

**Name:**

Dr. K. RANJITH KUMAR

Earned Degree:

ME, PhD, MISTE

Current Designation:

Professor

Career Development officer

Department:

Electrical & Electronics Engg

Contact Phone Number:

9443015058

Email (Official Preferred):

ranjith@gct.ac.in, ranjith.kovai@gmail.com

Publications:**QUALIFICATION**

- B.E. - Electrical and Electronics Engineering (Government College of Engineering, Salem, Madras University)
- M.E. - Power Electronics and Drives (Government College of Engineering, Bargur, Anna University)
- Ph.D. - Electrical Engineering (Anna University, Chennai)

EXPERIENCE –TOTAL OF 25 YEARS

- Professor, Government College of Engineering, Bargur- From May 2023 to till date
- Professor, Govt. College of Technology, Coimbatore- from Aug 2017 to till April 2023.
- Associate Professor , Govt. College of Technology, Coimbatore- Aug 2014 to Aug 2017
- Assistant Professor Govt. College of Technology, Coimbatore- from Aug 2006 to Aug 2014
- Lecturer ,Govt. College of Engineering, Bargur -from Aug 2001 to Aug. 2006
- Research Assistant, Regional Engineering College, Trichy (Current NIT) From Jan. 1999 to May 2001
- Guest Lecturer, Government College of Engineering, Salem,from Dec. 1997 to Dec.1998

PUBLICATIONS

- International and National Journals : 26
- International and National Conferences : 50
 - https://scholar.google.co.in/citations?hl=en&user=kUzA0egAAAAJ&sortby=pubdate&view_op=list_works&gmla=AJ1KiT2Pz26yQ6owrHke1-tQWQMn7J5rEwFeeGT1sRoBeJCXD5MkTCXRTH2EnUeN9X-y8qkBdTbCbqNXccd0i91

International Journals:

- K. Ranjithkumar, D. Sakthibala, S. Palaniswami, "Efficiency Optimization of Induction Motor Drive Using Soft Computing Techniques", International Journal of Computer Applications, Volume 2, pp. 6-12, June'10 (ISSN:0975 – 8887)
- K. Ranjithkumar, M. Venkatesan, S. Palaniswami, "Simulation and analysis of variable frequency controlled three phase induction motor with PWM control technique", International Journal of Emerging Technologies and Applications in Engineering, Technology and Sciences (IJ-ETA-ETS), | volume 3 : issue 2, July '10 (ISSN:0975 – 8887)
- K.Ranjith Kumar, S.Palaniswami, K.Priyadharsini, July 2010, "Performance enhancement of wound Rotor Induction Motor by VSI with Dynamic Capacitor controlled Rotor Circuit", International Journal of Computer Applications (ISSN: 0975-8887), Vol. 3, No. 9, pp. 31-37.
- K.Ranjith Kumar, S.Palaniswami, April 2011, Performance Enhancement of Wound Rotor Induction Motor by Resonating the Rotor Circuit using Fuzzy Controller, European Journal of Scientific Research (ISSN: 1450-216X), Vol.52 No.4, pp.580-591.(ISI)
- K.Ranjith Kumar, S.Palaniswami, V.N.Dhivya, Feb. 2012, Genetic Algorithm Application for Efficiency Optimization of Wound Rotor Induction Motor by Rotor Capacitive Reactance Control, International Review on Modeling and Simulation, Vol.5 , No.1 , pp.239-244,(SCOPUS) ISSN:1974-9821
- K.Ranjith Kumar, S.Palaniswami, Lourds Shiny, May 2012, Performance Enhancement of Wound Rotor Induction Motor by Rotor Capacitive Reactance Control using fuzzy controller, International Journal of Electrical Engineering, Vol.5, No.2, pp.197-207, 2012. ISSN 0974-2158
- K.Ranjith Kumar, S.Palaniswami, K. Siva kumar, May 2012, Artificial Neural Network Based rotor capacitive reactance control for energy efficient Wound Rotor Induction Motor, Journal of Computer Science, Science publications, USA, Vol.8 , No.7 , pp.1085-1091(ISI). ISSN 1549-3636.
- K.Ranjith Kumar, S.Palaniswami, June 2012, Performance Analysis of Wound Rotor Induction Motor by DSP based Rotor Dynamic Capacitor Control, International Journal of Theoretical and Applied Information Technology, Vol.40, No.1, pp.67-77, June 2012. ISSN 1992-8645 (Scopus)
- K.Ranjith kumar, M.Prabhuraj, Feb.2014, Fuzzy Logic Control Strategy for stand-alone self excited Induction Generator for a variable speed Wind Turbine, International Journal of Innovative Research in Science, Engineering and Technology, Vol.3, Special Issue 1, pp.846-852.ISSN.2319-8753
- K.Ranjith kumar, K.R.Sasitharan, "Implementaion of P&O MPPT Quasi-Z source Inverter Fed Three Phase Induction motor", International Journal of Science & Technology, Vol.2, Issue 13, PP.13-18, ISSN 2321-919X, Dec.2014.
- K.Ranjith kumar, P.Ramalingam, N.Devarajan,"Performance Analysis of Multilevel Cascaded Quasi-Z-Source Inverter using Carrier based PWM techniques for PV Application", International Journal of Applied Engineering Research, ISSN 0973-4562 Vol. 10 No.55, pp.3525-3530 (2015)
- K,Ranjith kumar, S.Suganthi Mary and N.Devarajan,"PV based SEPIC converter with MPPT techniques for grid connected system",International Journal of Applied Engineering Research, ISSN 0973-4562 Vol. 10 No.49, pp.392-398 (2015).
- K.Ranjith kumar, A.Rizwana, " MPPT Control of Quasi Z-Source Cascade Multilevel Inverter Based Grid-Tie Solar PV System", International Journal of Applied Engineering Research, ISSN 0973-4562 Vol. 10 No.88, pp.225-230 (2015).
- K.Ranjith kumar, R.Suganthalakshmi, " A Novel Scheme for Single Phase Grid Interfaced with Harmonic & Load Compensating PV System Using Notch Filter", International Journal of Applied Engineering Research, ISSN 0973-4562 Vol. 10 No.88, pp.190-195 (2015).

- K.Ranjith kumar, Girish Gowtham.J, "Modelling and Simulation of Single Phase Five Level Grid Connected Inverter using Coupled Inductor fed from Wind Energy Conversion System", International Journal of Applied Engineering Research, ISSN 0973-4562 Vol. 10 No.88, pp.203-207 (2015).
- K.Ranjith kumar, M.Venkatesan, May 2018, "FPGA based quasi z-source cascaded multilevel inverter using multicarrier PWM techniques", Journal of Vibroengineering, ISSN: print 1392-8716, ISSN online:2538-8460, Vol.20, Issue 3. Pp-1544 – 1553.
- K.Ranjith kumar, S.Jaganathan, M.Sathyanathan, C.Sasikumar, Enhancement of Voltage Profile of Power Line by the Placement of Multi-line FACTS Devices, Jour of Adv Research in Dynamical & Control Systems, ISSN 1943-023X, DOI: 10.5373/JARDCS/V12I7/20201991, Vol 12, No.7, 2020
- K.Ranjith kumar, V N Sudharsan, J Rahul kumar, Design and Simulation of SEPIC Converter with Fuzzy-logic MPPT for Standalone System, International Journal for Modern Trends in Science and Technology, ISSN: 2455-3778, DOI: <https://doi.org/10.46501/IJMTST060820>, Vol.6, No.8, 112-119, 2020
- 19. K.Ranjith kumar, M Rajeswari, Design and Analysis of ANN-Based MPPT for Hybrid System, International Journal for Modern Trends in Science and Technology, ISSN: 2455-3778, DOI: <https://doi.org/10.46501/IJMTST060836>, Vol.6, No.8, 206-212, 2020
- 20. K.Ranjith kumar, K.Vinoth kumar, R.Vishnu, Implementation of Bi-directional Capabilities of Batteries for using Quadratic Buck-Boost Converter, Advancement of Signal Processing and its Applications, DOI: <http://doi.org/10.5281/zenodo.4021845>, Vol.3, Issue 2, p-p 1-9, 2020
- 21. K.Ranjith kumar, P.Hariharan, Improved Power Quality Switched Mode Power Supply Using Buck-Boost Converter, International Journal of Advanced Research in Science, Communication and Technology, Vol.6, Issue1, pp.824-834, 2021
- 22. K.Ranjith kumar, M.Sabitha, Fuzzy Based MPPT Controller For Solar Photovoltaic Systems, International Journal for Modern Trends in Science and Technology, Vol.5, Issue1, pp.359-370, 2021
- 23. K.Ranjith kumar, S.Saminathan, Multicarrier PWM based control of modular multilevel inverter with grid connected solar PV system, International Journal for Modern Trends in Science and Technology, Vol.7, Issue5, pp.72-80, 2021
- 24. K. Ranjith Kumar, K. S. Poornesh Kumar, Robust Dissipative-based PI Observer Design for the State of Charge estimation of a Lithium-Ion Battery, Journal of Electrical Engineering and Automation, Vol.4, Issue1, pp.41-56, 2022
- 25. K Ranjith Kumar, M Venkatesan, R Saravanan, A hybrid control topology for cascaded multilevel inverter with hybrid renewable energy generation subsystem, Solar Energy, Vol.242, Issue1, pp.323-334, 2022
- 26. K Ranjith Kumar, E.Vallimurugan, Enhanced Dynamic Voltage Restorer for Improving the Power Quality Using RETO Algorithm, International Journal of Innovative Research in Engineering, Vol.4, Issue1, pp.19-26, 2023
- K Ranjith Kumar, E.Vallimurugan

International Conferences:

- Dr.S.Palaniswami, K.Ranjith kumar, K.Priyadharsini,"Performance Enhancement of Single phase Induction motor using Indirect Current control of VSI with Dynamic Capacitor", 4th International conference on Intelligent Systems and Control ISCO 2010, Feb 4-5, 2010, pp-53-59
- Dr.S.Palaniswami, K.Ranjith kumar, D.Sakthibala,"Fuzzy multi objective approach for placement of Sectionalising switches in Distribution networks using Ant colony algorithm", 4th International conference on Intelligent Systems and Control ISCO 2010, Feb 4-5, 2010, pp-13-17

- Dr.S.Palaniswami, K.Ranjith kumar,M.Venkatesan, "Performance analysis of Variable frequency controlled three phase induction motor with PWM control technique", 4th International conference on Intelligent Systems and Control ISCO 2010, Feb 4-5, 2010, pp-13-17.
- K.Ranjith kumar, M.Prabhuraj, "Fuzzy Logic Control Strategy for stand-alone self excited Induction Generator for a variable speed Wind Turbine", International Conference on Engineering and Technology and Science (ICETS'14), 10th and 11th Feb. 2014, pp.153-158.
- K.Ranjith kumar, M.Prabhuraj, "PV Battery System with Reconfigurable Solar Converter", International Conference on Engineering Trends in Electrical Sciences", IETES '14, Indian Engineering College, 27-28th March 2014.
- K.Ranjith kumar, P.Ramalingam, N.Devarajan, S.Palaniswami, " Boost Control of Trans Z-Source Inverter for Photovoltaic System with MPPT Capability", International Conference on Advances in Control and Computing of Analog and Digital Systems, ACCADS'14, CIT, CBE, India, PP.269-276, 29 to 31st Dec. 2014.
- K.Ranjith kumar, P.Ramalingam, N.Devarajan, Comparative analysis of Quasi Z source and Trans source Inverter for Photovoltaic applications", International conference on Electrical, Instrumentation and Communication Engineering – Recent trends and Research issues, ICE2 – RTRI 2015, SKCT, Coimbatore-42, 2nd & 3rd January 2015.
- K.Ranjith kumar, Suganthi Mary, N.Devarajan, Performance analysis of Cuk and Sepic converters with MPPT techniques for solar power applications", International conference on Electrical, Instrumentation and Communication Engineering – Recent trends and Research issues, ICE2 – RTRI 2015, SKCT, Coimbatore-42, 2nd & 3rd January 2015.

National Conference:

- K. Ranjith kumar, Dr. S. Palaniswami, "Improvement in the Speed and Torque characteristics of Slip ring Induction Motor by modified rotor resonant circuit", National conference on Trends in Technology convergence – TITCON2k5, July 29, 2005, @Jayam College of Engg., Dharmapuri, TN.
- K.Ranjith kumar, N.Indira, Dr.S.palaniswami, "Optimal Unit Commitment using Genetic Algorithm", National conference on VLSI, Embedded Systems, Signal Processing and Communication – VESCOM 2007, Jan 27, 2007, @Kongu Engineering College, Dharmapuri, TN.
- M.Karthikeyan P.G student, Dr.S.Palaniswami HOD, K.Ranjithkumar, Improvement In Speed-Torque Characteristics of a Slip Ring Induction Motor By Rotor Resonance Control, 2nd National Conference on TICAE, Mar 15 -17, 2007, Sathyabama University, Chennai-119
- M.Karthikeyan P.G scholar, Dr.S.Palaniswami HOD, K.Ranjithkumar, Power Electronic System Analysis By Virtual Instrumentation, National Conference on Extreme Engineering and Technological advancement, XETA 2k7, April 4th & 5th, Jayam College of Engg. & Tech., Dharmapuri.
- R.Anbuthasan P.G.Student, anbuthasan@gmail.com and K.Ranjithkumar, "Soft Starting Of an A.C.Voltage Controller Fed Induction Motor Using Neural Networks", National Conference on Extreme Engineering and Technological advancement, XETA 2k7, April 4th & 5th, Jayam College of Engg. & Tech., Dharmapuri.
- R.Anbuthasan P.G.Student, anbuthasan@gmail.com and K.Ranjithkumar, Neural Network based firing angle control for Energy Efficient operation of AC voltage controller fed Induction Motor, National Conference on Soft Computing Techniques in Process Control and Instrumentation , March 15-17th 2007, St.Joseph College of Engg., Chennai
- Ranjith kumar, M.Chellia, "Control the Torque speed characteristics of a polyphase Induction motor by using SSVR Network", Proceedings of National Conference ITPED'08, pp. 17-23, March 14, 2008

- K.Ranjithkumar, M.P.Mohandass, "Power factor correction in inductive circuits using Neural Network Controlled Switched Capacitor", Proceedings of First National conference CTCT 2008", CIET, Coimbatore
- K.Ranjithkumar, M.P.Mohandass, "PWM controlled Switched capacitor for Power factor correction in Inductive circuits using genetic algorithms", Proceedings of National Conference CCCA 2008, SRIT, Coimbatore.
- Janardhan.A, Mr. K.Ranjith Kumar, "Restoration Of Power In Distribution Network With Distributed Generator" National Conference On "COMMUNICATION,COMPUTATION CONTROL and AUTOMATION"
- K.Ranjith kumar, Dr.S.Palaniswami, M.Venkatesan, "Fault-Tolerant Soft starter Control of Three phase Induction Motor", Third National Conference of Electrical Instrumentation Systems NCEIS'10, pp-243-247
- K.Ranjith kumar, Dr.S.Palaniswami, K.Priyadharsini, "Performance enhancement of three phase induction motor using rotor impedance control", Third National Conference of Electrical Instrumentation Systems NCEIS'10, pp-222-247
- K.Ranjith kumar,N.Surekha, N.Devarajan, "Simulation of soft computing based maximum power point tracking for PMSG wind generation system", National Conference on Renewable Energy Innovations for Rural Development, Gandhigram Rural Institute(REIRD '14), Gandhigram, 19th March 2014.

AREAS OF INTEREST

- Power Electronics drives, Renewable Energy systems, Battery Management systems, Electrical Vehicle Technology
- Soft Computing Techniques

SUBJECTS TAUGHT

- Control systems
- Electric Circuit Theory
- Electromagnetic Field Theory
- Electrical Machines (DC, AC machines)
- Power Systems
- Protection and Switchgear
- Power Semiconductor devices
- System Theory
- Analysis of Power Converters and Inverters
- Microprocessors and Microcontrollers
- High Voltage Engineering
- FACTS

PROJECT SUPERVISED

- 52 PG Projects
- 48 UG Projects

PATENT PUBLISHED

Quality and Engage the fundamental operations of integrated circuits using annotator device

Published on 03.12.2021

REVIEWER – INTERNATIONAL JOURNALS

International Journal Electronics

- WORKSHOPS/COURSES ORGANIZED
- WORKSHOP/COURSES PARTICIPATED
- EXTERNAL EXCELLENCE
- GUEST LECTURES

BOS /BOG MEMBER

Kumaraguru College of Technology, Coimbatore

Sona College of Technology, Coimbatore

Hindusthan College of Engineering and Technology

ACADEMIC COUNCIL MEMBER

Parisutham Institute of Technology, Thanjavur.

NPTEL ONLINE COURSES COMPLETED

- Control systems

PROFESSIONAL SOCIETIES MEMBERSHIP

- IEEE Member