

Dr.J.KANAKARAJ
Associate Professor
Department of Electrical & Electronics Engineering
PSG College of Technology, Coimbatore – 641 004
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EDUCATION

DOCTORATE (Month/Year)	PSG College of Technology Bharathiar University June 2007
POSTGRADUATE (Month/Year)	ME-EEE (Electrical Machines) PSG College of Technology Bharathiar University, 1997
UNDERGRADUATE (Month/Year)	BE-EEE Coimbatore Institute of Technology Bharathiar University, 1988.

EXPERIENCE

DESIGNATION	ORGANISATION	PERIOD OF EMPLOYMENT			
		FROM	TO	YRS	MON
Associate Professor	PSG College of Technology	01-10-2006	To date	10	0
Lecturer(Sl.Gr.)	PSG College of Technology	10-10-2003	01-10-2006	3	0
Lecturer(S.G.)	PSG College of Technology	10-10-1998	09-10-2003	5	0
Lecturer(O.G.)	PSG College of Technology	15 July 1993	09-10-1998	5	2
Chargeman - B	S&T workshop Southern Railway	26,Oct. 1989	15,July 1993	3	8
Electrical Supervisor	G.K. Alloy Steels (P) Ltd.	1 April 1985	JAN. 1988	2	9

COURSES HANDLED

UNDERGRADUATE

DCMT

UEE

I&C

Meas& Inst.

Control Systems

PSPSG

SMC

Electrical machine Design.

POSTGRADUATE

Linear Systems

Control System Design

Adaptive Control

Optimal Control

RESEARCH AREAS

Control System, Electrical Machines and Drives, Instrumentation systems

PUBLICATIONS

INTERNATIONAL JOURNALS

1. J.Kanakaraj and D.Subbulekshmi,' Study of Decoupling in Non-Linear Chemical processes", ICE– Journal of Emerging Technologies, pp33-37, Vol.4, August 2009.
2. R.Arulmozhiyal, K.Baskaran, N.Devarajan and J.Kanakaraj, "Real Time MATLAB interface for speed control of Induction Motor drive using dsPIC 30F4011". International Journal of ComputerApplications (0975 - 8887), Volume 1 – No. 5, 2010.
3. Kathiravan Srinivasan and J.Kanakaraj, "A Study on Super-Resolution Image Reconstruction Techniques", International Journal of Computer Engineering and Intelligent Systems, Vol. 2, No.4, 2011.
4. Kathiravan Srinivasan and J.Kanakaraj, "A Robust Super-Resolution for petite image sequences", International Journal of Innovative Systems Design and Engineering, Vol. 2, No.4, pp. 276-282, 2011.
5. Kathiravan Srinivasan and J.Kanakaraj, "Image De-noising Using Improved Wavelet Coding: A super-resolution perspective" , Australian Journal of Basic and Applied Sciences, Vol 5, no.(10): 1130-1136, 2011.

6. Kathiravan Srinivasan and J.Kanakaraj, "A non-neighbourhood super-resolution using phantom hashing", Australian Journal of Basic and Applied Sciences, 5(10): 607-612, 2011
7. Kathiravan, S & Kanakaraj, J 2011, 'Super-resolution via Uncertainty Models', Smart Computing Review, vol. 1, no. 1, pp. 1-11.
8. Subbulekshmi and Kanakaraj, J. "Linearization Algorithms for a Level and PH Process", Life Science Journal., Vol. 9, No. 4, pp. 2528-2533, 2012. **[Impact factor 0.072].**
9. Subbulekshmi, D. and Kanakaraj, J. "GMC algorithm with IMC and other controllers for a Chemical Process", International Journal of Advanced Engineering Technology., Vol. III, No. I, pp. 18-21, January-March, 2012.
10. Subbulekshmi, D. and Kanakaraj, J. "Decoupling and Linearizing of a pH Plant using Hirschorn's and Genetic Algorithms", Journal of Computer Science., Vol. 8, No. 8, pp. 1422-1427, 2012. **[Impact factor 0.044].**
11. Subbulekshmi, D. and Kanakaraj, J. "Decoupling and Soft Sensor Design for a Class of MIMO System", Journal of Applied Sciences., Vol.12, No. 21, pp. 2273-2278, 2012. **[Impact factor 0.42].**
12. Kanakaraj, J. and Subbulekshmi, D. "Comparison of RGA and RNGA Algorithms with Decentralized PI Controller", International Journal of Applied Engineering Research (IJAER), Vol. 7, No. 11, pp. 1325-1335, 2012.
13. Kanakaraj J. and Kathiravan S, "Super-resolution image reconstruction using sparse parameter dictionary framework", Scientific Research and Essays Vol.7 No.5, pp. 586-592, February, 2012, DOI: 10.5897/SRE11.1904
14. R. Latha, J. Kanakaraj, "Maintaining Stability in Distribution System with Microgrid using Neuro-Fuzzy," European Journal of Scientific Research , Vo.76, No.2 , pp 316-326, May 2012.
15. R. Latha, J. Kanakaraj, "Enhanced Control Technique for Stabilization of Power Systems Using Controllable Series Capacitor", International Review of Automatic Control(I.R.E.A.CO.) Vol. 5, No.3, May 2012.
16. Latha, R Palnivel, S and Kanakaraj, "Frequency Control of Microgrid Based on Compressed Air Energy Storage System", Distributed Generation and Alternative Energy Journal, Vol. 27, No.4, pp 8-19, Dec 2012. ISSN 2156-3306. DOI:10.1080/21563306.2012.10554219
17. Kathiravan, S & Kanakaraj, J 2013, 'A Review on Potential Issues and Challenges in MR Imaging', Hindawi Publishing Corporation, Scientific World Journal, Article ID 783715. **(Impact factor: 1.73)**
18. Kathiravan, S & Kanakaraj, J 2013, 'A Review of Magnetic Resonance Imaging Techniques', Smart Computing Review, vol. 3, no. 5, pp. 358-366.
19. Latha. R and Kanakaraj, J, "Adaptive neuro-fuzzy inference system-particle swarm optimization based stability maintenance of power system networks", American Journal of Applied Sciences, Vol. 10, No.8, pp. 779-786, Sep 2013. DOI : 0.3844/ajassp.2013.779.786, ISSN Online: 1546-9239.

20. R. Kannan and J. Kanagaraj, "Performance Analysis Of An Induction Motor Drive Using Fuzzy Variable Structure Control" *Australian Journal of Basic and Applied Sciences*, 7(12), Pages: 51-59, Oct 2013.
21. R. Kannan, J. Kanakaraj, "Fuzzy Gain Scheduling and Fuzzy Logic Control Based Induction Motor Drives Using Variable Structure Control Methodology" *Int. Journal of Engineering Research and Applications*, Vol. 3, Issue 6, pp.1104-1110 Nov-Dec 2013
22. R. Kannan, J. Kanakaraj, "Fuzzy Gain Scheduling Based Induction Motor Drive Using Variable Structure Control" *Journal of Applied Sciences Research*, 9(10): 5533-5540, 2013
23. Kannan R & Kanakaraj J, 'Performance Analysis of Direct Torque Controller Based Variable Structure Control of Induction Motor Drive', *International Journal of Applied Engineering Research*, vol. 10, no.9, pp. 23009-23020, 2015. (ANNEXURE II)
24. Dr.J.Kanakaraj , S.Kavitha , "MULTIPLE MOBILE ANCHORS BASED LOCALIZATION USING PARTICLE SWARM OPTIMIZATION (PSO) FOR WIRELESS SENSOR NETWORKS" *Journal of Theoretical and Applied Information Technology* December 2013 -- Vol. 58 No.1-2013
25. Dr.J.Kanakaraj , S.Kavitha and Mary Jansi Rani,G , "Mobility based Energy Efficient Tracking using Particle Swarm Optimisation(PSO) for wireless sensor networks", *International Journal of Applied Engineering Research*, Vol.9, no.21, pp.11327-11340, 2014.
26. Kathiravan, S & Kanakaraj,J 2014, 'Evaluation of Super-Resolution Methods for Magnetic Resonance Images, *ASTM International - Journal of Testing and Evaluation*, vol. 42, no. 6. (accepted) **(Impact factor: 0.349)**
27. Kathiravan, S & Kanakaraj,J 2014, 'An Overview of SR Techniques Applied to Images, Videos and Magnetic Resonance Images', *Smart Computing Review*, vol. 4, no. 3, pp. 181-201.
28. T. Bogaraj, Dr. J. Kanakaraj, "Development of MATLAB/SIMULINK models for Solar PV & Wind systems and Review of Control strategies for Hybrid Energy systems", *International Review on Modelling and Simulations*, Vol.No. 5. No.4, pp.1701-1709, August 2012. (Annexure-2)
29. T.Bogaraj, J.Kanakaraj, C. Maria Jenisha, "A Multi-Agent Control for Energy Management in PV/Wind/Fuel Cell/Battery Hybrid Power System", *Journal of Applied Mechanics and Materials with the title Advancements in Automation and Control Technologies.*, Vol.No.573, pp.235-241, June 2014. (Annexure-2)
30. T.Bogaraj, J.Kanakaraj, E. Shalini, "Fuzzy Logic Based MPPT for Solar PV Applications", *International Journal of Innovative Research in Electrical, Electronics, Instrumentation and Control Engineering*, Vol. 2, Issue 6, pp.1566-1571, June 2014.
31. T.Bogaraj, J.Kanakaraj, K.Mohan Kumar, "Optimal Sizing and Cost Analysis of Hybrid Power System for a Stand-Alone Application in Coimbatore Region: A Case Study" *Archives of Electrical Engineering*, Vol. 64(1), pp.138-155, March 2015. (Annexure-2)

32. T.Bogaraj, J.Kanakaraj, R.Rameswar, "Multi-input SEPIC Converter for Wind & Solar Hybrid Power System with Energy Storage devices", *International Journal of Applied Engineering Research*, Vol. 10(29), pp. 22653-22658, May 2015. (Annexure-2)
33. J.Chelladurai, B.Vinod, T.Bogaraj, J.Kanakraj, M.Sundaram, "Scalar Controlled PWM Rectifier for Micro-Wind Energy Generators", *Research Journal of Applied Science, Engineering, Technology*, Vol. 10(1), pp. 35-44, May 2015. (Annexure-2)
34. T.Bogaraj, J.Kanakaraj, J.Chelladurai, "Modeling and Simulation of Stand-alone Hybrid Power System with Fuzzy MPPT for Remote Load Application", *Archives of Electrical Engineering*, Vol. 64(3), pp.487-504, September 2015. (Annexure-2)
35. T.Bogaraj, J.Kanakaraj, "Intelligent energy management control for independent microgrid", *Sadhana- Academy Proceedings in Engineering Science*, Vol. , pp. , March 2016. (**Annexure I- Updated List of journals**)

International Congress

1. Subbulekshmi, D. and Kanakaraj, J. "Decoupling and Linearization Control Algorithms with Kalman Filter in a Non-Linear Chemical Process" International congress on 26th Indian Engineering Congress, Institution of Engineering Congress, December 2011.

NATIONAL JOURNALS

1. G.Gurusamy and J.Kanakaraj, "A New State Space Approach to Electric circuits", *National journal of Systems Science & Engineering (Paritantra)*, Systems Society of India, pp15-18, Vol. 13, No.1, June 2006.
2. D.Subbulekshmi and J.Kanakaraj, "Comparitive evaluation of linearisation algorithms for a mimo process", *Journal of Instrument Society of India*, Vol. 40 No. 4, December 2010.

National Conferences

1. J.Kanakaraj and T.R. Sudheer,"Lab View based Universal Power Measurement for NonSinusoidal Signals" proceedings of Second Natioal Conference on Modern Trends in Electrical and Instrumentation Systems, at Govt. College of Technology, Coimbatore, March 9 – 10, 2005.
2. J.Kanakaraj and K.V. Sathya Narayana," Adaptive control Signal Synthesis for Position / Force in Robotic Applications" proceedings of Second National Conference on Modern Trends in Electrical and Instrumentation Systems, at Govt. College of Technology, Coimbatore, March 9 – 10, 2005.
3. J.Kanakaraj and T.Narendra , " ASG based Adaptive controller for Automatic Blood Pressure Control " proceedings of National Conference on Modern Trends in Electrical and Instrumentation Systems, at Govt. College of Technology, Tirunelveli, March 9 – 10, 2005

4. J.Kanakaraj and G.Gurusamy, "State variable diagram - Category 1", Proceedings of the National Conference on "Power Conversion and Industrial Drives" Bannari Amman Institute of Technology, Sathyamangalam, 25-26, March 2005.
5. G.Gurusamy and J.Kanakaraj, "State variable diagram - Category 3", Proceedings of the National Conference on "Intelligent and Efficient Electrical Systems" PSG College of Technology, Coimbatore, 24-25, June 2005.
6. J.Kanakaraj and G.Gurusamy, "Simplified State Variable diagram-Category 2 Dual Phase variable observable form", Proceedings of the National Conference on Power Electronics Drives and Industrial Control, NSS College of Engineering, Palakkad, 8-9, July 2005.
7. J.Kanakaraj and G.Gurusamy, "A State space approach to Electric Circuits - A New Technique", National Conference on Instrumentation, Control Systems and Automation (NCICSA-2006), 5-7 Jan. 2006, S.R.M. Institute of Science and Technology, Chennai.
8. G.Gurusamy and J.Kanakaraj, "Review on State Space Modelling", Second National Conference on "Emerging Trends in Electrical Engineering & Power Drives", at Government College of Engineering, 3rd March, 2006, Tirunelveli.

SEMINARS / CONFERENCES ORGANISED

PARTICIPATION IN THE ORGANISATION OF CONTINUING EDUCATIONAL PROGRAMMES DURING THE LAST THREE YEARS				
PROGRAMME	DURATION	PERIOD	NO. OF PARTICIPANTS	NATURE OF INVOLVEMENT
Refresher Course on PMDC Motor	3 Days	June 30,31 & August 1, 2009	15	Organised and conducted the course
National Conference NCIEES'09	2 Days	Aug.27,28 2009	40	Joint secretary for the conference
National workshop on Mathematics for Electrical and Mechanical Engineers(MEMS)	2 Days	March 2-3, 2012	40	Coordinator
National workshop on Research perspectives in Power System Deregulation and Restructuring	2 Days	Jan.31, Feb.1, 2014.	36	Organising Secretary
TEQIP-II FDP on SMART GRID and Renewable Energy Systems	7 Days	Dec. 14- 20, 2014	40	Organising Secretary
National Workshop on Electrical Safety standards and Practices	2 Days	Jan.23, 24 2015.	35	Organising Secretary

National Workshop on Modelling and Simulation of Power Systems in MicroGrid Environment	1 Day	14, Oct., 2015	32	Organising Secretary
Certification course on Ultrasound Technology and condition monitoring services in Industries	1 Day	23 July, 2016	25	One of the Conveners

SEMINARS / CONFERENCES ATTENDED

Sl.No	Course Name & Conduct Authority	Period Duration
1	Leadership Enhancement Programme for Professors by Coimbatore Productivity Council	3 Days 24-05-2016 to 26-05-2016
2	FDP on Well being in workplace by PSG College of Technology	1 Day 14-03-2014
3	QIP on Advanced Control Theory for Electrical Engineering Applications by Coimbatore Institute of Technology, Coimbatore	7 Days 13-20-2014 to 19- 10-2014
4	FDP on Distributed Generation: The Power Structure for Next Generation by Coimbatore Institute of Technology, Coimbatore	7 Days 3-10-2013 to 9-10-2013
5	Management capacity Enhancement Programme-TIMELESS LEADERSHIP by PSG College of Technology	2 Days 19-09-2013 to 20- 09-2013
6	Workshop on Latest Trends in Test and Measurement Technology by Coimbatore Institute of Technology, Coimbatore	1 Day 21-03-2013
7.	FDP on Research opportunities in Contemporary issues of Engineering by Govt. College of Technology, Coimbatore.	7 Days 24-08-2012 to 30-08-2012
8.	Question Bank workshop on Engg. /Computer Science & Info.Tech /Elec.& Comm. Engg. by Staff Selection Commission(Southern Region)	2 Days 14-06-2012 to 15-06-2012.
9.	Workshop on Question Paper setting by PSG College of Technology	2 Days 07-01-2011 to 08- 01-2011
10.	Workshop on Wireless and Digital Measurements by PSG College of Tech.	2 Days 26,27-02-2010
11.	Seminar on Robotics and Intelligent Automation by PSG College of Tech.	2 days 5,6-08-2009
12.	Workshop on current Trend in Test & Meas Solutions by PSG College of Tech.	2 Days 26,27-03-2009
13.	Learn with LabVIEW by PSG College of Technology	1 Day 03-02-2005
14.	Soft Computing Models for Engineering Applications by PSG College of Technology	14 Days 28-03-2004 to 10-04-2004
15.	New Trends in BioMedical Engineering by PSG College of Technology	14 Days 09-11-2003 to 22-

		11-2003
16.	Simulation Tools for Electrical Engineering Applications by Jawaharlal Nehru Technological University, Hyderabad, AP.	21 Days 10-02-2003 to 01-03-2003
17.	AICTE-ISTE Sponsored winter school on “Semiconductor controlled device Drives and their Applications” at IIT Kanpur.	14 Days 01-12-1993 to 13- 12-1993
18.	Instruction Enhancement programme on ‘RDBMS’ at IIT Bombay,	44 Days 21-06-1994 to 3-8-1994
19.	Winter school on ‘Computer Simulation of Power Electronic Systems’ at PSG College of Technology,	14 Days 17-11 1996 to 30-11-1996
20.	Short term course on ‘Advanced method in electric motor design and manufacture’ at PSG Polytechnic,	2 Days 28-01-1995 to 29-01-1995
21.	Indo- British workshop on “Electromagnetic software for industrial applications” at IIT, Delhi,	4 Days 23-12-1998 to 26-12-1998
22.	Training course in LabView Basics I & II at NI centre Bangalore.	5 Days 12-07-1999 to 16- 07-1999

SPECIAL LECTURES DELIVERED

PARTICIPATION IN THE ORGANISATION OF CONTINUING EDUCATIONAL PROGRAMMES DURING THE LAST THREE YEARS				
PROGRAMME	DURATION	PERIOD	NO. OF PARTICIPANTS	NATURE OF INVOLVEMENT
Refresher Course on PMDC Motor	3 Days	June 30,31 & August 1, 2009	15	Organised and Delivered a Technical Lecture on Design of Permanent Magnet Machines
AICTE-SDP on Modeling and Analysis of Electrical Machines	Two weeks	June 20 to July 2, 2011	25	Delivered a Technical Lecture on Modelling of Machines
Workshop on NPTEL at PSG CT	3 days	7,8 &9 April, 2010	25	Delivered a Technical Lecture on Switchgears
AICTE-SDP on Linear Systems	1 Week	16-23,Dec., 2011	30	Delivered a Technical Lecture on State Space Systems
SDP on Special machines	2 Days	20, June, 2012	30	Delivered a Technical Lecture on Linear Motors

SPONSORED / CONSULTANCY ACTIVITIES

TESTING JOB	ORGANISATION	NO OF TESTS DONE	REMUNERATION EARNED
Environment Detection Assessment and Response system, for	ARMREB, DRDO	One prototype designed and fabricated	Rs.13.73 Lakhs
Design and Development of Under Water Motor	NIOT, Chennai	One prototype designed and fabricated	Rs.76 Lakhs
Testing of Sound proof materials at Audio Processing centre	Final year students of B.Tech Textile	Approx. 20	Rs.20,000
Magnetisation of Permanent magnets	M/s Aryen Motors(I) P.Ltd	6 magnets	Rs.6000
Starting current evaluation	M/s CEC Ltd (as per RDSO specs)	3 motors	Rs.6,000

MEMBERSHIP OF PROFESSIONAL BODIES

PROFESSIONAL BODY	TYPE OF MEMBERSHIP	POSITION HELD
Indian Society of Technical Engineers	Life member	Member
System Society of India	Life Member	Member

DOCTORAL GUIDANCE / SUPERVISION

Number of Ph.D under progress: 2

Number of Ph.D Completed: 5