

VANI CHALATH

PH: +91 9447336944 OR +91 8921251672

EMAIL: vani.babu7@gmail.com

EMBEDDED SYSTEMS ENGINEER

- Currently working as guest lecturer in Department of Electronics, CUSAT from July 2017.
- 2 years 11 months of professional experience in Embedded Systems Engineering.
- Master of Engineering in Embedded Systems.
- Bachelor of Engineering in Electronics and Communication Engineering.

AREAS OF COMPETENCY

- Embedded Programming Languages known
 - Embedded C & C++
 - MATLAB
- Designing Software and IDE knowledge on
 - PROTEUS
 - AVR Studio
 - Arduino
 - MP Lab
- Other Exposures
 - Programming Languages : C, C++, C#, ASP.Net
 - Software development IDE : Microsoft Visual Studio
 - Database language : Microsoft SQL

PROFFESIONAL EXPERIENCE

- Teaching experience:-
 - Currently working as guest lecturer in department of electronics, CUSAT.
 - 3 years of teaching experience as guest lecturer in DOE,CUSAT from July 2017.
 - Given technical training in the field of electronics and embedded systems for students from various engineering colleges and polytechnic colleges.
 - Conducted Incampus technical training on Arduino in Mangalam college of engineering for the students of ECE and EEE department.
- Software programming and hardware prototyping experience on various academic projects based on microcontrollers.

PROJECT EXPERIENCE**Smart Shopping Cart for Automated Billing Purpose using Wireless Sensor Networks**

Implementation of a reliable, fair and cost efficient Smart Shopping Cart using Wireless Sensor Networks. Such a system is suitable for use in places such as supermarkets, where it can help in reducing man power and in creating a better shopping experience for its customers. Instead of making the customers wait in a long queue for checking-out their shopped items, the system helps in automating the billing process.

- ATMEGA32 Microcontroller is used
- Programmed on Embedded C
- IDE Used for programming is AVR Studio
- Tested on PROTEUS simulation tool
- External Components used are

1. ZIGBEE Module

2. RF bar code reader

Wearable Biosensors for health monitoring

Wearable Bio-Sensors will permit continuous cardiovascular monitoring in a number of novel settings. WBS could play an important role in the wireless surveillance of people during hazardous operations (military, firefighting, etc) or such sensors could be dispensed during a mass civilian casualty occurrence. They typically rely on wireless, miniature sensors enclosed in ring or a shirt. They take advantage of handheld units to temporarily store physiological data and then periodically upload that data to a database server via wireless LAN or a cradle that allow internet connection and used for clinical diagnosis.

- ATMEGA32 Microcontroller is used
- Programmed on Embedded C
- IDE Used for programming is AVR Studio
- Tested on PROTEUS simulation tool
- External Components used are
 1. GSM Module
 2. GPS Module

Smart Power Control System

The smart power control system will automatically switch on and switch off the lights and fans inside the room by detecting the entry and exit of people into the room. The light intensity and temperature inside the particular room is sensed using LDR and temperature sensor and depending on this value the light and fan is switched on if required and automatically switched off when no person is found inside the room.

- ATMEGA32 Microcontroller is used
- Programmed on Embedded C
- IDE Used for programming is AVR studio
- Tested on PROTEUS simulation tool
- External Components used are
 1. IR Sensor

Optimal power management of residential customers in the smart grid as Academic Project

From September 2012 to July 2013

The project aims on effective utilization of solar energy in generating electricity by transformation of power grid into smart grid. The solar generated DC level is boosted up using a boost converter in the system which aims at optimal energy generation and storage even in some adverse conditions. The system was simulated and tested in PROTEUS simulation tool. ATMEGA32 Microcontroller is used

- Programmed on Embedded C
- IDE Used for programming is MP LAB
- Tested on PROTEUS simulation tool
- External Components used are
 1. Solar Panel
 2. PIC 16F877
 3. DPDT Relay Switch

Energy harvesting from piezoelectric materials fully integrated in foot wears as Academic Project

From January to April 2011

The piezoelectric sensors integrated in footwear senses the pressure applied by each footstep and convert it into electric energy. The DC generated by the piezoelectric sensor is fed to the DC to DC converter which increase the DC level of the current fed to it. This is stored in a rechargeable battery and can be used externally. Electrostatic generator is included to improve the energy conversion in the system.

- PIC Microcontroller is used
- Programmed on Embedded C
- IDE Used for programming is MP LAB
- External Components used are
 1. Piezoelectric sensors
 2. PIC16F877
 3. Rechargeable battery

INTERNATIONAL AND NATIONAL CONFERENCES

- Participated in the 3 days International Conference on “Recent Advances in Technology, Engineering, Management and Science (ICRATEMS-2011)” held at Vivekanandha College of Engineering for Women.
- Presented a paper on “optimal power management of residential customers in the smart grid” in the national conference on “Recent Trends in Communication, Computation and VLSI (NCRTCCV-2013)” held at Sri Ramanathan Engineering College, Tamil Nadu.
- Participated in the National Conference on VLSI, Communication and Computation (NCVCC’13) held at Maharaja Engineering College, Tamil Nadu.

INTERNATIONALLY ACCREDITED CERTIFICATES

- Attended training by BULATS of ESOL Examinations, University of Cambridge and secured CEF/ALTE Level as B2/3 as part of Academic activities.

ACADEMIC OVERVIEW

Year	Discipline	University or Board	College or School	Percentage
2011-2013	ME Embedded Systems	Anna University, Chennai	Maharaja Institute of Technology	71.3
2007-2011	BE Electronics and Communication	Anna University of Technology, Coimbatore	Vivekanandha College of Engineering for Women	82.8
2007	10+2	State Board	M.S.P H.S.S	79.00
2005	SSLC	State Board	M.S.P E.M.H.S	88.00

PERSONAL INFORMATION

Date Of Birth	July 26,1989
Father's Name	Babu.C
Nationality	Indian
Domicile	Kerala
Languages Known	English (Read, Write, Speak) Hindi (Read, Write, Speak) Malayalam (Read, Write, Speak) Tamil (Read, Speak)
Contact Address	Sreelakam, Near YMCA, Thrikkakara PO Kochi - 682021
Passport Number	N6985076