

## BIO-DATA OF Dr. K.RAGHAVENDRA RAO

**Dr. K. RAGHAVENDRA RAO**

**Professor of Physics**

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**Qualification:**

**M.Sc, M.Phil., Ph.D.**

**Teaching & Research Experience:**

**36 Years as Assistant Professor,**

**Associate Professor, Professor**

**Research Areas:**

**Electronics Instrumentation, Solid State Physics,  
Materials Science, Embedded systems,  
Internet of Things (IoT), Cloud Computing.**

**Total No. of Ph.Ds Awarded:**

**14**

**No. of Publications:**

**40 (Best Papers-List Enclosed)**

**Present Position:**

**PROFESSOR & PRINCIPAL  
SRI KRISHNADEVARAYA UNIVERSITY  
COLLEGE OF ENGINEERING & TECHNOLOGY  
ANANTAPURAMU-515003, A.P**

### **Membership in Professional bodies:**

1. Life Member of ISTE, India
2. Life Member of ISOI, India
3. Member of BOS St. Theresa College , Eluru
4. Member, BOS, GUPG Centre, Raichur.

### **Major Project Agencies:**

1. MOSSBAUER AND RELATED SPECTROSCOPIC STUDIES ORGANO-IRON COMPLEXES sponsored by UGC. Grant Sanctioned 3 lakhs (1991-1995)
2. DESIGN AND DEVELOPMENT OF AN INTEGRATED ELECTRO CHEMICAL UNIT AND INTERFACING WITH P.C sponsored by CSIR. Grant Sanctioned 3 lakhs (1992-1995)
3. MOSSBAUER STUDIES AND LATTICE PROPERTIES OF TERNARY FERRO-SPINALS FOR ULTRASONIC ENGG sponsored by BRNS. Grant Sanctioned 5 lakhs (1993-1997).

### **Visits Abroad:**

1. Presented a paper on IEEE International conference on Teaching, Assessment and Learning for Engineering (TALE), 26-29 August, 2013, Bali , Indonesia,
2. Visited Royal Nepal Academy of Science and Technology in connection with conduct of Workshop during May 18<sup>th</sup> to 28<sup>th</sup>, 1987, Nepal.
3. Attended World Congress in Computer Science, Computer Engineering and Applied Computing (WORLDCOMP'12) - Las Vegas, Nevada, USA, July 16-19, 2012.
4. Presented a paper” DESIGN AND DEVELOPMENT OF HARDWARE AND SOFTWARE TO TEST THE POTENTIOMETER LINEARITY USING PC”, World Academy of Sciences, Engineering and Technology (WASET), Italy, 28-30, April, 2010.
5. Presented paper on International Conference on Mechanical and Electronics Engineering (ICMEE), August 1-3, 2010, Kyoto, Japan.

### Honours:

1. Co-Ordinator, Department of Electronics, Sri Krishnadevaraya University, Anantapur
2. Head, Dept. of Physics, Sri Krishnadevaraya University, Anantapur
3. Chairman, Board Of Studies in Physics, Sri Krishnadevaraya University, Anantapur
4. Board Of Studies in Department of applied Electronics, Gulbarga University, Gulbarga
5. Board Of Studies in Department of Physics, Osmania University, Hyderabad
6. Co-Ordinator, IoT Workshop in Sri Krishnadevaraya University, Anantapur.

### Awards:

1. CSIR-JRF, SRF
2. 2<sup>nd</sup> Prize at District Level Lyric Janmabhoomi Competition
3. 3<sup>rd</sup> Prize at State Level Essay Competition
4. 1<sup>st</sup> Prize in Best Exhibit on IoT Workshop Conducted by Andhra Pradesh Government, 2016.

### List of Students guided for Ph.d:

1. G.Sathish Babu, Development of Hardware and Software for Interfacing SMDE with PC, 2002.
2. Padma Suvarna, Development of Instrumentation for ac Conductivity measurement and investigations in Certain polymers, 2002
3. K.E. Sreenivasa Murthy, Implementation of FIR filters using VLSI Chips, 2003.
4. M.V.Lakshmaiah, Design and Implemenatation of IIR filters using DSP Processors and FPGAs, 2006.
5. P.Thimmaiah, Design and Development of an embedded system for automatic Potentiometric titration using AVR Microcontroller, 2008.
6. P.Saraswathi, Design and development of a PC based Instrumentation for determination of fluoride ion concentration in certain tooth paste,2009
7. A.Sreedevi Reddy, Design and development of an embedded system for thermal conductivity measurement of polymer thin films, 2009.
8. A.Nagaraj, Design and Development of an embedded system for Dielectric Constant measurement in Liquids Using TI MSP430F149 mixed signal controller, 2008.
9. G.Nagamani, Design and development of an embedded system for measurement of Thermal Conductivity of liquids by transient Hot wire method, 2010.

10. K.Sreelekha, Design and development of a microcontroller based measurement system for fluoride ion concentration using ion selective electrode, 2010.
11. K.Aruna, 2014, Design and Development of Automatic Potentiometric titration system for end point determination, 2014.
12. U.Naveen Kumar, Design and development of a Semiconductor Bandgap measurement system using MSP430G2553 and Zigbee, 2014.
13. C.Swapna, Design and development of dsPIC30F6014A-Based Specific heat Capacity measurement system, 2015.
14. C.Rajeswari, Design and development of microcontroller LM4120H5QR based measurement system for Stefan's constant of Black body radiation, 2016.

**M.Phil Degress awarded:**

1. D.Srinivasulu, Development of an Inexpensive Card Reader Interface for Microcomputer and a simple Optoelectronic circuit to determine the acceleration of gravity g, 1992.
2. G.Sudha, Development of a microcomputer controlled heat capacity measurement technique for solids and liquids, 1994.
3. G.Sathish Babu, Development of a P.C Base Conductance Meter for Electrolytic Solutions, 1995.
4. D.Syamala Bai, Development of a Micro Controller Based Waveform Generation for Polaro-Graphic Studies and a Power supply for Modern 303 A SMDE Assembly, 1996.
5. A.Vishala, Microcontroller Based Investigations on Certain Optoelectronic Devices, 2003.
6. P.Thimmaiah, Embedded system application controlling of web camera using ATMEL89C51 microcontroller, 2004.
7. Purnima, S.Durga, Embedded system design development of certain interfaces to PIC16F877 microcontroller, 2005.
8. S.Abdul Khazar, Exploitation of PC's Printer Port for Controlling the External Device, 2005.
9. Phanendra, Design and development of a microcontroller based instrument for water distillation plant, 2010

10. C.Rajeswari, Design and development of Microcontroller based humidity and temperature measurement and monitoring system using PIC18F25K20 microcontroller, 2014.
11. Eunice Sophia, Wind Speed and Direction Measurement System Using Atmel 89S51 microcontroller, 2016.

#### **Present Working Ph.d Students:**

1. G.Sreenivasulu- Submitted Ph.d Thesis
2. **P.Divya Vani- DST INSPIRE Scholar (IF140622) - 2014-2016 (JRF), SRF (2017, January to till now).**

#### **List of Published Papers:**

##### **2016**

1. P.Divyavani and **K.Raghavendra Rao**, “Measurement and Monitoring of Soil Moisture using Cloud IoT and Android System”, Indian Journal of Science and Technology (SCOPUS), Vol.9, Issue 31, PP:1-8, August,2016, DOI: [10.17485/ijst/2016/v9i31/95340](https://doi.org/10.17485/ijst/2016/v9i31/95340).
2. **Raghavendra Rao Kanchi** , Naveen Kumar Uttarkar, “Design and development of a semiconductor bandgap measurement system using Microcontroller: MSP430G2553 and ZigBee: CC2500”, International Conference on Processing of Materials, Minerals and Energy(IMME),2016
3. G.Sreenivasulu, **K.Raghavendra Rao**, “Design and Development of Linear Velocity Measurement System using Texas Instruments Hall Effect Sensor DRV5023-Q1 and Microcontroller MSP430G2553”, Indian Journal of Science and Technology (SCOPUS),Vol. 9, Issue 38, PP: 1-11,
4. G.Sreenivasulu, **K.Raghavendra Rao**, “Design and Development of an Embedded System for the Measurement of Boltzmann’s Constant”, Indian Journal of Science and Technology (SCOPUS),Vol. 9, Issue 39, PP: 1-10,
5. G.Sreenivasulu, **Prof.K.Raghavendra Rao**, P.Divya Vani, “Design and Development of an Embedded System for the Band Gap Measurement in Elemental Semiconductors”, Current Research Topics in Power Nuclear& Fuel Energy (CRTPNFE-2016).

## 2015

6. G.Sreenivasulu and **K.Raghavendra Rao**, Embedded System Laboratory Design with Texas Instruments' LaunchPad with Energia, IJCCIT, International Journal of Conceptions on Computing and Information Technology Vol. 3 (13), Issue. 1, April 2015; ISSN: 2345 - 9808.
7. RAJESWARI CHERUKURI and **RAGHAVENDRA RAO KANCHI**, Design and Development of an Integrated Relative Humidity, Temperature Measurement and Gas (LPG) Sensing System Using PIC 18F25K20, Research and Reviews Journal of pure and applied physics, Vol 3, Issue 1, PP. 1-8, Mar-Apr 2015, ISSN: 2347-2316 / EISSN: 2320-2459.
8. Rajeswari Cherukuri and **Raghavendra Rao Kanchi**, Fast Track Exercises to Understand ARM Cortex-M4 Architecture Using Texas Instruments' Stellaris LaunchPad, American Journal of Embedded Systems and Applications, Vol.3, Issue 2, PP:22-32, Oct 2015, ISSN:2376-6069 (Print) / ISSN:2376-6085 (Online).

## 2014

9. K. Vijaya Lakshmi, P. Thimmaiah, **K. Raghavendra Rao**, B.Rama Murthy, The 8051 Microcontroller Interrupts Concepts: Programming and Applications, IJECT Vol. 5, Issue 1, Jan - March 2014, ISSN: 2230-7109 (Online) / ISSN: 2230-9543 (Print).
10. Aruna. Kommu and **Raghavendra Rao Kanchi**, Design and Development of Sensor based Mini Projects for Embedded system Laboratory using ARM Cortex-M3 (LPC1768), IEEE 4 th International conference on Information, communication and Embedded systems, 27-28 of 2014, pp:1-6, Feb 2014, Chennai, Tamilnadu, India.Indexed in IEEE Digital, ISSN: 0018-9219.
11. Aruna Kommu, **Raghavendra Rao Kanchi** and Naveen Kumar Uttarkar, Design and Development of Microcontroller based Peristaltic pump for Automatic Potentiometric Titrations, IEEE 4th International conference on Information, communication and Embedded systems, 2014,27-28, pp:1-6, Feb 2014, Chennai, Tamilnadu, India. Indexed in IEEE Digital, ISSN:0018-9219.

12. Naveen Kumar Uttarkar, Aruna Kommu, and **Raghavendra Rao Kanchi**, Design and Development of Data Acquisition System for a Remote Furnace Using MSP430G2553 and Zigbee, Information Communication and Embedded Systems (ICIES), 27-28 Feb,2014, Chennai, India, ISSN: 0018-9219.
13. Swapna Chintakunta, **Raghavendra Rao Kanchi** and Ramanjappa Thogata, Designing an Introductory FPGA-based Embedded System Laboratory, American Journal of Embedded Systems and Applications, Vol.2, No.2, pp.6-12, March, 2014, ISSN: 2376-6069 (Print) / ISSN: 2376-6085 (Online).
14. Aruna Kommu and **Raghavendra Rao Kanchi**, Naveen Kumar. U, Design and Development of Microcontroller Based Peristaltic pump for Automatic Potentiometric Titrations IEEE International Conference on Communication and Signal Processing”, (ICCSP), pp: 157-161, 2014, April 3-5, Melmaruvathur, Tamilnadu. Indexed in IEEE Digital Xplore, ISSN: 0018-9219.
15. Aruna Kommu and **Raghavendra Rao Kanchi**, Designing a learning platform for the implementation of serial standards using ARM microcontroller:LPG 2148, Resent Advances and Innovations in Engineering (ICRAIE), 9-11 May, PP: 1-6, 2014, Jaipur, India, Indexed in IEEE Digital Xplore, ISSN: 0018-9219
16. Aruna Kommu,Naveen Kumar Uttarkar and **Raghavendra Rao Kanchi**, Design and Development of Sensor-Based Mini Projects for Embedded System Laboratory Using ARM Cortex-M3 (LPC1768), IEEE International Conference on Communication and Signal Processing”, (ICCSP), pp: 157-161, 2014, April 3-5, Melmaruvathur,Tamilnadu. Indexed in IEEE Digital Xplore, ISSN: 0018-9219.
17. Rajeswari Cherukuri and **Raghavendra Rao Kanchi**, Design and development of a project-based embedded system laboratory using PIC 18F25K20, American Journal of Embedded Systems and Application, Vol. 2, No. 3, pp.21-28, June 2014, ISSN: 2376-6069 (Print) / ISSN: 2376-6085 (Online).
18. Swapna Chintakunta, **Raghavendra Rao Kanchi**, An Embedded System Laboratory Training using dsPIC30F6014A, International Journal of Scientific and Engineering Research, Vol.5, Issue.7, pp.1432 – 1440, July, 2014, ISSN: 2229-5518.

19. Aruna. Kommu and **Raghavendra Rao Kanchi**, ARM-based Automatic Potentiometric Titration System, Research and Reviews: Journal of Engineering and Technology, Vol 3, Issue 4, pp. 1-8, Oct-Dec-2014, ISSN: 2319-9873.

## 2013

20. Aruna. Kommu and **Raghavendra Rao Kanchi**, ARM based Temperature Measurement and Processing to Remote Computer using Fiber Optic Cable, IEEE International Conference on Communication and Signal Processing, (ICCSPP), pp. 423-427, April 3-5, 2013, India, Indexed in IEEE Digital Xplore, ISSN: 0018-9219.
21. Naveen Kumar Uttarkar and **K. Raghavendra Rao**, Design and Development of a Low-Cost Embedded System Laboratory Using TI MSP430F149, IEEE International Conference on Communication and Signal Processing, April 3-5, 2013, pp.165-175, IEEE Advanced Technology for Humanity, ISSN: 0018-9219.
22. Aruna. Kommu, **Raghavendra Rao Kanchi** and Raghavendra Prasad V.R, Design and Development of Low cost Students Experiments for Teaching ARM based Embedded System Laboratory, IEEE International Conference on Teaching, Assessment and Learning for Engineering (TALE), pp.515-520, August 26-29, 2013, Bali, Indonesia, Indexed in IEEE Digital Xplore, ISSN: 0018-9219.
23. Naveen Kumar Uttarkar and **K. Raghavendra Rao**, Design and Development of Texas Instrument's MSP430F149 Based Linear Velocity Measurement System, Emerging Research in Computing, Information, Communication, and Applications, pp.460-463, Elsevier Publications 2013, E-BOOK ISBN: 978-81-322-2550-8.
24. Naveen Kumar Uttarkar and **K. Raghavendra Rao**, Design and Development of a Low-Cost Embedded System Laboratory Using TI MSP430 LaunchPad", American Journal of Embedded Systems and Applications. Vol. 1, No. 2, pp. 37-45, 2013, ISSN: 2376-6069 (Print) / ISSN: 2376-6085 (Online).
25. Aruna. Kommu and **Raghavendra Rao Kanchi**, Design and Development of Project based Embedded System laboratory using LPC1768, American Journal Of Embedded systems and Applications, vol. 1, No. 2, Dec 2013, pp 46-53, ISSN: 2376-6069 (Print) / ISSN: 2376-6085 (Online).



## 2012

26. **K.Raghavendra Rao**, Development of Embedded Systems to Control Toxic Compounds in Textile Industries, International Journal of Scientific Research, Vol. 1, PP: 45-47, 2012, ISSN: 2070-0237 (print), ISSN: 2070-0245 (online).
27. **K.Raghavendra Rao** and K.Sree lekha, Design and Development of a Microcontroller-Based System for Measurement of RPM, International Academy of Science, Engineering and Technology, Vol.1, PP: 9-14, 2012, Impact factor: 3.6986.
28. **K.Raghavendra Rao** and saraswathi, Design and Development of an Instrument to Determine the Fluoride Ion Concentration in certain Tooth Pastes, Sensors and Transducers, Vol.100, PP: 95-101, 2012, ISSN: 1726-5479.
29. **K. Raghavendra Rao** and Naveen Kumar Uttarkar, "Study of Heat Loss from Hot Tungsten Filament Bulb Using AT89C51 Based Data Acquisition System", International Journal of Applied Physics and Mathematics, Vol. 2, No. 3, May 2012, pp.194-196, ISSN: 2010-3621.
30. Swapna. C, Vijay Kumar. J, **Raghavendra Rao. K**, Ramanjappa. T, FPGA Based Heart Beat Measurement System, International Conference on Information Technology, Electronics and Communications (ICITEC), July 14 – 15, 2012, Hyderabad, India, ISSN: 2279-0078.

## 2010

31. **K. Raghavendra Rao** and B.Nagamani, Design and Development of an Embedded System for Testing the potentiometer Linearity, Sensors and Transducers, Vol.112, PP: 107-117, 2010, ISSN: 1726-5479.
32. **K.Raghavendra Rao** and A.Sree devi, Design and development of Embedded System for Thermal Conductivity Measurement of Polymer Thin films, International Conference on Mechanical Electronics Engineering (ICMEE), Vol.1, PP: 454-459, 2010, ISSN: 0025-696X (print), ISSN: 1741-0444 (online).

## 2003

33. P.Thimmaiah, **K.Raghavendra Rao** and E.R.Gopal, External Device Control using IBM PC's Centronics Printer Port, J.Instum.Soc, India,32 (4), (2003),239.

34. R.Padma Suvarna, **K.Raghavendra Rao** and E.R.Gopal, Frequency Measurement using the Centronics Printer Port of an IBM Compatible PC, J.Instum.Soc, India,33(2), (2003) 87.

## 2002

35. R. Padma Suvarna, **K.Raghavendra Rao** and K. Subbarangaiah, A Simple Technique for ac Conductivity Measurement, Bull.Material.Sci.25 (7), 647 (2002).

## 2001

36. **K.Raghavendra Rao** , A Low-cost PC-based Dielectric Constant Measurement of Liquids, Instum.Soc.India, 31, (2001)256.

## 1992

37. **K.Raghavendra Rao** , Falling body experiment-determination of 'g', Phys.Edn, 9(3), (1992)235.

## 1991

38. **K.Raghavendra Rao**, Inexpensive Instrumentation for semiconductor junction characterization Phys.Edn, 8(1), (1991)30.
39. **K.Raghavendra Rao**, A simple and inexpensive multichannel logic tester, Phys.Edn, 8(3), (1991)236.

## 1990

40. **K.Raghavendra Rao** and E.Rajagopl, An In expensive Multichannel Scaler for Mossbauer experiment with simultaneous display- Rev.Sci.Instrum, 61(3), (1990) 1156.