



Dr.K. Sedhuraman

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Technology, Madagadipet,
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Professional Objective:

To serve as a professional educator. To constantly upgrade knowledge and skills for exploring new areas of research. To develop methodologies to enhance teaching learning process. Serve to create good technical and ethical human resource.

Career profile:

- To teach and educate students according to guidelines provided by the university Curriculum Framework under the overall guidance of the competent education authority.
- To teach and educate students according to the educational needs, abilities and attainment potential of individual students entrusted to his/her career.

Educational qualification:

DOCTOR OF PHILOSOPHY (Ph.D)

April 2014

ELECTRICAL AND ELECTRONICS ENGINEERING

Pondicherry Engineering College, Puducherry,
Pondicherry University, Puducherry, India

Post Graduate (M.Tech)

June 2009

ELECTRICAL DRIVES AND CONTROL

Pondicherry Engineering College, Puducherry,
Pondicherry University, Puducherry. India.

Under Graduate (B.Tech)

May 2006

ELECTRICAL AND ELECTRONICS ENGINEERING

Rajiv Gandhi College of Engineering & Technology,
Pondicherry University, Puducherry, India.

Work experience: (starting from present position)

S.No	Employer	Designation	Period of Service	Nature of Work
1.	Manakula Vinayagar Institute of Technology	Assistant Professor	22-08-2013 To Till Date	Teaching and Research

Teaching Activities: (Subjects Taught)

- (i) **Under Graduate :** Electric Circuit Analysis,
Linear Control Systems
Utilization of Electrical Energy,
Microprocessors and Microcontrollers,
Fuzzy and Neural Systems,
Power System Operation and Control,
Power Electronics,
Smart Grid
- (ii) **Post Graduate :** -- Nil --
- (iii) **Laboratories handled:** Basic Electrical & Electronics Laboratory
Measurement and Control Lab
Power Electronics Lab
Micro Processor and Microcontroller Lab
Power System Simulation Lab
Project Phase – I & II

Paper Publications / Presentation:

	Published	Accepted	Communicated	Total
International Journal	12	-	-	12
National Journal	-Nil-	-	-	-Nil-
International Conference	07	-	-	07
National Conference	02	-	-	02

FDP/STTP/Workshops attended: 17 (Annexure Attached)

Reviewer for the journals: Journal of Electrical and Electronic Engineering

Research guidance: -Nil

Project Guidance: 11

Guest Lectures delivered:

Professional Membership: Life Member of ISTE, IEEE Member

LIST OF PUBLICATIONS

International Journals: 12

- [1] A.Venkadesan, S.Himavathi, K.Sedhuraman, A.Muthuramalingam, (2016) ‘Design and FPGA Implementation of Cascade Neural Network Based Flux Estimator for Speed Estimation in IM Drives’, IET-Electric Power Applications, Vol. 11, Iss. 1, pp 1-11, Sep. 2016. (SCI)
- [2] A. Venkadesan, K.Sedhu Raman, K.Chandrasekaran, C.S.Boopathi, (2016) ‘Artificial Neural Network Based Harmonics Estimator for a Power Electronics Converter’, Indian Journal of Science and Technology, Vol. 9, Iss. 42, pp 1-5 Nov. 2016.
- [3] A. Venkadesan, K.Sedhu Raman, (2016) ‘Design and Control of Solar Powered Boost Converter’, International Journal of Electronics Engineering Research (IJEER), Vol. 4, Iss. 2, pp: 132-137. Jun. 2016.
- [4] K.Sedhuraman, S.Himavathi and A.Muthuramalingam, (2015) ‘Neural Network based On-Line Speed Estimator Independent of Rotor Resistance for Sensorless Indirect Vector Controlled Induction Motor Drives’, International Journal of Applied Engineering Research (IJAER), Vol. 10 No.51. (Scopus)
- [5] A. Venkadesan, A. Sai Kumar, and K.Sedhuraman, (2015) ‘Comparison of Rotor Flux and Stator Current based Model Reference Neural Learning Adaptive System for Rotor Speed Estimation in Sensorless IM Drives’, International Journal of Applied Engineering Research (IJAER). Vol. 10 No.44. (Scopus)
- [6] A. Venkadesan and K.Sedhuraman, (June 2015) ‘Stator Resistance Estimation Utilizing Real and Reactive Power for Direct Torque Controlled Induction Motor Drives’, International Journal of Advanced Research in Electrical, Electronics and Instrumentation Engineering (IJAREEIE), Vol. 4, Issue 6.
- [7] S. RajKumar, K.Sedhuraman, Purimetla Santhi and A Joycy Faustina Lourdes, (March 2015) ‘Design and Analysis of High Speed Switched Reluctance Motor For Two Different Materials’, International Journal of Electrical & Electronic Engineering & Telecommunications (IJEETC), Vol. 1, Iss. 1.
- [8] K.Sedhuraman, S.Himavathi and A.Muthuramalingam, (Mar. 2013) ‘Neural Learning Adaptive System Using Simplified Reactive Power Reference Model based Speed Estimation in Sensorless Indirect Vector Controlled Induction Motor Drives’, *Archives of Electrical Engineering*, Vol. 62, Issue 1, pp. 25-41. (Scopus)
- [9] K.Sedhuraman, S.Himavathi and A.Muthuramalingam, (Jun. 2012) ‘Reactive Power based Model Reference Neural Learning Adaptive System for Speed Estimation in Sensor-less Induction Motor Drives’, *The Journal of Engineering Research*, Vol. 9, No. 2, pp. 17-26. (Scopus)
- [10] S. Himavathi, A. Muthuramalingam, A. Venkadesan and K. Sedhuraman, (Apr. 2012) ‘Nonlinear System Modeling Using Single Neuron Cascaded Neural Network For Real-Time Application’, *ICTACT Journal On Soft Computing*, Vol. 2, Iss. 03, pp. 309-318. (Scopus)
- [11] K.Sedhuraman, S.Himavathi and A.Muthuramalingam, (Dec. 2011) ‘Performances Comparison of Neural Architectures for On-Line Speed Estimation in Sensorless IM Drives’, *World Academy of Science, Engineering and Technology*, Iss. 60, pp.1318-1325. (Scopus)
- [12] K.Sedhuraman, A.Muthuramalingam and S.Himavathi, (Nov. 2010), ‘Single Neuron Cascaded Neural Network Model based Speed Estimation for Sensorless Induction Motor Drives’, *International Journal of Recent Trends in Engineering and Technology*, Vol. 4, No.3, pp.115-119.

International Conferences: 07

- [1] K.Sedhuraman, (Jun. 2017) ‘Comparison of Feed Forward and Cascade Neural Network for Harmonic Current Estimation in Power Electronic Converter’, Proc. *IEEE Technically*

Sponsored International Conference on Innovative Research in Electrical Science (IICIRES2017), E.G.S Pillay Engineering College, Naggapattinum, Tamil Nadu, India (Scopus)

- [2] K.Sedhuraman, (Jun. 2017) ‘High Torque to Weight Ratio and Cost Estimation of Cage Induction Motor with Finite Element Method for Hybrid Vehicle ’, Proc. *IEEE Technically Sponsored International Conference on Innovative Research in Electrical Science (IICIRES2017)*, E.G.S Pillay Engineering College, Naggapattinum, Tamil Nadu, India. (Scopus)
- [3] K.Sedhuraman, (Jun. 2017) ‘Simplified Space Vector Modulation Technique for Induction Motor Drives’, Proc. *IEEE Technically Sponsored International Conference on Innovative Research in Electrical Science (IICIRES2017)*, E.G.S Pillay Engineering College, Naggapattinum, Tamil Nadu, India. (Scopus)
- [4] K.Sedhuraman, S.Himavathi and A.Muthuramalingam, (Mar. 2012), ‘Comparison of Learning Algorithms for Neural Network based Speed Estimator in Sensorless Induction Motor Drives’, Proc. *IEEE – International Conference on Advances in Engineering, Science and Management (ICAESM-2012)*, E.G.S Pillay Engineering College, Naggapattinum, Tamil Nadu, India. (Scopus)
- [5] S.Himavathi, K.Sedhuraman, and A.Muthuramalingam, (Aug. 2010), ‘Neural Learning Algorithm for MRAS based Speed Estimation using Reactive Power Technique in Sensorless IM Drives’ *International Conference on System Dynamics and Control (ICSDC-2010)*, Manipal Institute of Technology, Manipal.
- [6] A.Venkadesan, K.Sedhuraman, S.Himavathi, and A.Muthuramalingam, (Apr. 2009), ‘Robust Cascade Neural Network based Flux Estimator for Sensorless Induction Motor Drives’, Proc. *International Conference on Electrical Energy Systems and Power Electronics in Emerging Economies (ICEESPEEE’09)*, SRM University, Chennai.
- [7] A.Venkadesan, K.Sedhuraman, S.Himavathi, and A.Muthuramalingam, (Jan. 2009), ‘Comparison of Feed forward and Cascade Neural Architectures for Flux Estimation in Vector Controlled Induction Motor Drives’, Proc. *International Conference on Trends in Industrial Measurements and Automation (TIMA’09)*, Madras Institute of Technology, Chennai.

National Conferences: 02

- [1] M.Sheela, A.Venkadesan, K.Sedhuraman, and S.Himavathi, (Apr. 2011), ‘Comparison of Flux and Reactive Power Based MRAS for Inverse Rotor Time Constant Estimation in Induction Motor Drives’, Proc. *National Conference on Advanced Intelligent Techniques in Power and Electronics Systems (AITPES-2011)*, Sengunther Engineering College, Tiruchengode, Tamil Nadu, pp.73-77.
- [2] K.Sedhuraman, A.Venkadesan, S.Himavathi, and A.Muthuramalingam, (Nov. 2008), ‘A Cascade Neural Network for Speed Estimation in Vector Controlled Induction Motor Drives’, Proc. *National Conference on Technological Trend (NCTT’08)*, College of Engineering, Trivandrum, Kerala.

List of Workshops Attended

1. Attended a Two days Workshop on “Advances in Modeling, Simulation and Control for Power Electronics Drives”, Dept. of EEE, Pondicherry Engineering College, 2007.
2. Attended a two days Workshop on “Linux Operating System”, Dept. of ECE, Pondicherry Engineering College, 2012.
3. AICTE Sponsored Two weeks FDP on “Analysis and modeling of motors using FEM package [ANSYS]” on 18th Nov to 30th Nov 2013 at MIT.

4. IEEE sponsored one day workshop on “Power Electronics applications in Renewable energy source” on September 2014 in EGS Pillai.
5. Participation in one day seminar on “Research & Development in Engineering Institutions” in 2014 MIT.
6. Participation in Three days Workshop on “Advanced Teaching Techniques” on June 2015 in ICT Training Academy (DIT), Puducherry.
7. ISTE Sponsored one day hands on training on “Embedded System “organized by Department of EEE, MVIT (NEXGEN Technologies)
8. Participation in two day National Seminar on “IPR Awareness & Research Methodologies” held during 27th & 28th of May 2016 organized by Department of ECE, Karpaga Vinayaga College of Engineering And Technology.
9. Participation in one day FDP on “How to Prepare Proposal and Apply for Funding” organized by R & D Cell, MVIT (1Day, 03-06-2016)
10. Participation in one day FDP on “NBA Workshop” organized by Department of EEE, MVIT (1Day, 04-06-2016)
11. Participation in two day FDP on “Solar Energy – Technology & Products” organized by Department of EEE, MVIT (2 Day, 09-06-2016 & 10-06-2016)
12. Participation in one day workshop on “Power Electronics applications” in EGS Pillai Engg. College.
13. Participation in one day seminar on “Research & Development in Engineering Institutions” in MIT (1Day)
14. Participation in three day FDP on “Advanced Teaching Techniques” in ICT Training Academy (3Day)
15. Participation in One day workshop on “Hands on Training Program Using Embedded System and Development” in MIT (1Day)
16. Participation in CSIR Sponsored two days workshop on “Recent Trends In Hybrid Power Generation” at MIT from 30.06.2017 to 01.07.2017.
17. Participation in ISTE Sponsored one week Short Term Training Program on “Contemporary World Of Electricity-Solar Energy” at MIT from 27.11.2017 to 1.12.2017.

List of UG Projects Guided

No. of UG Projects Guided and its details: 11

1. Investigation on Harmonic Mitigation Using High Power Converter for Electrical Drives (2018)
2. Hybrid Serial Output Converter for Integrated Led Application (2018)
3. Compact Battery Charger for Electric Vehicles (2018)
4. Analysis, Design and Hardware implementation of Buck converter using PIC microcontroller (2017)
5. Design analysis and hardware implementation of boost converter using PIC micro controller (2017)
6. Maximum Power Point Tracking For PV Module Using Boost Converter (2016)
7. Neural Network Based Harmonics Estimation of Non-Linear Loads in Power System Applications (2016)
8. Comparison of MRAS based Speed Estimator for Sensorless Induction Motor Drive (2015)
9. Design of Multi-Level Inverter and Speed Estimator for Sensorless Induction Motor Drives (2015)
10. Electric bike with automatic battery charger (2014)
11. Dual half controlled converter using pulse width modulation (2014)