Phone: 91-9524121838
Email: udinkumar87@gmail.com

Dinesh kumar. U

CAREER OBJECTIVE

To work for an organization which provides me the opportunity to improve my skills and knowledge to growth along with the organization objective.

EDUCATIONAL QUALIFICATION: M.Sc. (Ph.D.)

Degree	*Subject*	*Year of passing*
Ph.D.	**Instrumentation**	**Feb - 2018**
M.Sc.,	Electronics and Instrumentation	2008-2010
B.Sc.,	Electronics and Communication	2005-2008

CERTIFICATIONS

1. **DCHN,** Diploma certificate in Computer Hardware and Networking.
2. **DC++,** Diploma Certificate in C++.
3. **DDTP,** Diploma in Desktop Publishing tools.

EXPERIENCE

UG & PG Teaching – from June 2015 till date at St. Joseph's college, tirchy.

PG Teaching - 5 years (June 2010 – April 2015) at Madurai Kamaraj University.

RESEARCH (*Ph.D. in Instrumentation)*

- Date of Registration : April, 2011
- Title of Thesis : ***Localization and Tracking of Mobile Robots using different Control Loop Tuning Techniques***
- Supervisor : Dr. N. Mathivanan,(Retd.,) Professor & Director, USIC, MKU.

RESEARCH PUBLICATIONS – *3 (International Journals)*

1. **Dinesh kumar. U**, M. Nisha, and N. Mathivanan," Tracking of a PID Driven Differential Drive Mobile Robot", International Journal of Mechatronics, Electrical and Computer Technology,2018384-399, ISSN: 2305-0543 Available online at:http://www.aeuso.org. **(Impact Factor : 2.84)**

2. Nisha ,**Dinesh Kumar** , Sekar and Indira "Vision Assisted Pick And Place Robotic Arm ", Advances in Vision Computing: An International Journal (AVC) Vol.2, No.3, September 2015 DOI : 10.5121/avc.2015.2302 9
3. **Dineshkumar, U**., M. Nisha, and N. Mathivanan. "Design of a Differential Drive Mobile robot and Remote Tracking of Robot using Odometry and WSN Nodes."International Journal of Mechatronics, Electrical and Computer Technology Vol. 4(11), (2014), 384-399, ISSN: 2305-0543 Available online at:http://www.aeuso.org. **(Impact Factor : 2.84)**
4. K. Vairamani, N. Mathivanan, K. Arunvenkatesh and **U. Dinesh Kumar** "Environmental Parameter Monitoring Using Wireless Sensor Network". Instruments and Experimental Techniques, 2013. Vol. 56 (4), 468-471. (**Impact Factor : 0.361)**

(to be submitted)

1. Localization of PID Driven Differential Drive Mobile Robot - Applying Ziegler Nicholas Tuning Method.
2. Position Estimation of PID Driven Differential Drive Mobile Robot - Applying Cohen Coon Tuning Method

CONFERENCES AND TRAINING PROGRAMS PARTICIPATED

CONFERENCE

- **NCRE'16** National conference on recent trends in electronics organized by St. Joseph's college, tirchy and presented a paper.
- Participated in national level conference "Educators day" organized by National Instruments, Bangalore on 13th October 2013, for researchers.

NATIONAL INSTRUMENTS HARDWARE AND SOFTWARE EXPERIENCE

- Software : LabVIEW 7.0, 8.0, 8.5, 2010 and 2014.
- Hardware : experienced on Traditional DAQ PCI-6014, PCI-6251, USB DAQ -6009, NI – ELVIS 3.0,
- A project work for NI-YANTRA2009 national level competition SbRIO 9642 (3 months),
- A research work and Project work NI-YANTRA2011 using NI – WSN starter Kit,
- Major research work carried out using NI myRIO.
- Undergone one week training program on multiple NI DAQ hardware and LabVIEW software at National Instruments. Pvt., Ltd., Bangalore. October 2009.

OTHER HARDWARE AND SOFTWARE EXPERIENCE

- PCB Software : PCB designing and simulation software such as eagle, Proteus, orcad, Fritzing, Microsoft VISIO.
- Embedded hardware : Arduino UNO, mega2560, NANO, Pro micro, LPC 2129
- Single board computer : Raspberry pi B, B+
- Process control : siemens S7-200 PLC with an analog module interfaced.
- Wireless and IoT : NodeMCU, ESP 8266, Zigbee modules.

IoT based work – 2 members and 5 months duration projects

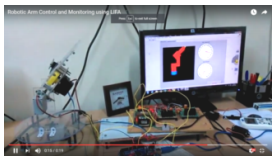
SMART ENVIRONMENT PARAMETER MONITORING AND DATA-LOGGING SYSTEM(2015)

The Raspberry Pi is a credit card-sized single-board computer (SBC) loaded with a Linux based '*Raspbian OS*' on SD-card. A TFT-LCD is interfaced to SPI of Raspberry Pi to display the environmental changes with the help of DHT11 sensor. The on board Wi-Fi enables the SBC with internet connection.Thus an IoT system has made and the remote monitoring of parametersachieved.

IoT ENABLED SOLAR FLAT PLATE COLLECTOR EFFICIENCY MONITORING AND DATA LOGGING SYSTEM(2016)

NodeMCU a Wi-Fi module with digital I/O enabled. Digital single wire temperature sensor is used to acquire the inlet and outlet temperature of SFPC. Sensor interfaced to NodeMCU enables the efficiency analysis from remote via internet.

ROBOTIC ARM MONITORING via LIFA (2017)

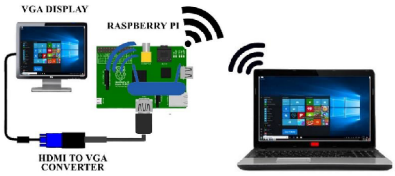


A robotic arm designed with servo motors are configured for pick and place application. Arduino mega 2560 is programmed via LabVIEW to control and monitor the robotic arm.
https://www.youtube.com/watch?v=V4a8XalyxhQ

Design of Wearable pulse rate monitoring system (2017)

This project is designed to monitor human health condition using wearable sensor (RSEN11547 PULSE RATE SENSOR) it measure the body pulse rate by the help of ESP8266 NodeMCU development board It is an IoT Platform. The BPM value (beats per minute) is send to NodeMCU it displays data in to OLED Display. It was designed like a compact wrist watch.

DESIGN OF SCREEN CAST SYSTEM USING RASPBERRY PI (2018)



Screen Casting is important in Commercial spaces, schools, hospitals, challenging indoor and outdoor environments requires video casting. This project describes the use of low cost single –board computer Raspberry Pi which acts as a processor and a server. This technology is used as a standalone platform for both Raspberry Pi desktop to PC and PC to Raspberry Pi and Medias from Android can also be casted.

EXPERTISE GAINED

- Design of Robotics.
- LabVIEW Programming.
- Microcontroller and Embedded System Designs.
- Hardware Troubleshooting.

LIST OF OTHER SUCCESSFUL PROJECTS SUPERVISED:

The projects enabled the students to gain in-depth knowledge in latest technologies and it helped the students to get placements / win competitions, etc.

1. Hop by Hop System for Border Security Force using LabVIEW.(2011)
2. Automatic Bottle filling system using PLC with LabVIEW.(2011)
3. NI-WSN based Pipeline inspection mobile robot (2012)
4. Zigbee based Mobile Rover Control and monitoring using ARM 7 on LabVIEW (2012)
5. Indoor mobile robot monitoring system using RF modem and LabVIEW (2013)
6. Underground Mine Exploring Robots with LabVIEW.(2013)
7. Automatic Grain distribution system.(2014)
8. MEMS Accelerometer based gesture Controlled Robotic ARM.(2014)
9. Web based tracking with GSM and GPS.(2014)
10. Pneumatic piston rod position measurement on PCB drilling systems.(2015)
11. Closed loop control system for pick and place Robotic arm. (2015)

PERSONAL DETAILS

- Name : Dinesh Kumar. U
- Father's Name : Mr. D. Udaya Kumar.
- Date of Birth : 26.10.1987
- Languages known : Tamil, English.
- Address : 1/763, LVB nagar, Kadachanendhal, Madurai – 625107.

DECLARATION

I do hereby declare that the above-mentioned information and particulars are true and correct to the best of my knowledge and believe.

(U.Dinesh Kumar)