


Name of the Faculty	Prof. Satyanarayana Katukojwalawala		
Designation	Adjunct Professor		
Nature of Job/Appointment	Adjunct Faculty		
Date of Joining the institution	10-12-2021		
Email	kjjwala@yahoo.com; skjwala@gmail.com		
Educational Qualifications	Name of the Degree	Class	
	Ph. D	Ph.D (BME)	Awarded
	PG	M.E (ECE)	Distinction
	UG	B.E (ECE)	Distinction
Work Experience	Teaching	29	
	Research	10	
	Industry	10	
	Others	--	
Area of Specialization	Electronics and Communication Engg ,Bio medical Engineering, Embedded systems , Navigation and Instrumentation		
Professional Memberships	BMESI and ISOI		
	<b>Administrative/Corporate Engagements and Responsibilities</b>		
	1. Project Coordinator for ME Projects with Care Foundation(2013)		
	2. Member, FIST Committee, NERTU OU		
	3. Chairman, Board of Studies in BME OU(2008-2010)		
	4. Member, Campus-wide Network Committee, OU (2007-2008)		
	5. Head Department of BME (2004-06)		
	6. Member, Campus-wide Network Committee, UCE OU (2004-2006)		
	7. Director, Computer Centre UCE OU (2005-06)		
	8. Network Administrator OU (1998-2000)		
	9. Systems Analyst UCE OU (1999-2006)		
	10. Vice President, CIT (2000)		
	11. Member, Faculty of Engineering		
	12. Member of several committees for CDE, ECE, Tagore Auditorium etc.		
	13. Director, Biomedical Instrumentation Centre OU (1994-1997)		
	14. Project IMPACT in Developing Infrastructure, Installation of E-MAIL and Computer Systems.		
	15. Project Coordinator for BE (BME) Projects		
	16. Member, Adhoc Departmental Committee for Biomedical Engineering Course O.U		
	17. Member, Departmental Committee, BME		
	18. Member, Departmental Committee, ECE		
	<b>Contributions to the Department of BME</b>		
	1. Actively associated with preparation of Brochures, Annual Budget Estimates, Procuring the Laboratory equipment.		
	2. Successful handling of the accounts, redistribution of the allotted grant to Engineering and Medical Departments and settlement of the Accounts to the University Authorities.		
	3. Proficiently managing academic and administrative correspondence.		
	4. Administering various activities at the Biomedical Engineering Laboratories.		
	5. Key role in introducing new courses, Syllabi & academic schedules as the Chairman, Board of Studies (BME).		
	6. Pivotal in managing the overall operation for BME as the Department Head.		
	7. Instrumental in maintaining the Electro medical Equipment at Hospitals having service contracts with BMIC as Director, Biomedical Instrumentation Centre.		
	8. Fore fronting the operations for modifying existing Biomedical Equipment required by Doctors.		
	9. Managing design and development new equipment catering to the needs of Doctors.		
	10. Rendering Technical assistance in the Procurement, drawing up of specifications, evaluation of supplies, installation and commissioning of the electro medical equipment.		
Responsibilities held at Institution Level			
Responsibilities held at Department Level			

**Dr. APJ Abdul Kalam** blessed his group working in Collaboration with Care hospitals for Electro-cardiology related development project involving PG students. He has been associated with Hospitals like NIMS in development of Instrumentation for diagnosis and treatment.

## Awards Received

**STUDENT SCHOLARSHIPS**

- U. G. C. Scholarship 1976-1977
- State Merit Scholarship 1971-1976
- State Special Merit Scholarship 1969-1971

## Courses Handled at Under Graduate / Post Graduate Level.

➤ **Demonstrated skills in teaching the following subjects:**

1. Special Topics in BME
2. Biomedical Equipment II
3. Biomedical Instrumentation
4. Elements of Biomedical Engineering
5. Computer Programming and Numerical Methods
6. Computer Applications to BME
7. Medical Equipment Maintenance Instrumentation
8. Advanced Signal Processing
9. Micro Computers
10. Electronic System Design
11. Microcontrollers and RTOS

➤ **Remarkable efforts in Developing and Running the following laboratories:**

1. Biomedical Equipment
2. Biomedical Instrumentation
3. Electronic Devices
4. Electronic Circuits
5. Advanced Medical Instrumentation Lab
6. Embedded systems Lab
7. Computer Programming Lab
8. English Language Lab

## No. of Papers Published

Journals Papers	23
Conference Papers	44

**COMPUTERS AND NETWORKING PROJECTS**

Intranet : WIN Server based Inter Office Mail System using dial up networks in College of Engineering, OU (1997).

Internet : 64 Kbps / 8 Mbps leased line connectivity to Osman University for complete Intranet and Internet Applications (1998)

## Projects Carried out

1. E-MAIL facility at Dept. of ECE OU
2. E-MAIL facility at Dept. of Astronomy OU
3. Installation, Configuration of communication equipment including last mile modems, Cisco Router, Rack Modems, LTS, WEB Server and Proxy Server, DNS, Mail Servers etc.,
4. Installation and commissioning of Internet related UG cable network to extend the Internet facility through a 300-line telephone exchange and DOT lines.
5. Implemented 128 KBPS Radio Modem based connectivity to University College of Engineering, Osmania University for complete Internet Applications.
6. Implemented Wireless LAN in UCE OU with Cisco Wireless bridges and Access points.
7. Implemented 2 MBPS Fibre Optic Cable based Internet access facility at UCE OU
8. Designed and Implemented a Computer Centre and server farm at UCEOU.
9. Designed Electronic Class rooms for UCE OU
10. Designed and implemented Campus Wide Network for University College of Engineering, OU
11. Designed and implemented Campus Wide Network for Osmania University
12. Zigbee based sensor networks

### **Software Projects**

1. Inpatient Medical Record System
2. Computer Assisted Ventilation Manager
3. Computer Assisted Diagnostics for Ophthalmology
4. Computer assisted Prescription system
5. Hospital Data Analysis System ( VB, MS SQL, JSP)
6. Web based project monitoring system(JSP based)
7. IVRS based Student information system
8. Air warfare simulation and evaluation system
9. Information system for ITDA
10. RFID based supply chain management system
11. RFID based asset tracking systems
12. RFID based solar panel tracking system

### **PC based systems (Hardware and Software)**

1. Charge Discharge Monitoring of Ni Cd Batteries (10 Channel System)
2. Life Cycle Evaluation of Ni Cd Batteries (60 Channel System)
3. Performance Evaluation of Thermal Batteries
4. Automation of frequency measurement in RADAR Applications
5. Communication Receiver Evaluation System
6. Computer Assisted Prescription System
7. DC motor speed control system
8. Multi-channel Interval Timer / Event Counter for Radiation measurements
9. Programmable Neuro physiological Stimulator
10. Speech Analyzer using SP 1000
11. IVRS based Student information system
12. GPS based Fleet location system
13. GPS based Passenger Information System
14. GPS based Location announcement system for trains
15. GPS based Station System for MMTS
16. GPS based Fleet location system for Locomotives
17. GPS based Convoy monitoring and Messaging system
18. Micro Controller based Shooter evaluation system
19. PC / MC based Ethernet tester.
20. ISP for 16F877A board.
21. ISP for 18F452 board
22. Parallel port programmer for PIC micro controllers.
23. PC based PTZ controller, video monitor and firing system
24. Remote Audio and Video monitoring using Internet.
25. Convoy monitoring system
26. Central Monitoring system
27. Marksmanship evaluation system
28. LAN based moving display
29. RFID with Rabbit microprocessor
30. Laser / RF based Range finder system
31. LAN based Remote Data Acquisition Terminal
32. Microcontroller based Variable Frequency Pulse width Modulator
33. PC based intra-cardiac signal analysis
34. Visitor tracking / Guidance system
35. Video surveillance System
36. Baby view monitor / Central Monitoring system for neonates
37. Solar cell / Module evaluation system
38. Central monitoring during golden hour
39. Central Plant Automation systems
40. Indigenization of solar cell and module testers
41. LPC1788 based data acquisition system
42. S3C2440A based telemonitoring system

### **INSTRUMENTS PURVIEW**

#### **Medical Instruments**

1. Programmable Micro Infusion Pump
2. Precision Temperature Controllers
3. Electronic Bone Growth Stimulator
4. Micro controller based EOG stimulator
5. Apnoea Monitor
6. Dry Steam Table Top Sterilizer
7. Peripheral Nerve Stimulator for Anaesthesia Applications
8. Ultrasonic Dental Scaler
9. Bio Signal Amplifiers for ECG,EEG,EMG,EGG
10. 9-inch display subsystem for Blood gas analyser (Import Substitute)

11. Modification / Redesign of Multi-parameter Monitor (KONE 565)
12. Executive Stress Manager
13. Electro Surgical Generator
14. Lympha Press for Cancer Patients
15. Pulse wave velocity monitor
16. Vacuum gage for Wound vacuum monitoring
17. Pain threshold and tolerance evaluation system
18. PC / UC based multi-channel data acquisition system
19. Blue tooth ECG transmission and reception system
20. Multi-channel Impedance data acquisition system for GI applications
21. pH monitor for GI applications
22. Bluetooth Data acquisition system
23. Pressure monitors for GI applications
24. Medi Communication systems for Emergency Patient Transportation
25. Interface for HR 32 Pressure monitoring system
26. ECG with GPS system
27. Fibre optic interface for medical instruments
28. Serial to RS422 converters
29. Serial to RS 485 converters (Half and Full Duplex)

#### **Instruments for Communications**

1. Digital cable Fault Locator
2. Line Test and Talk
3. Pulse Reflectometer
4. Individual Battery Cell Monitor
5. Digital Earth Resistance meter
6. Cable Route Tracer
7. BPSK Modulator Demodulator
8. DSP based BPSK Demodulator for Satellite receiver

#### **Instruments for Industry**

1. Intelligent Battery Charges
2. Photo switches and Precision Timers
3. Control modules for packaging machines
4. Micro controller based Battery monitors
5. Control system for seeds packaging machine
6. Moving message displays with LAN Interface
7. Fleet tracking system using cellular networks
8. Universal meter
9. Micro controller based platform stabilisation system
10. Remote controlled / pre-programmed vehicle with Distant vision
11. Input range selectable 4 – 20 mA Current Transmitters
12. GPS Clock
13. Feed mix controller
14. White LED drivers
15. Solar Battery chargers
16. PV cell gage
17. PV module gage
18. Solar lights
19. Home and Plant Automation modules
20. Zigbee based Remote Flash units with Bright LEDs
21. SBC for handheld terminal with ARM processor
22. LED based home lighting system
23. LED Lanterns
24. LPC 1788 based data acquisition system
25. GPS GPRS based telemonitoring system with S3C2440
26. First Antitheft system for Solar Modules in India

#### **Academic Applications**

1. English Language Laboratory System
2. PC / MC based Modulation techniques trainer
3. Synchro evaluation system

#### **CONSULTANCY ASSIGNMENTS**

To be provided on specific request

Patents

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#### **SIGNIFICANT TECHNICAL CONTRIBUTIONS**

Technology Transfer

1. First Antitheft system for Solar Modules in India
2. Designed and implemented Campus wide network for Osmania University with fibre optic backbone and Extreme hardware
3. Designed and established Computer centre for UCE OU (Director CC, UCE OU) with fibre optic backbone and Cisco hardware
4. Establishment of e class rooms in Engineering College

5. Extension of Internet to the Department of BME and Mech. Engg. using wireless links
6. First internet lab at UCE OU
7. Audio Systems in Tagore Auditorium, Distance Education Centre.
8. First leased line based internet access facility in OU at Computer Centre and acted as Network Administrator, OU
9. Establishment of Neurophysiology laboratory at the Dept. Of Zoology, OU
10. Design and Development of English Language Lab, first of its kind in the state Engg. Colleges
11. First email facility in the Department of ECE and Department of Astronomy
12. Helped other departments and Centres like Linguistics, Univ. Library, CDE in establishing their departmental laboratories, email-facility, Computer labs etc.

Invited Speaker

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No. of Books/Chapter Published with details

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#### PROFESSIONAL BODIES AND CONFERENCE CONTRIBUTIONS

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| <p>Details of Short-Term Training Programs/Faculty Development Programs/Seminars/Workshops.Other Trainings (<b>Attended and/or Organized</b>).</p> | <ol style="list-style-type: none"> <li>1. Member, Biomedical Engineering Society of India</li> <li>2. President Local Chapter BMESI, HYD</li> <li>3. Member ISOI</li> <li>4. Co-chair NAVCOM 2012</li> <li>5. Member Organizing Committee, International Conference on Recent Advances in Biomedical Engineering (ICRABME) OU Jan 1994</li> <li>6. Chairperson Poster Sessions (ICRABME) (Jan 1994)</li> <li>7. Co-ordinated The User's Workshop on Computer Assisted Prescription System, February 1990, Dept. of ECE, Osmania University.</li> </ol> |
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Details of Journal Publications/ Conferences (**National and International**)

Yes

#### International Journals

1. Supraja Reddy Ammana, Satyaarayana Katukojwala etal, Development of Simple Software Receiver For IRNSS L5 Signal IEEE International Women in Engineering (WIE) conference on Electrical and Computer Engineering WIECON-ECE) 978-1-6654-7849-6/21/ IEEE 2021
2. Sree Naresh Krishna Chama, Satyanarayana Katukojwala, Design and Development of NavIC and GPS based Geolocation System for CO2 Monitoring International Conference on Innovative Practices in Technology and Management (ICIPTM) 50 978-0-7381-3289-1/21 IEEE 2021
3. Naga Sai Ravali Challa, Satyanarayana Katukojwala, etal, Design and Implementation of Bluetooth-Beacon Based Indoor Positioning System, 5th IEEE International WIE Conference on Electrical and Computer Engineering (WIECON-ECE), 2019
4. A. Naga Rajesh, S. Chandralingam, T. Anjaneyulu and K. Satyanarayana EOG Controlled Motorized Wheelchair for Disabled Persons, International Journal of Medical, Health, Pharmaceutical and Biomedical Engineering Vol:8 No:5, 2014
5. Naga Rajesh A., Chandralingam S., Anjaneyulu T. and Satyanarayana K., "Optimization of Stationary Wavelet Transformation Technique for Effective Processing of EOG Signal", International Journal of Systems, Algorithms & Applications, Volume 3, Issue ICEEC13, June 2013, ISSN Online: 2277-2677.
6. Satyanarayana K, Sarma A.D, Naga Praveen P, Malini M and Krishna Reddy D, "Mitigation of Cellular Phone Interference in ECG During Emergency Patient Transportation" Cardiovascular Engineering and Technology, BMES, Springer, Vol.4, Issue No.2, July, 2013. ISSN 1869-408X, <http://www.springerlink.com/openurl.asp?genre=article&id=doi:10.1007/s13239-013-0159-1>
7. Yedukndalu K., Sarma A.D., Ashwani Kumar and Satyanarayana K., "Spectral Analysis and Mitigation of GPS Multipath Error using Digital Filtering for Static Applications", IETE Journal of Research, Volume 59, No.2, March-April 2013.
8. V. Satya Srinivas, A.D. Sarma, K CT Swamy and K. Satyanarayana, "Performance Evaluation of IRI-2007 at Equatorial Latitudes and its Matlab Version for GNSS Applications", Journal of Advanced Space Research, Elsevier (2013), <http://dx.doi.org/10.1016/j.asr.2012.12.002>, 2013
9. Satyanarayana K., Sarma A.D., Sravan J., Malini M. and Venkateswarlu G., "GPS and GPRS based Telemonitoring system for Emergency Patient Transportation", Journal of Medical Engineering, Hindawi, Volume 2013, <http://dx.doi.org/10.1155/2013/363508>.
10. Radhika Rani L., Chandralingam S., Anjaneyulu T. and Satyanarayana K., "A Suggestive Diagnostic Technique For Early Identification of Acyanotic Heart Disorders From Infant's Cry" International Journal of Electrical and Electronics Engineering (IJEET), Vol. 1, Issue 3, 2012.
11. Naga Rajesh A., Chandralingam S., Anjaneyulu T. and Satyanarayana K., "Denoising EOG signal using Stationary Wavelet Transform", Measurement Science Review, Vol. 12, No. 2, 2012.
12. Naga Rajesh A., Chandralingam S., Anjaneyulu T. and Satyanarayana K., "Performance Evaluation of Adaptive Filter Algorithms for EOG Signal Processing", IJSAA, Vol. 2, 2012.
13. Patil G.M., Satyanarayana K. and Subba Rao K., "Evaluation of QRS Complex Based on DWT Coefficient Analysis

- using Daubechies Wavelets for Detection of Myocardial Ischaemia”, World Scientific Journal of Mechanics in Medicine and Biology, Vol. 10, Issue 2, pp. 273-290, 2010.
14. Radhika Rani L., Chandralingam S., Anjaneyulu T. and Satyanarayana K., “Estimation of Fundamental and Formant frequencies of Infants Cry; A Study of Infants with Congenital Heart Disorder”, Indian Journal of Computer Science and Engineering (IJCSE), Vol. 3, Issue 4, Aug-Sept 2012.
  15. Dhiraj S., Satyanarayana K., Viswanadh C.S. and Sarma A.D., “Estimation of TEC and Instrumental Biases of Low Latitude GPS Stations using Kalman Filter”, IETE Journal of Research, Vol. 56, Issue 5, pp. 235-241, 2010.
  16. Malini V., Satyanarayana K., and Subba Rao K., “Linear Prediction Modelling of Saccadic Eye Movements”, Interdisciplinary Engineering Journal, Institution of Engineers, India, 2010.
  17. Malini V., Satyanarayana K., Subba Rao K. and Naidu M.U.R., “Embedded Diagnostic System for Saccadic Eye Movements”, International Journal of Biomedical Engineering and Consumer Health Informatics, Vol.1, No. 2, pp. 109 – 113, 2009.
  18. Malini V., Satyanarayana K., Subba Rao K. and Naidu M.U.R., “Automated Visual Stimulator and EOG Signal Acquisition and Analysis System”, Journal of Instrument Society of India, June 2009.
  19. Patil G.M., Satyanarayana K. and Subba Rao K., “Detection of Atrial Fibrillation through Wavelet Analysis of Single Cycle ECG”, Journal of Institution of Engineers, May 2009.
  20. Patil G.M., Satyanarayana K. and Subba Rao K., “Emergency Healthcare and Follow-Up Telemedicine System for Rural Areas”, Journal of Medical Engineering & Technology, World Scientific Journal on Biomedical Engineering: Applications, Basis and Communications, Vol. 20, Issue 6, 2008.
  21. Patil GM., Subba Rao K., Mytri V.D., Rajkumar A.D., Reddy D.N. and Satyanarayana K., “Embedded Microcontroller based Digital Telemonitoring System for ECG”, Journal of Instrumentation Society of India 37(2), 134-149, 2007
  22. D.C. Reddy and Satyanarayana K “Developing Interdisciplinary Professionals: A model Approach”, IETE Technical Review Vol.No.11, Jan-Feb., 1994 pp.63-66.
  23. Arjit Mondal, Shailendra M and Satyanarayana K: “Apnea Monitor Journal of Pure and Applied Physics”, Vol.I, No.3, July-Sept., 1989.

#### **International Conference Papers**

1. Dhiraj Sunehra, Thirupathi Samudrala, K. Satyanarayana and M. Malini, “Physiological Signals and Vehicle Parameters Monitoring System for Emergency Patient Transportation”, International Conference on Nano, Bio & Material Sciences-Nizam College, Osmania University, Hyderabad, January 8-10, 2014.
2. Satyanarayana K., Futuristic Applications of Global Positioning systems, 29th National Convention of Electronics and Telecommunication Engineers and National Seminar on “Emerging Trends in Electronics and Telecommunication Engineering”, October 29-30, 2013, The Institute of Engineers (India), Hyderabad .
3. V. Satya Srinivas, E. Suneetha, D. Krishna Reddy, K. Satyanarayana and A.D. Sarma, “Performance Evaluation of Fast Satellite Selection Techniques for GNSS”, 29th National Convention of Electronics and Telecommunication Engineers and National Seminar on “Emerging Trends in Electronics and Telecommunication Engineering”, October 29-30, 2013, The Institute of Engineers (India), Hyderabad .
4. P. Yashasvi, A. Supraja Reddy, K. Satyanarayana and A.D. Sarma, “Estimation of Ionospheric Spatial Gradients for Indian GBAS using GAGAN TEC Data”, 29th National Convention of Electronics and Telecommunication Engineers and National Seminar on Emerging Trends in Electronics and Telecommunication Engineering, October 29-30, 2013, The Institute of Engineers (India), Hyderabad.
5. G.Venkateswarlu, A.D.Sarma, K.Satyanarayana and K.Yedukondalu, “Characterization of Indian Ionospheric TEC Behaviour Using PDFs and GPS satellite Data”, ICCSP\_13 IEEE Conference, 03-04-2013 to 05-04-2013, Adhiparasakthi Engineering College, Melmarathur, Kanchipuram (Dist), Tamilnadu.
6. Yedukondalu Kamatham, Venkateswarlu Ginkala and Satyanarayana Katukojwala “Mitigation of GPS Multipath Using Various LMS Adaptive Algorithms”, Pearl Jubilee International Conference on Navigation and Communication (NAVCOM 2012), Hyderabad.
7. Satyanaryana K., Sarma A.D. and Malini M., “Development of Physiological Data Acquisition System and Evaluation of Vital Parameters with respect to location”, Pearl Jubilee International Conference on Navigation and Communication (NAVCOM 2012), Hyderabad.
8. Radhika Rani L., Chandralingam S., Anjaneyulu T. and Satyanarayana K. “A Suggestive Diagnostic Technique for Early Identification of Acyanotic Heart Disorders from Infant’s Cry”, 2nd International Conference on Electronics and Communication Engineering, Hyderabad, November 12, 2011.
9. Naga Rajesh A., Chandralingam S., Anjaneyulu T. and Satyanarayana K., “Performance Evaluation of Adaptive Filter Algorithms for EOG Signal Processing” ICTM 2011, Hyderabad, June 9, 2011.
10. Dhiraj S., Viswanadh C.S., Sarma A.D. and Satyanarayana K., “Fitted Receiver Bias Estimation of GPS using Night Time Data”, 16th National Space Science Symposium, Rajkot, February 24-27, 2010.
11. Patil G.M., Satyanarayana K. and Subba Rao K., “Heart Disease Classification Using Discrete Wavelet Transform Coefficients of Isolated Beats”, IFMBE Proceedings, Vol. 23, Springer Berlin Heidelberg, 2009.
12. Malini V., Satyanarayana K. and Subba Rao K., “Wavelet Analysis of Electrooculogram”, National Conference on Advanced Signal Processing (NCASP 09), Andhra University, Visakhapatnam, November 20 - 21, 2009.
13. Satyanarayana K., Naveen Kumar P. and Ramnath D.G., “Implementation and Applications of Dynamic Reconfiguration Techniques”, RACE 08, Hyderabad, December 22 – 23, 2008.
14. Patil G.M., Satyanarayana K. and Subba Rao K., “Heart Disease Classification Using Discrete Wavelet Transform Coefficients of Isolated Beats”, International Conference of Biomedical Engineering ICBME 2008, Singapore, December 3 – 6, 2008.
15. Malini V., Satyanarayana K., Subba Rao K. and Naidu M.U.R., “Analysis of Saccadic Eye Movements of Epileptic Patients using Indigenously Designed and Developed Diagnostic system”, International Conference of Biomedical Engineering ICBME 2008, Singapore, December 3 – 6, 2008.

16. Satyanarayana K., Ushasri A. and Sarma A.D., "DSP based Noise Reduction Techniques for Biomedical Applications" International Conference on RF and Signal Processing systems, KLCE, Guntur, January 11 – 12, February 1, 2, 2008.
17. Malini V., Satyanarayana K., Subba Rao K. and Naidu M.U.R., "Embedded Diagnostic System for saccadic Eye Movements", International Symposium on Global Trends in Biomedical Informatics Research, Education and Commercialisation, Hotel Green Park, Chennai, November 15 -16, 2007.
18. Satyanarayana K., Ushasri A. and Sarma A.D., "Effect of Location on Physiological Parameters", Silver Jubilee National Conference on Global Navigation Satellite System and its Applications (GNSS 2007), Hyderabad, October 25 – 26, 2007.
19. Patil G.M., Satyanarayana K. and Subba Rao K., "Characterization of ECG using Multilevel Discrete Wavelet Decomposition", National Symposium on Instrumentation NSI – 32, Tiruchengode, Tamilnadu, October 24 – 26, 2007.
20. Patil G.M., Satyanarayana K. and Subba Rao K., "Detection of Cardiac Arrhythmia by R-R interval Measurement from the ECG Time Series", National Symposium on Instrumentation NSI – 32, Tiruchengode, Tamilnadu, October 24 – 26, 2007.
21. Malini V., Satyanarayana K., Subba Rao K. and Naidu M.U.R., "Microcontroller Based Diagnostic system for Electrooculography", National Conference on Biomedical Engineering (NCBME2007), Manipal, October 5-6, 2007.
22. Malini V., Satyanarayana K., Subba Rao K. and Naidu M.U.R., "Acquisition of EOG Signals and Extraction of Saccadic Parameters", National Conference of Signal Processing and Automation (NCSPA 07), Pune, September 6-8, 2007.
23. Patil G.M., Subba Rao K, Mythri D.V., Rajkumar A.D., Reddy D.N., Satyanarayana K. and Siddalingappa V., "Analysis of the Variability of Waveform Intervals in the ECG for Detection of Arrhythmia", International Conference on Information Processing, ICIP, Bangalore, August, 2007.
24. V.Malini, K.Satyanarayana, Subba Rao K., M.U.R. Naidu "Design and Development of Saccadic Stimulator using PIC 18F452 Microcontroller" IETE Zonal Seminar on Emerging and Converging Communication technologies (SECT 07) February 10-11, 2007 Visakhapatnam
25. Satyanarayana K., "GPS for Location Based Services", A three day intensive course on Global navigation satellite systems, NERTU, Hyderabad, November 15 – 17, 2006.
26. Patil GM., Subba Rao K., Mytri V.D., Rajkumar A.D., Reddy D.N. and Satyanarayana K., "Embedded Microcontroller based Digital Telemonitoring System for ECG", National Symposium on Instrumentation NSI \_ 31, ITM University, Gwalior 12th to 15th Oct 2006
27. Patil GM., Satyanarayana K. and Subba Rao K "PC Based Wireless Cardiograph" National Conference on Emerging Trends in Physics, Electronics and Engineering Sciences, JSS College, Mysore, 25th to 27th Sept 2006
28. Vijaya Kumar V. and Satyanarayana K., "Convoy Monitoring System", National conference on Latest Trends in Telecommunications RAYAT Institute of Engineering and Information Technology, Railmajra, Punjab, August 26 – 27, 2006.
29. Krishna Reddy D, Sarma A D, Satyanarayana K "Grid Based Field Strength Method for Mobile Positioning", 2nd International Conference on Positioning Navigation and Timing, Bangalore, India, 7th to 9th June 2006.
30. Patil GM, Subba Rao K, Satyanarayana K, D.N.Ghista "PC Based Respiration Monitoring System using Strain Gauge Pneumograph" National Symposium on Instrumentation NSI -30m CUSAT, Cochin 20th Nov 2005 to 2nd Dec 2005
31. GM.Patil, K. Subba Rao, K.Satyanarayana, D.N.Ghista "PC based Bedside ECG Monitor" International Conference on Instrumentation INCON 2004, Pune Institute of Engineering and Technology, Pune Dec 6-7 2004
32. Satyanarayana K, Dr.S.C.Parekh "Hyderabad Gas flow meter" SAARC conference of Anesthesiologists, Chennai Sept 1999.
33. Satyanarayana K, "Equipment Management, Hospital Management Programme" for Senior Personnel of APVVP, Aug., 1995 Administrative Staff College of India.
34. Satyanarayana K, Dr. Krishna Reddy V, "Long Term Effects of Neurogenic Pain on the Motoneuron and Post Synaptic membrane in Rats", International Conference on Recent Advances in Biomedical Engineering, OU, Hyderabad, Jan 1994.
35. Satyanarayana K, Ravinder Reddy, Dr. Manimala Rao, "Design Development and Clinical Evaluation of Neuromuscular Junction Monitor" International Conference on Recent Advances in Biomedical Engineering, OU, Hyderabad, Jan., 1994.
36. Satyanarayana K, Ravinder Reddy, Dr. Manimala Rao, Dr. Raja Reddy, "Design Development and Clinical Evaluation of Apnoea Monitor", International Conference on Recent Advances in Biomedical Engineering, OU, Hyderabad Jan 1994.
37. Krishna Reddy V, Devaraj E, Satyanarayana K, "Experimental studies on efferent roles of efferent nociceptive fibres in Indian Palm squirrels" VII Annual Conference on Pain, JIPMER, Pondicherry Feb 1991.
38. Satyanarayana K, Reddy D.C, "A Computer-assisted Prescription System for use in Primary Health Centres and District Hospitals", World Congress on Medical Physics and Biomedical Engineering, July 7-12 1991, Kyoto, Japan.
39. D.C. Reddy, Satyanarayana K and K. Shanta, "Computer Aided Prescription System for Medical Care at Primary and District Hospital Centres", Seminar on Computers in Rehabilitation, NIOH, June 1990, Calcutta.
40. Hari Mohan V, Satyanarayana K, Reddy D.C, "Ventilator Management-A Medical Expert System", International and Advances in Computer Applications" Feb 21-23 1990, AIIMS, New Delhi.
41. Satyanarayana K, Reddy D.C., "An Automated Method for Determining Time Constants of Forced Expiratory Manoeuvre", Proceedings of XI AISWBME, Bombay, December, 1985.
42. Satyanarayana K, Divekar D.V., "Diagnosis of Airway Obstructive and Restrictive Diseases", API conference,

Bangalore, January, 1985.

43. Satyanarayana K, Divekar D.V., "Analysis of 1620 Vitalographs of coal miners", Workshop on Pneumoconiosis, Ranchi, Jan 1984.
44. Satyanarayana K, Reddy D.C., Divekar D.V., "Detection of Airway Obstructive and Restrictive Diseases through Time Dependent Exponential Functions Approximations", IX All India Symposium on Biomedical Engineering, Pune, Nov 1983.

**PREVIOUS MAINTENANCE ASSIGNMENTS AT SCCL**

1. Successfully handled the maintenance & troubleshooting of 400/50 line Automatic Telephone Exchanges, 25 line Electronic Telephone Exchanges, Office Intercom Systems, Underground Communication Systems. Shaft Signalling Systems.
2. Executed Electrical rewinding & testing of (1) LT & HT transformers (upto 33 KV/11 KV 4000 KVA (2) LT & HT motors (up to 400 HP), Switch Gear maintenance (up to 4000 KVA OCBs, 5 HP to 400 HP starters) Alternators (up to 188 KVA).
3. Maintenance of HT and LT Transmission lines & Switchyards, Electrical Substations, Water Supply Pump Houses.
4. Maintenance of Public Address Systems, Electronic Calculators, Test and Measuring Equipment and Maintenance of the following Biomedical Equipment:
  - a. Bedside Monitors, D. C. Defibrillators, Chart recorders, ECG Machines, Suction Equipment, 15 mA to 500 mA X-Ray Plants, ODELCA MMR Camera, Flame photometers, Electrophoresis Equipment, Shortwave Diathermy, Ultrasound Diathermy, Nerve Stimulators, Audiometers, Ophthalmoscopes, Electromagnets, Electro surgical Generators, Cold light source, Fiber Optic Endoscopes, Premature Baby Incubators, Foetal Monitors, Spiro Analyzers, Ultrasound Scanners and Tread Mill.
5. Installation and Maintenance of Central Air conditioning Systems 50T, Package Air-conditioning units, Windows Air conditioners, Refrigerators, Deep freezers, Water Coolers, Ice Plant etc.

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