BIO DATA

Name:Dr. KIRAN KUMAR KALYANAEmployee ID:A5EEE00T06

Designation: Professor

Department: EEE

Date of Birth: 04-11-1979

Father Name:K.Baskara Rao

Mother Name: D.Dhamayanthi

Reservation Category: S C

Address: D. No: Vizianagar Street, Pathapatnam , Srikakulam

Mobile Number: 9440341841

Email id: kirankalyana1@gmail.com/hodeeeaitam@gmail.com Date of Joining in the Institution: 03-08.2016

EDUCATIONAL QUALIFICATIONS

QUALIFICATION	BOARD / UNIVERSITY	DIVISION	YEAR
Ph. D	A.U. College of Engineering, Andhra University, Visakhapatnam	-	2015
M.E	A.U. College of Engineering, Andhra University, Visakhapatnam	First Class	2004
B.E	GMRIT, Rajam	First Class	2001



EXPERIENCE

- Having **20 years** of teaching experience.
- Experienced in teaching of various advanced subjects of Electrical Engineering.

Organization	Designation	Duration	
JITM , PARLAKHEMUDI	Lecturer	18 June 2003 – 23 December 2004	
AITAM, TEKKALI	Assistant Professor	24 December 2004- 30 th June 2007	
AITAM, TEKKALI	Sr.Assistant Professor	1 st July 2007- 31 st January 2009	
AITAM, TEKKALI	Associate Professor	1 st February 2009- 2n ^d June 2011	
VITS , SONTYAM	Associate Professor; HOD	3 nd June 2011 – 04 February 2016	
NSRIT, SONTYAM	Professor; HOD	05 February 2016- 21 July 2016	
AITAM, TEKKALI	Professor, Asst.HOD	4 th August 2016 – 30 th September2021	
AITAM, TEKKALI	Professor, Head of EEE Department	3 rd October 2021- Till date	

Topic of PhD Thesis: APPLICATION OF LEAST SQUARES METHOD AND TIME MOMENTS TECHNIQUE FOR ORDER REDUCTION OF INTERVAL SYSTEMS – SOME NEW RESULTS AND A CRITICAL STUDY

Topic of M.E. Thesis: A MODIFIED EIGEN SPECTRUM METHOD FOR ANALYSIS AND DESIGN OF HIGHER ORDER DISCRETE TIME SYSTEMS

RESEARCH PUBLICATIONS:

1. Kiran Kumar. K. and Sastry G.V.K.R. 'A New Method of Order Reduction for High Order Interval Systems using Least Square Method', *International Journal of Engineering Research and Applications (IJERA)*, Vol. 2, Issue 2, pp 156 -160, *March*, *2012*.

2. Kiran Kumar. K. and Sastry G.V.K.R. 'An Approach for Interval Discrete-Time Systems Reduction using Least Squares Method', *International Journal of Engineering Research and Applications (IJERA)*, Vol. 2, Issue 5, pp 2096-2099, *Sept., 2012*.

3. Kiran Kumar. K. and Sastry G.V.K.R. 'An Algorithm For Interval Continuous –Time MIMO Systems Reduction Using Least Squares Method', *International Journal of Engineering Research and Applications* (*IJERA*), Vol. 3, Issue 2, pp 18-21, March 2013.

4. Kiran Kumar. K. and Sastry G.V.K.R. 'Order reduction of Interval SISO Systems Using Least Square Methods', 28th *International Conference on CADCAM, Robotics and Factories of the Future 2016*, 6th – 8th January 2016, Kolaghat, West Bengal, India Springer.

5. Dr. Kiran Kumar and A.V.S.LAKSHMI. "Stable ROM of a single machine infinite bus power system via Time domain approach", A National Conference on *Recent Advancements in Power ,Control and Drives for Sustainable Energy (PCDSE-16)*, 4th-5th March,2016.GITAM Institute of Technology, GITAM UNIVERSITY, Visakhapatnam.

6. Dr. Kiran Kumar and Mani Kumar Gutti. "Fuzzy Logic Controller of DFIG to ride through recurring GRID Faults", *International Journal of Engineering Science and Technology* Vol: 8, issue: 9, pp 209-218, ISSN no, September 2016

7. Dr. Kiran Kumar and Bogaparapu Gayatri, "Uncertain Systems Order Reduction by Modal Analysis Approach", *Indian Journal of Science and Technology* article no 96367, Vol: 9, issue: 38, Oct 2016. Indexed in Scopus.

8. Dr. Kiran Kumar and A.V.S.LAKSHMI. "Analysis and Design of a Controller for an SMIB Power system via Time domain Approach", *Indian Journal of Science and Technology*, Vol: 9, issue: 44, Nov 2016. Indexed in Scopus.

9. Dr. Kiran Kumar and Sai Kartek Vyakaranam, "Reduction of Lower Harmonics and Improve the Efficiency of a wireless charging system by using Quasi –Z-source converter", *Indian Journal of Science and Technology*, Vol: 9, issue: 45, Dec 2016.**Indexed in Scopus.**

10. Dr. Kiran Kumar and Bogaparapu Gayatri, "Uncertain system Order Reduction by Aggregation Method" *International journal of Electrical and Computer Engineering*, vol.7, No. 1, February 2017,pp.244-252 Indexed in Scopus.

 Dr. Kiran Kumar , "Application of Arithmetic mean for Reduction of Higher Order Interval Systems", *International Journal of Advanced Research in Electrical ,Electronics and Instrumentation Engineering*, Vol.7, Issue 2, February 2018 ,pp.604-608. UGC Serial number 2928. 10.15662/IJAREEIE.2018.0702035.

12. Dr. Kiran Kumar and Sangeeta Kurman "Analysis and Design of High Order Discrete Time Interval Systems using New Order Reduction Technique via Least Squares Method and Time Moments Technique", *International Journal for Research in Applied science and Engineering Technology*, Vol.6, Issue II February 2018, pp.562-569. UGC Approved Serial number 44382. DOI : 10.22214/ijraset.2018.2081

13. Dr. Kiran Kumar and M. Mounika "A Novel Method of Issue Identification in Induction Motors using Smart Sensors", *International Journal for Research in Applied science and Engineering Technology*, Vol.6, Issue III, March 2018, pp.369-374. UGC Approved Serial number 44382. 10.22214/ijraset.2018.3058.

Dr. Kiran Kumar, "Implementation of Geometric mean for Higher Order Interval Systems", *International Journal of Creative Research Thoughts, Vol.6, Issue* 1, March 2018, pp.88-92. UGC Approved Serial number 49023.

15. Dr. K. Kiran Kumar, K. Sangeeta e.tal. " Order reduction by pole clustering method via shifting about a point 'k'", International conference on New Trends and Engineering , GRT Institute of Engineering and Technology Chennai , Tamil Nadu, September 7th and 8th ,2018 *ICNTET* IEEE Explore Digital Library. IEEE Record #44368.

16. Dr. K. Kiran Kumar, K. Sangeeta e.tal, "A New Algorithm For Reduction Of High Order Commensurate Non Integer Interval Systems", *1st International Conference on Innovative Product Design and Intelligent Manufacturing System*, National Institute of Technology, Rourkela India, May 17-18, 2019.pp. 691-701.Indexed in Springer

17. Dr. K. Kiran Kumar, B.Srinivas rao, e.tal, "Design and Simulation of Hybrid System Using Cuckoo MPPT Technique", *International Journal of Engineering and Advanced Technology (IJEAT)*, Vol. 8 Issue-6, August 2019 pp.3078-3086. Indexed in Scopus.

18. Dr. K. Kiran Kumar e.tal. "Application of modified least squares method for order reduction of commensurate higher order fractional systems", *Indonesian Journal of Electrical Engineering and Informatics (IJEEI)*.vol.8, No.1, March2020, pp-94-102. Indexed in Scopus.

19. Dr. K. Kiran Kumar, B.Srinivas rao, "Modelling and Designing of Plug in Electric Vehicle Under g2v Compatability", 2nd Innovative Product Design and Intelligent Manufacturing System: National Conference (IPDIMS 2020) lecture notes in mechanical engineering National Institute of Technology, Rourkela, India during February 12 – 02- 2021. Pages 391-400, indexed in springer.

20. Dr. K. Kiran Kumar e.tal "Student classification based on cognitive abilities and predicting learning performances using machine learning models", *International Journal of Computing and Digital Systems*, 2021, 10(1), pp. 63–75, indexed in Scopus.

21. Dr. K. Kiran Kumar, B.Srinivas rao, "Power quality improvement using cuckoo search based multi-level FACTS controller", *Journal of Engineering Research*, DOI: 10.36909/jer.10895. Vol 10 No 4A (2022) indexed in sci.

22. Dr. K. Kiran Kumar e.tal "Analysis ,Design and Instillation of inverter based 6kw solar smart water purifier in the ground water polluted areas of Kaviti mandal – A death zone of srikakulam ,Andhra Pradesh in India", *International journal of Engineering and Technology* ,volume 10,Issue 6, June 2021.

23.Dr.RamaRao, Dr. K.Kiran Kumar e.tal, "Automatic Man Hole Lid status Detection Indication and Protection", *Journal of XIAN University of Architecture &Technology* Vol.XIV, Issue VI ,2022 indexed in Scopus.

24.Dr.K.Kiran Kumar e.tal, "Implementation of Hybrid MPPT for Grid-Connected Hybrid System", IPDIMS 2022 (*International Conference on Innovative Product Design and Intelligent Manufacturing Systems*), NIT Rourkela.

25. Dr. K. Kiran Kumar e.tal "Quantitative Analysis of Ground water in Kaviti Mandal – A Renal Failure Zone of Srikakulam, AP, India" *Indian journal of Environmental Protection* indexed in Scopus Vol. 42, No. 12, pp 1528-1536, 2022 indexed in Scopus

26. Dr.K.Kiran Kumar e.tal, "Reduction of High Dimensional Non-Integer Commensurate Systems Based on Differential Evolution" *International Transactions on Electrical Energy Systems*, vol. 2023, Article ID 5911499, 10 pages, 2023. <u>https://doi.org/10.1155/2023/5911499</u>. **Indexed in SCI**

27. Dr.K.Kiran Kumar e.tal. "A comparison of fuzzified Pareto multiobjective optimization using grey wolf optimizer and particle swarm optimization method for power losses reduction incorporating TCSC", *Journal of Electrical Engineering & Technology* (SCI) (communicated). Manuscript EMID: 007a6bb72cf4ab2e.

28. Dr.K.Kiran Kumar e.tal "Reduction of High Dimensional Commensurate Fractional Interval System via Artificial Bee Colony Optimization Algorithm", *Indonesian Journal of Electrical Engineering and Informatics* indexed in Scopus. (Communicated).

29. Dr. K.Kiran Kumar e.tal "VACCINATION IDENTIFICATION SYSTEM USING RASPBERRY Pi", imanager's Journal on Electronics Engineering, Vol. 13 No. 2 January - March 2023. DOI:10.26634/jele.13.2.19474.

30. Dr. K.Kiran Kumar e.tal "Effect of Standard Lightning Current Wave Rise and Tail Times on Transient Response of Horizontal Buried Conductor" has been submitted to International Transactions on Electrical Energy. (SCI) (communicated.)

31. Dr. K.Kiran Kumar e.tal "EFFECT OF CHANGE IN LOAD ON BOTH TORQUE AND SUSPENSION ELECTRO MAGNETIC POLES OF 12/14 SPECIAL SELF SUSPENSION SWITCHED RELUCTANCE MOTOR UNDER RUNNING CONDITION" has been submitted to International Transactions on Electrical Energy Systems (Communicated.)

32. Dr. K.Kiran Kumar e.tal " An efficient **Bi-Directional DC-DC converter for an electric drive in an Electric Vehicle**" International Journal of Power Electronics and Drive Systems (IJPEDS) Paper ID# 22969.(communicated). 33. Dr. K.Kiran Kumar e.tal "The Survey Paper on Inevitable Metrics in Agile Software Development", IJFANS INTERNATIONAL JOURNAL OF FOOD AND NUTRITIONAL SCIENCES, UGC CARE Listed (Group -I) Journal Volume 11, Iss 3, Mar 2022.

34. Dr. K.Kiran Kumar e.tal, "Prediction of Tomato Leaves Disease Using Ensemble Learning Algorithms" IJFANS INTERNATIONAL JOURNAL OF FOOD AND NUTRITIONAL SCIENCES, UGC CARE Listed (Group -I) Journal Volume 11, Iss 4, Mar 2022.

35. Dr. K.Kiran Kumar e.tal, "A Predictive Approach to Estimate Software Defects Using Fuzzy Logic " IJFANS INTERNATIONAL JOURNAL OF FOOD AND NUTRITIONAL SCIENCES, UGC CARE Listed (Group -I) Journal Volume 11, Iss 5, Mar 2022.

PATENTS:

- 1. Title of Invention "Intelligent Solar Power Theft detection technology using WI-FI notification", Application No: 202041029285 A, Publication date 31-07-2020.
- 2. Title of Invention "Solar Based smart water purification system in the ground water", Application No: 202041032258 A, Publication date 7-8-2020.
- 3. Title of Invention "Multiple independent charging system for E-Vehicles", Application No: 202241031100 A, Publication date 10-06-2022.
- 4.

Nature of Job/ Duties:

Academic:

Teaching subjects related to Electrical and Electronics Engineering at undergraduate and post graduate level. Guidance of projects, mini projects and seminars undertaken by the students during their courses of training and take projects as faculty. Responsible to supervise the functions, improvements and modernization of various laboratories.

Administrative:

Undertake administrative appointments in the college for conduct of academic curriculum and administrative tasks as required in running of University /other University such as

- Coordinator for B. Tech EEE Department projects.
- Training Seminar In charge of B.Tech. Students.
- Time Table Coordinator.
- Alumni In charge for B.Tech EEE Department.
- Acted as an External Examiner on 26th March, 2009 for the Evaluation of Projects and Comprehensive viva for EEE B.Tech students of J.I.T.M, Palakhemundi-761211(Gajapati).

- Acted as an External Examiner on 10th February, 2012 for the Evaluation of Projects and Comprehensive viva for EE 4/4 B.E. students of A.U.C.E (A), Andhra University, Visakhapatnam.
- Convener for "ADVANCEMENTS IN CONTROL SYSTEMS & APPLICATIONS (ACSA-2013)", a two day workshop held on 1st and 2nd March 2013 at VITS College of Engineering, Sontyam.
- Convener Three day workshop on PLC & Its Application -11th, 12th & 13th March 2014 Associated with HITECH AUTOMATION PRIVATE LIMITED.
- Convener –two day workshop on Renewable Energy systems -10th & 11th October 2014 Associated with Roboversity.
- Co-Convener–VISASTRA2K15 Two day Technical symposium VITS COLLEGE OF ENGINEERING, SONTYAM, 19th & 20th March 2015 Associated with IEEE STUDENT CHAPTER.
- IEEE student Branch Department Advisor, IEEE VITS College of Engineering student branch.
- IE(I) student Branch Department Advisor, IE(I) VITS College of Engineering student branch.
- Head of the Electrical and Electronic Engineering Department.
- Head of Research and Development.
- Convener for NAAC
- Convener for one day Guest Lecture on MATLAB/SIMULINK BASED MODELLING, SIMULATION AND ANALYSIS on 25-02-2016.
- Department NBA coordinator.
- Department R&D Member.
- Department Assistant HOD.
- Head of the EEE Department

Membership of Professional Bodies

- Life Member of Indian Society for Technical Education, New Delhi, India. LM 56486
- Life Member of Institution of Electronics & Telecommunication Engineers, New Delhi, India.AM 210712
- Member of International Association of Engineers, Hong Kong. LIFE MEMBER 126743.

Short Term Training Programmes/Workshops/Seminars:

- Successfully completed a three days National Workshop on Recent Advancements in Modeling & Simulation of Control Systems Organized by EEE department, SHRI VISHNU ENGINEERING COLLEGE FOR WOMEN, Vishnupur, and Bhimavaram during 07-09th July, 2007.
- Successfully completed a five days AICTE Sponsored Short Term Training Programme on "Emerging Trends in Electromechanical Energy Conversion", Organized by EEE department in association with ISTE chapter during 5th – 9th MAY 2008, held at GMR INSTITUTE OF TECHNOLOGY, RAJAM.
- Successfully completed a three days NSTEDB-DST Sponsored Short Term Training Programme on "Faculty Awareness Camp on Entrepreneurship", Organized by EEE department in association with ISTE chapter during 10th – 12th MAY 2008, held at GMR INSTITUTE OF TECHNOLOGY, RAJAM.
- 4. Participated in the Two day National workshop on "Applications of Mathematics related to engineering (e@math-08)", organized by Department of Basic Sciences &Humanities during 29th 30th August 2008, held at Aditya Institute of Technology and Management (AITAM), Tekkali-532201.

- Participated in the Two day workshop on "ADVANCES IN ELECTRICAL ENGINEERING", organized by Department of EEE during 6th & 7th September 2008, held at Aditya Institute of Technology and Management (AITAM), Tekkali-532201
- Participated in the Two day workshop on "THE FUNDAMENTALS OF ELECTRICAL CIRCUIT ANALYSIS", organized by Department of EEE during 25th & 26th September 2008, held at Chaintanya Engineering College Kommadi, Visakhapatnam-41.
- Attended two week AICTE, New Delhi Sponsored Staff Development Programme on "ADVANCES IN ELECTRICAL POWER AND CONTROL SYSTEMS (AEPCS)" conducted by Department of EEE during 30-11-2009 to 12-12-2009 held at JITM, PARLAKHEMUNDI.
- Participated five day workshop "MISSION10X", Organized by WIPRO in association with ISTE chapter during 21st 25th FEB 2011, held at Aditya Institute of Technology and Management(AITAM), Tekkali-532201
- Participated in the Three day Faculty Development Programme conducted by Dr.B.G.Barki,Retd professor of Education NITTTR, Chennai during 17th – 19th May ,2012 VITS College of Engineering, sontyam, Visakhapatnam.
- 10. Participated in One day Faculty Development Programme on "OUTCOME BASED ENGINEEING EDUCATION FOR EMPLOYABILITY ENHANCEMENT (OBE⁴-2K13)" conducted by Department of Computer Science & Engineering and Basic Sciences & Humanities on 8th June ,2013 VITS College of Engineering, sontyam, Visakhapatnam.
- Participated in One day Faculty National Workshop on "Soft Computing Techniques in Estimation and Control (SCTEC-14)", conducted on 22nd February, 2014 under TEQIP Phase-II by Department of EEE, GITAM UNIVERSITY, VISAKAHAPATNAM-45.
- Participated in One day Faculty National Workshop on "Reactive Power Control and Voltage Stability in Power Systems (RPCVS-14)", conducted on 28th March, 2014 under TEQIP Phase-II by Department of EEE, GITAM UNIVERSITY, VISAKAHAPATNAM-45.
- 13. Given a Presentation to Polytechnic students of VITS COLLEGE OF ENGINEERING creating awareness on Industrial Hazards and Safety Measures on 01-05-2015.
- 14. Organized One Week Faculty Development program on "Optimization Techniques for Electrical Engineering Applications", on 22nd to 27th September, 2016. Department of EEE, AITAM, TEKKALI.
- 15. Co-convener of Asian e-bike championship and annual day celebrations on 1st march to 4th march, 2019, AITAM, TEKKALI.
- 16. Co-Convener of International Conference on "Intelligent computing in Control and Communication (ICCC-2020). 10th & 11th July 2020.
- 17. Successfully completed Electric Power Systems an online non-credit course authorized by University at Buffalo and The State University of New York and offered through Coursera.
- Participated in one week (8thJune to 13thJune 2020) on-line Faculty Development Program on 'Advances in Electrical Engineering', organized by Department of Electrical Engineering, PVG's COET, Pune in association with PES/IAS Chapter, IEEE Pune Section.
- Participated in the Two-week on-line Faculty Development Program on "Research Opportunities in Electrical Engineering" under Technical Education Quality Improvement Program (TEQIP-III) organized by Department of Electrical Engineering during May 7-16, 2020. Government college of Engineering, KARAD

- 20. Participated in a Five Day National Level Online FDP on "Cutting-Edge Technologies for Electrical Engineering", organized by Department of Electrical & Electronics Engineering, from 18th -22nd May 2020.
- 21. Co convener for Faculty development programme on Challenges and research opportunities in microgrid operation control and protection from 15th to 19th June, 2020, Department of EEE, Tekkali.
- 22. Participated 40 hour FDP on "IOT applications in Smart Metering", NIT Warangal, 18th -27th March, 2022.
- Co-coordinator for Faculty Development Programme on Recent Innovations and Emerging Advances in Electrical Engineering from 4th April – 9th April 2022.
- 24. Participated One Week Faculty Development Programme Emerging trends in communication and signal processing for next generation applications from 12/09/2022 to 16/09/2022. National Institute of Technology Silchar, India.
- 25. NITTR CHANDIGARG COORDINATOR

Recognitions/Achievements:

- Ratified by JNTU Hyderabad as Assistant professor Lr.No.RP/PVP/Selections/2006 dt: 23.08.2006.
- Ratified by JNTU Kakinada as Associate professor Lr.No.JNTUK/DAA/List of Faculty Ratified by JNTU Kakinada dt: 12-06-10.
- Ratified by JNTU Kakinada as Professor Lr.No. JNTUK/Registrar Peshi/Ratify Principal & Faculty /2016 dt: 06-06-2016.
- Gone through a training program conducted by WIPRO as WIPRO MISSION10X.
- Received Appreciation certificate for applying Ugc minor research project.

Editorial board

- Editorial member of International Electrical Engineering Journal (IEEJ)
- Reviewer of International Journal of Engineering Research & Technology (IJERT) (ISSN: 2278-0181)
- Reviewer of Journal of the Institute of Engineers (India): series B
- Reviewer of International Journal of Power and Energy Conversion Inderscience

Research Interests

- Large scale systems Reduction.
- Model Reduction of Uncertain systems.
- Uncertain Nonlinear systems.
- Design of controllers
- Reduction of Fractional Interval systems.

RESEARCH GUIDANCE

- M.Tech Thesis Awarded : 05
- M Tech Thesis ongoing : 01

Subjects Taught/ Teaching:

- Control systems.
- Discrete Control systems
- Power system operation and Control(M.Tech)
- Electro Mechanics I
- Electro Mechanics II
- Electro Mechanics III

- Advance Control Systems
- Electric Circuits Analysis
- Basic Electrical Engineering
- Switchgear and Protection
- Power systems I
- Power systems II

Labs Taken:

- Control systems Lab
- Power Electronics lab
- EM I Lab
- EM II Lab
- Electric Circuits Lab

Labs Established:

Power Systems Lab Control systems Lab

Software's Knowledge:

S.No	Software	Area	Level
1	Simulation Software's (PSPICE, ORCAD)	Modeling and Optimization Tool	Confident
2	MATLAB	All applications (New product development, Energy systems modeling, control systems simulation)	Confident
3	SCILAB	All applications (New product development, Control systems simulation)	Entry
4	C, C++	Programming	Confident
5	MS Office	Data Processing and Analysis	Confident

Project Approved:

1.Science and Engineering Research Board 2016-2017 "Analysis Design and Instillation of 6KW Solar Smart Water Purifier in the Ground water Polluted Areas of KAVITI Mandal – A DEATH ZONE of Srikakulam District, Andhra Pradesh", File Number :ECR/ 2017/000379.

2. All India Council for Technical Education sanctioned Short Term Training Program titled "Application of Advanced Techniques to Control Micro grid (AATCM)", with file number: 34-36/138/FDC/STTP/Policy-1/2019-20.

3. Science and Engineering Research Board "Enhancement of Performance and Service

Life of Oil Filled Apparatus: Progress, Challenges and Future Prospective" With File number

SUR/2022/002594.

4. Local Coordinator NITTR Chandigarh "Research Scope in Electric Vehicles (In collaboration with ANSYS) (ICT-153)", **05/12/2022 to 09/12/2022.**

References:

Dr.V.Srinivasa Rao	Dr.P.V.SURESH,
Senior Scientist and Deputy Project Director	Associate Professor,
DRDO, Hyderabad	Chemical Engineering Department
Andhra Pradesh, India	NIT Warangal
Email: nivas637@gmail.com	Andhra Pradesh, India
Mobile:+919490189029	Email: pvsuresh@nitw.ac.in
	Mobile:+918332969402

Place: Tekkali

Dr. Kiran Kumar. K Professor of EEE Department AITAM, TEKKALI