Image Fusion Technology	19.02.2010 to 20.02.2010	KSR College of Technology, Tiruchengode
10	AICTE-QIP sponsored Short-Term Course	Renewable Energy Electric Conversion Systems	14.12.2009 to 18.12.2009	Dept of EEE, National Institute of Technology, Trichy
11	Educators Day 2009	Annual Technical Forum for faculty and research scholars	Year 2009	National Instruments at Chennai.
12	Quality Improvement Programme	Instructional Design and Delivery	13.11.2006 to 18.11.2006	NITTTR, Chennai & Mahendra Engineering College

YouTube Lectures

Posted more than 13 YouTube Lectures

S.No.	Title	Link
1	Synchronous Reluctance Motor	https://www.youtube.com/watch?v=7HRG7nykz4s&t=29s
2	Torque Equation of Synchronous Reluctance Motor	https://www.youtube.com/watch?v=HrTsp8JnUis&t=64s
3	Phasor Diagram of Synchronous Reluctance Motor	https://www.youtube.com/watch?v=RphSf5SHNkw&t=190s
4	Introduction to Stepper Motor	https://www.youtube.com/watch?v=2vuSnjOri5w&t=149s
5	Construction of single stack VR stepper motor	https://www.youtube.com/watch?v=qLPEu9_1tc8&t=16s
6	EMF Equation DC Generator	https://www.youtube.com/watch?v=JZAw6WXvZ6A&t=28s