



VIGNAN'S INSTITUTE OF MANAGEMENT AND TECHNOLOGY FOR WOMEN

(Approved by AICTE, Affiliated to JNTU, Hyderabad)
KONDAPUR VILLAGE, GHATKESAR MANDAL, RANGA REDDY DISTRICT - 501 301.

NEWS LETTER

TECHINNOVATION

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Volume - 2

"The five essential entrepreneurial skills for success are concentration, discrimination, organisation, innovation and communication."

Effervescent NSS unit which has been established with a rudimentary objective of providing a dais for the interested students to partake in social work during their free time.

EDITORIAL DESK

Hello!!! We are happy to welcome you all aboard the fledgling 2nd edition for the scintillating year 2016. TECHINNOVATION is the newsletter of the ELECTRONICS & COMMUNICATION ENGINEERING which aims to bring forward the buzz from the department in the past few months. The edition demystifies the realms of Electronics & Communication Engineering and also provides insight to the latest technology adopted in the field. Hope our deeds would ignite everyone's life!!!

HOD'S DESK

It is a theme of happiness to articulate with all of you Through this 2st newsletter. Within these pages you will Find much news related to Diverse activities from the Whole faculty and students Of ECE department. I am cheerful for the initiatives taken by the faculty to disseminate knowledge by organizing various activities in the department. I hope everyone will find this news letter Exciting and interesting.

ECE DEPARTMENT

Department of Electronics and Communication Engineering was started since the inception of VIGNAN'S Institute of Management and Technology for Women during 2008 with an initial

intake of 60. The strength was enhanced to 120 during 2005. The Department had added Post graduate program in VLSI during the year 2012 and Embedded Systems during 2014 with an intake of 18 each. The Department is headed by well qualified

VISION

To transform the students into technologically competent professionals, with abilities to address the societal challenges of the time through innovative technical practices in electronics & communication engineering

MISSION

M1: To foster inquisitive-driven advanced knowledge building among students for reinforcing the domain knowledge, develop capabilities, skills and solve complex engineering problems

M2: To prepare industry-ready graduates for global Electronics as well as communication based engineering companies by conducting training programs, workshops and industry visits.

M3: To build leadership qualities, research aptitude among students for the contribution of economic and technological development in cutting edge technologies in national and as well as in the global arena.

PROGRAM EDUCATIONAL OBJECTIVES (PEOS)

PEO1: To develop the student's ability on technical concepts to design, simulate, and synthesize various electronic and communication circuits & systems for their research advancements.

PEO2: To impart analytical skills and to prepare the students excel in applying state of the art hardware and software tools to solve complex engineering problems for R&D, Industry and societal requirements.

PEO3: To prepare students to work in teams, take independent decisions and integrate engineering issues for successful career in multi-disciplinary environment.

PEO4: To promote entrepreneurship among the students to become successful entrepreneurs with professional ethics.

PROGRAM SPECIFIC OUTCOMES (PSOS):

PSO1:1. Professional Skills Ability: Identify, design electronics & communication circuits and conduct experiments with electronics & communication systems, analyze and interpret data, formulate and solve electronics & communication engineering problems.

PSO2: Industrial Skills - Ability: Design digital and analog systems, algorithms, firm ware, modern engineering tools, software, etc. as per needs and specifications and work in laboratory and multidisciplinary tasks.

PSO3: Ethical and Social Responsibility: Communicate effectively in both verbal and written form, will have knowledge of professional and ethical responsibilities and will show the understanding of impact of engineering solutions on the society and also will be aware of contemporary issues

WORKSHOPS ON

- DESIGN CHARACTERISTICS OF LATEST MICROPROCESSORS
- VARIOUS RADAR BASED DETECTION TECHNIQUE

TECHNICAL TALK

- BAND RADIATIONS DETECTION

CAREER GUIDANCE

Programme In Association With YGK Academy

- Carrier Guidance And Abroad Counseling III&IV Year Students Which Was Organized By YGK Academy.
- Professional Development Program Career Awareness session
- Communication & Language Skills
- G.D orientation programme
- Resume Writing

FACULTY TECHNICAL ARTICLE BY

"GERIATRIC CARE SYSTEM USING ELECTRONICALLY CONTROLLED AIR JACKET"s
Written by DR. A. NARMADHA

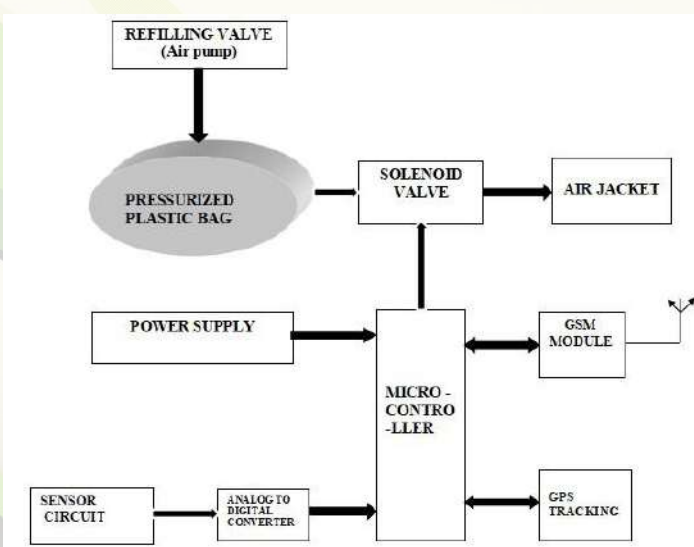
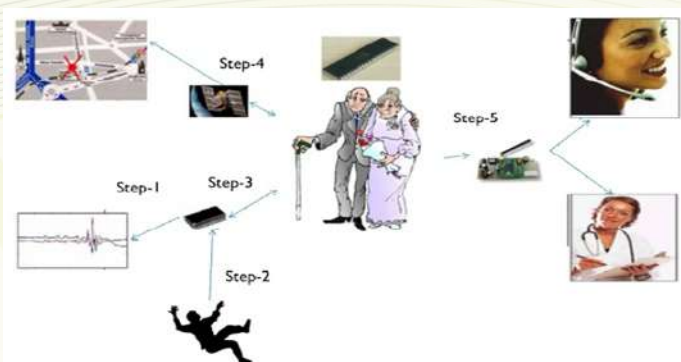
Faculty Technical Article : Title - **“GERIATRIC CARE SYSTEM USING ELECTRONICALLY CONTROLLED AIR JACKET”** Written by **DR. ALAPARTHI NARMADHA**

Introduction

Elderly individuals are the quickest growing section of the total populace. As indicated by the World Health Organization, 30 % of the older person fall at least once every year. Fall and fall-related injuries are responsible for 70% of accidental death in persons who are aged 75 years and above. A dread of fall additionally has emotional mental results on the psychological wellness of an elderly individual since it ruins the self-assurance of the person. Falls and fall-related injuries are the third cause of chronic disability. Along with this increase, the proportion of older adults who are frail and dependent is also likely to rise significantly.

ADVANTAGES OF E-JACKET FOR FALL DETECTION

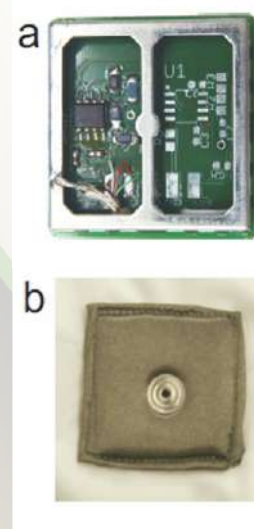
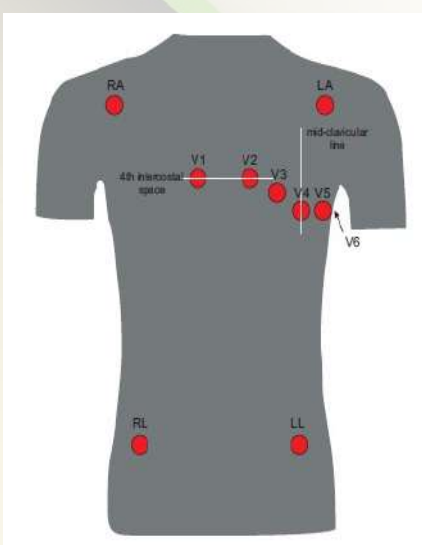
The activity of the user is continuously monitored using an entity acceleration, which, when crosses a threshold value indicates that fall has been detected. The module also includes pressurized plastic bags which are filled with air pumped with the help of a solenoid valve arrangement. This arrangement helps in mitigating the harmful impact of fall and fall-related event. The system consists of a GPS module; it provides an accurate location of the user using which the user's location can be easily found. After the fall event, a request for help is sent to the caregivers who can provide the required medical assistance in time. The module is designed in the form of a wearable jacket which is best suited for both indoor and outdoor events.



Student Technical Article : Title - **“ECG T-SHIRT”** Written by **ALLE PURNIMA.**

Introduction

Unobtrusive sensing of vital signs, such as cardiac activity and respiration, has been increasingly applied in the past decade. The aging of our society has resulted in an increasing demand on medical staff, which cannot always be met. As a result, an increasing number of technical solutions, the so-called personal healthcare systems, are being developed. They aim at enabling sick and elderly patients to stay at home for a longer period, rather than facing prolonged hospital stays. When staying at home, patients generally benefit from increased comfort, which may accelerate their recovery. In turn, costs for the healthcare system will be reduced by shortening the stay in hospital. This is the main rationale for developing long-term monitoring solutions for the home environment. One of the established long-term cardiac monitoring devices is the



Conclusion

This paper introduces a novel ECG T-shirt for 12-lead measurements with fully active and dry electrodes. A portable 12-lead ECG recorder was developed, which is compatible with the T-shirt. The system is portable and has a battery life of two days. To our knowledge, a 12-lead ECG T-shirt specifically with active electrodes has not been developed before. In a study with three volunteers, the functionality of the device was successfully compared with a commercial device in everyday scenarios. The relative error of the RR intervals was 0.96% with a mean coverage of 96.6%.

RESEARCH PUBLICATIONS:

S.No.	List of Authors	Title of the Paper	Journal Name	Year of Publication	ISBN/ ISSN/ Impact Factor
1.	Dr.A.Narmada& Dr.P.Sudhakara Rao	Customized ZigBee stack- Mathematical modeling	Recent Trends in Electronic and Communication Systems	2016	2393-8757
2.	Dr.A.Narmada&Dr.P. Sudhakara Rao	Mathematical modeling of end-to-end-delay of ZigBee stack towards optimization of performance metrics	Recent Trends in Electronic and Communication Systems	2016	2393-8765
3.	Dr.A.Narmada&Dr.P. Sudhakara Rao	Mathematical Modeling of end-to-end delay of customized ZigBee stack towards optimization of performance metrics	Research Journal of Engineering and Technology	2016	0976-2973
4.	Dr.A.Narmada&Dr.P. Sudhakara Rao	Adaptation Layer towards integration of ZigBee and IP stacks	IEEE-ICACDOT-2016	2016	978-1-5090- 2080-5/16

WORKSHOP

S.no	Topic	Date- Month- Year	Resource Person	No.of students	Fill a Gaps
1	Arranged a workshop on “ Design characteristics of latest microprocessors”	18-01-2016 19-01- 2016	Mr.Pavan kumar, Phonex Technologies, Hyderabad	100	Advanced microprocessor- Pentium-4

SEMINARS

S.no	Topic	Date- Month-Year	Resource Person	No.of students	Fill a Gaps
1	Arranged one day seminar on “ Various RADAR based detection techniques”	06-01-2016	Mr A. Gopala Sharma, Assoc.Professor, Stanley Engineering College	90	Detection theory
2	Arranged one day seminar on “ Band radiation detection”	15-02-2016	Dr.P.Srihari, VNR VJIET, Hyd	95	Efficient techniques for out of band radiation reduction

ACADEMIC PERFORMANCE

ECE I SEMESTER TOPPERS



A. PURNIMA
H.T.No.12UP1A0405
Final Year **84.01%**



G. AKILA
H.T.No.13UP1A0422
3rd Year **77.63%**



B. MOUNIKA
H.T.No.14UP1A0401
2nd Year **56.55%**

ECE II SEMESTER TOPPERS



A. PURNIMA
H.T.No.12UP1A0405
Final Year **89.07%**



S. SHAHNAZ
H.T.No.13UP1A0472
3rd Year **77.10%**



B. MOUNIKA
H.T.No.14UP1A0401
2nd Year **69.33%**