VELAMMAL

COLLEGE OF ENGINEERING AND TECHNOLOGY
(AUTONOMOUS)
MADURAI .

KNOW EVERYTHING ABOUT YOUR DEPARTMENT.

so many success stories is about to be told..

WHERE DREAMS TURN INTO REALITY.

Where time passes by, but memories do not stop.

WINDOWS

See through

ATTITUDES AMPLIFIED FAULTS RECTIFIED

YEARLY MAGAZINE
2023-2024 EDITION

ELECTRONICS AND COMMUNICATION ENGINEERING


ELECTRONIC AND COMMUNICATION ENGINEERING ASSOCIATION
ECE
ASSOCIATION
VCET

VELAMMAL

COLLEGE OF ENGINEERING AND TECHNOLOGY
(AUTONOMOUS)
MADURAI

VISION OF THE INSTITUTE:

To emerge and sustain as a center of excellence for technical and managerial education upholding social values.

MISSION OF THE INSTITUTE:

Our aspirants are:

- Imparted with comprehensive, innovative and value – based education.
- Exposed to technical, managerial and soft skill resources with emphasis on research and professionalism.
- Inculcated with the need for a disciplined, happy, married and peaceful life.

GOALS OF THE INSTITUTE:

- Uncompromising regularity and punctuality.
- Academic excellence, depth in subject and general knowledge.
- Suitable placement or higher education or entrepreneurship.
- Curiosity of learning, research and development.
- Proficiency in communication skills.
- Professional values and Social ethics.
- Keeping good health and following good habits.

ABOUT THE DEPARTMENT:

A hearty welcome to the Department of Electronics and Communication Engineering, Velammal College of Engineering and Technology, Madurai. Since its inception in 2007, the Department of ECE has been the front runner in imparting quality technical education to the students. The Department has well qualified and motivated faculty members passionate towards moulding the younger generation. The rich technical ambience, highly enthused faculty members, state of the art laboratories and the able support from the management have made the students perform with distinction in the career pursuit. Moreover, the department of ECE is making huge strides in Research and Development. It has procured funded projects from DRDO, AICTE and DST to the tune of Rs 3.1crores . Students relish the placement in top Mulitinational companies like TCS, CTS, Wipro, Accenture, Aricent, HP, UST Global, Zoho, Athena Healthcare, etc. The department also has a worldwide reach with its vibrant alumni network. Working shoulder with shoulder with the institution, it is constantly aiming towards reaching greater heights to serve the needs of the society and meet the aspirations of the student community.

VISION OF THE DEPARTMENT:

To emerge as a vibrant Centre of repute, moulding students to excel in Electronics and Communication Engineering with ethical responsibility.

MISSION OF THE DEPARTMENT:

To excel in producing competent Electronics and Communication Engineering professionals by:

- Imparting strong theoretical background in the fundamental concepts.
- Providing self-directed learning opportunities to meet a variety of career choices.
- Training students to realize ethical and environmental responsibilities for the betterment of mankind.
- Entailing the students in Research and Development activities.

CHAIRMAN'S MESSAGE

Every young Indian of this great country should dream big! It is not enough if they only dream but they should work hard to make it a reality! We at Velammal College of Engineering and Technology, Madurai, provide the necessary platform to many aspiring youths of this region to become very enterprising Engineers, so that they could provide the right kind of engineering solutions to propel our nation to greater heights! We sincerely believe in imparting quality engineering education laced with deep social values to ensure that every individual who is graduated from our Institution not only become a competent Engineer but also a very responsible citizen! It is high time that we got away from the age old practice of testing "standardized testing" to "creative teaming"! It has been our earnest endeavor to produce such Engineers who could offer very creative solutions! Life would not provide any warranties and guarantees and it provides only possibilities and opportunities! We want all our budding Engineers to remember this and make the best use of them. We are on an incredible journey and we expect every Velammalian to do the right thing, at the right time, the right way and for the right reason!". Please come and join us in our exhilarating journey!

-Shri M.V. Muthuramalingam, Chairman

SENIOR PRINCIPAL'S MESSAGE

VCET has a world class infrastructure and state-of-the-art laboratories. The members of the faculty are highly experienced and committed to provide comprehensive technical education. The systems established in this college ensure that the engineering professionals produced are capable of meeting the global standards. Consistent campus placements and our alumni occupying premier positions in leading organizations worldwide stand testimony to quality of education and processes in this Institution.

-Dr. N. Suresh Kumar, Senior Principal

PRINCIPAL'S MESSAGE

"Branding is the art of becoming knowable, likable and trustable". As per John Jantsch words, VCET is a known, liked and trusted technical Institution in Madurai. VCET has emerged and sustaining as a center of excellence imparting technical and managerial skills to the southern district students of Tamil Nadu inculcating soft skills to brand as a professional Engineer. From its inception in 2007, various accreditations with NAAC, NBA has been achieved. The attracting feature of VCET is its infrastructure and state-of-the-art laboratories. VCET faculty members are highly experienced and committed to provide comprehensive technical education. The systems established in this college ensures that the engineering professionals graduating from VCET are capable of meeting the global standards. Consistent campus placements and our alumni occupying premier positions in the leading organizations worldwide, stand as a testimony to the quality of education imparted in our Institution. I proudly share that, I am a part of VCET and being the Principal of the Institution makes me always creative, analytical and innovative in ideas and implementing the same.

-Dr. P. Alli, Principal

HOD'S MESSAGE

A hearty welcome to the Department of Electronics and Communication Engineering of Velammal College of Engineering and Technology, Madurai. Since its inception from 2007, the department of ECE has been the front runner in imparting quality technical education to the students. The department has well qualified and expeneneed faculty members who are passionate towards moulding the younger generation. The rich technical ambience, highly enthusiastic faculty members, state of the art laboratories, and the able support from the management have made the students perform with distinction in their career pursuit. Moreover, the Department of ECE is making huge strides in Research and Development it has procured funded projects from DRDO, AICTE and DST worth of Rs 3.1 Crores. Students have proved themselves by getting placed in top MNC companies like TCS, CTS ,Wipro, Accenture, Aricent HP, UST Global Zoho, Athena Healthcare, Wells Fargo, etc. The Department has also got a worldwide reach with its vibrant alumus network working in close association with the Institution, the Department constantly aims to reach greater heights inorder to serve the needs of the society and meet the aspirations of the student community.

-Dr.K.Kavitha, Professor & HOD/ ECE, VCET

THE ASSO SQUAD

Dr.K.Kavitha
HOD/ECE

Mr.A.Suban
Asst.Prof/ECE

Ms.A.Alaimahal
Asst.Prof/ECE

UPCOMING EVENTS

Odd semester 2023-2024

25/08/2023
APPOINTMENT OF OFFICE BEARERS

07/09/2023
ECE Association Inauguration

05/09/2023
Teachers Day Celebration

13/09/2023
Literary Events Contest - Essay Writing, JAM, Quiz (II - ECE)

30/09/2023
Circuit Debugging Contest

05/10/2023
Seminar on "Development of Coding for Real Time Applications using Java/Python" by Alumni of ECE Department

13/10/2023
Short Film Contest on theme"Usage of Social Media by Youngsters in a Constructive way"

20/10/2023
VCET-ECE APP Challenge Contest

30/10/2023
Poster Presentation Contest on topic "Signal Processing technique for 5G and beyond"

31/10/2023
Guest Lecture - I

Even semester 2023-2024

22/01/2024
Adzap Contest

31/01/2024
Dr. S. R. Ranganathan Trophy Contest

17/02/2024
Intradepartmental Paper Presentation Contest

26/02/2024
Multimedia Presentation Contest on theme "Boon of IoT/AI

08/03/2024
Tamil Pattimandram

11/03/2024
Hardware Hackathon Contest - II ECE

27/03/2024
Guest Lecture - II

01/04/2024
Hardware Hackathon Contest - III ECE

06/04/2024
ECE Association Valedictory

PROJECT CORNER

LOW-COST INDIGEOUS DIGITAL HEALTH CARE SYSTEM

Problem Identification and Solution offered Around:

Around 12% of newborn infants require assistance during transition after birth. Vital parameters are the most important clinical indicator to evaluate the clinical status of a newborn. One of the major problems in current scenario is that mass of cords connected to a neonate in NICU are most of the times heavier than the neonate itself. Even though these multiple parameters are monitored in NICU, there is no intelligence that draws a correlation between them. Studies have shown that by studying the dependencies of multiple vital parameters analysis can be drawn up to a great extent to predict the neonate's future health conditions. To Design a system with a unique POD and 3 disposable patch variants .The POD contains in-built sensors. To Design a Communication module and battery management system (a long battery life) and to develop an intelligent analysis application that can predict the discharge time and much more using vital parameters.

Objective of the Project:

- To design soft, sensitive and low radiation emitting patches and pods.
- To design a pod for measuring the vital parameters of the neonate.
- To create a platform where the mother can know the current status of her baby.

Project summary

Smart health monitoring and alert system development is a demanding research area today. Most of the currently available monitoring and controlling medical devices are wired which limits freeness of working environment and that causes infections to the neonates . A wireless sensor is the best alternative in such situations. A neonatal intensive care unit is used to take care of sick and premature neonates. Hypothermia is an independent risk factor for neonatal mortality and morbidity. To prevent it, a smart monitoring system is required. In this product, an automated neonatal health monitoring system is designed using sensor mobile cloud computing (SMCC). SMCC is based on WSN and MCC. In the authors' system, temperature sensors, acceleration sensors, heart rate measurement sensors, and ECG sensors are used to monitor body temperature, acceleration due to body movement, heart rate, and electro cardio gram rate of neonates, respectively. The sensor data is stored in the cloud. The health professional continuously monitors and accesses this data via mobile device via an Android neonatal monitoring application.In addition to health professionals, parents can also know the current status of the neonate to avoid their mental stress

When an abnormal situation occurs, an alert is sent to the health professional's mobile device. By alerting health professionals using such an automated system, early care is provided to the affected babies and the probability of recovery is increased.

கிரசெண்ட் ஹேக்கத்தான் போட்டிகள்

WON 1st PLACE AND A PRIZE MONEY OF Rs.1 LAKH IN SMART INDIA HACKATHON (2022)

BY,

SHIVANI SUVATHEKA-III ECE B

AMMU NISHITHA-III ECE A

RAAJA KARTIKEYA-III ECE B

AL MOHAMMED BILAL-III ECE A

VISHAL JONATHAN-III ECE A

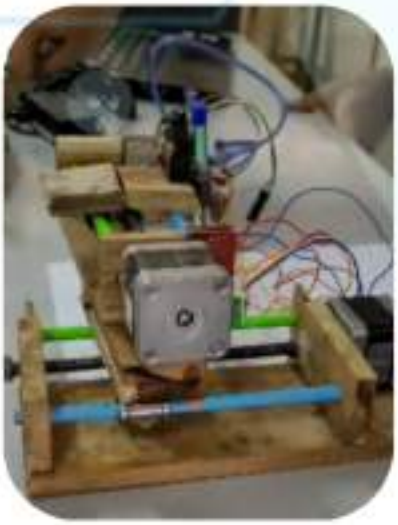
DINESH-III ECE B

CNC DRAWING MACHINE

Abstract:

This abstract provides an overview of a CNC drawing machine, discussing its purpose, operation, and significance. The machine is designed to automate the process of creating intricate drawings using Computer Numerical Control (CNC) technology. The introduction sheds light on the motivation behind the machine's development. The document then delves into the operational aspects of the machine, explaining how it translates digital designs into physical drawings. Finally, the conclusion summarizes the benefits and potential applications of CNC drawing machines in various fields.

Introduction:



The advent of automation and digital technologies has spurred the creation of innovative machines, including CNC drawing machines. These machines combine computer-controlled precision with artistic expression,enabling the creation of complex drawings with unparalleled accuracy and efficiency. This introduction provides context for the development of CNC drawing machines and highlights their potential impact on art, design, and various industries.

Operation:

The operation section details how CNC drawing machines function. These machines interpret digital designs from computer software and translate them into physical drawings on a chosen medium. The process involves a combination of stepper motors, linear guides, and specialized drawing tools that work in harmony to execute precise movements. A central control unit orchestrates these movements based on the digital design, resulting in a faithful representation of the original artwork. This section provides an overview of the components involved and the steps from design input to the finished drawing.

Conclusion:

CNC drawing machines represent a remarkable fusion of artistry and technology. Their ability to transform digital creativity into tangible drawings offers benefits in fields ranging from graphic design and illustration to architectural planning and prototyping. By eliminating manual constraints and introducing a new level of accuracy, CNC drawing machines empower creators to explore intricate designs with newfound freedom. As technology continues to evolve, these machines hold the potential to redefine the artistic and industrial landscape, making precision-driven creativity more accessible than ever before.

BY
TEAM TECH TITANS
N.K.VIJAY-II ECE A
N.SIVAKUMAR-II ECE A
DHANUSH KUMAR-II ECE A
YUVAN SHANKAR RAJA-II ECE A

SMART SHOPPING CART WITH AUTOMATED BILLING SYSTEM

INTRODUCTION:

The system gives solution to reduce the shopping time at supermarkets.This system provides solution to improve the speed of purchasing and faster payment option by using near field communication RFID Technology.

OBJECTIVE:

The billing process at the counter is time consuming and also need more human resource in the billing system.The main objective is to tackle this problem.This solution will increase consumer experience and reduce the shopping time.

EXECUTION:

At present,we are using the process in malls with the help of barcode Scannet.vendor scans the products through the barcode scanner ,this is to be a very slow process and the customer has to wait for long queues.The key objective of the future system is to deliver an expertise concerned with low cost ,easily accessible and an even system for supporting shopping and it will also help to customer by shopping and it will also help to customer not to cross the budget limit.

OPERATION:

When the customer punch the RFID card to RFID Reader ,then it will give a identical number of RFID Card to Arduino via serial Communication .Arduino will get the details of ID from the database ,to show on LCD and it show recent products detail along with the Total cart amount ,as soon as when we press the key placed on it ,it will send the data to the billing counter automatically in offline communication.I f the Controller online communication it will update the final amount in respective page.

PRESENTED BY:

A.B.R.Sree Harniyaa-II ECE B

A.K.Somina-II ECE B

S.Nasreen Firdouse-II ECE B

Battery Thermal management

ABSTRACT:

Conventional fuels operated internal combustion engines are the major sources of carbon emissions and it causes environmental degradation. Electric Vehicles (EVs) offers best efficient and cost-effective solution for the above said issue, if the battery charging done by renewable energy conversion base routes when compared to conventional based route. We include two types of battery one is lithium-ion battery and another one is lead acid battery.

The lithium-ion batteries are widely used for electric vehicles due to high energy density and long cycle life. lithium-ion batteries are the directly impact on performance, reliability, cost and safety of the vehicle. The lead acid battery is a storage device which stores power. Lead acid battery are used in emergency lighting and to power sump pumps in case of power failure. And in this paper, we include some basic types of battery thermal management systems they are,

1. Air cooling
2. Liquid cooling
3. Direct refrigerant cooling
4. Phase change material cooling
5. Thermoelectric cooling
6. Heat pipe cooling

BATTERY THERMAL MANAGEMENT CONCEPT:

Proper thermal management of a project involves understanding the thermal budget and understanding the three strategies employed in managing heat. These strategies are heat spreading, heat movement, and heat dissipation. In addition to this, the three ways that heat is transferred must also be understood. Heat transfer is accomplished by conduction, convection, or radiation.

The electric vehicle market is growing rapidly, and with it the demand for fast charging, increased energy density and improved safety. Hence an efficient battery thermal management system (BTMS) is one of the most necessary technologies for success of the electric vehicles in the long term. Hence, in this review paper, various types of battery thermal management system along with opportunities for advancement are reviewed. In this context, an effective battery thermal management system solution is discussed in this paper.

BY
S V Dharshini-II ECE A
R Alagu Udhayashree-II ECE A
S HemaDharshini-II ECE A

OUTCOME OF MOU SIGNED COMPANIES

COMTEK SCIENTIFIC INSTRUMENTS
-Bangalore

ABSTRACT:

This abstract encapsulates the internship undertaken at Comtek Instrumentations, where a comprehensive exploration of fiber optics spectrometers was conducted. The internship encompassed a dynamic learning environment that provided hands-on experience in the field of optical instrumentation and fiber optics technology. Over the course of the internship, a deep understanding of the principles, applications, and components of fiber optics spectrometers was gained. spectrometers. This experience helped me develop practical skills in optical instrumentation and expand my knowledge in the field."

ABOUT THE COMPANY:

Comtek Instrumentations is a leading innovator in optical instrumentation, specializing in advanced spectrometers with a focus on fiber optics technology. Renowned for precision and quality, the company collaborates across industries to drive applications in environmental monitoring, healthcare, and materials analysis. Their commitment to innovation and partnerships positions them at the forefront of advancing scientific and industrial progress in the field of spectrometry.

KNOWLEDGE GAINED FROM INTERNSHIP:

Internship at Comtek Instrumentations provided Students with a wealth of knowledge that significantly enriched their understanding of optical instrumentation and spectrometers. Through hands-on experience, students gained a comprehensive insight into the intricate process of configuring and calibrating fiber optics spectrometers. also, students learned how to handle optical components, align fiber-optic cables, and troubleshoot technical issues that arise during operation.

OUTCOMES:

The outcome of internship has been highly rewarding. students gained comprehensive skills in

- configuring spectrometers and analyzing data, along with a broader understanding of their applications.
- Additionally, gained valuable soft skills like communication and teamwork. This experience has not only provided technical expertise but also ignited a deeper passion for the field, setting a strong foundation for students future endeavors.

AVIAN AEROSPACE

ABSTRACT

The Avian Aerospace internship in Bangalore offers a unique chance to delve into underwater image processing and drone manufacturing. This project aims to enhance underwater image quality, object recognition, noise reduction, and real-time processing, vital for marine research, environmental monitoring, and autonomous underwater vehicles. Simultaneously, interns gain valuable insights into drone production, enriching their skill set. These efforts are poised to position Avian Aerospace as an industry leader, with the potential to reshape underwater exploration and unmanned aerial operations while fostering interns' professional growth in these dynamic fields.

About the company

Avian Aerospace is a leading aerospace company with a strong focus on cutting-edge aviation and space technologies. Their vision is to become a global leader in aerospace innovation, shaping the future of flight and space exploration while promoting sustainability and responsible global citizenship.

Knowledge gained from Internship

The internship at Avian Aerospace was interesting. It was a hand on experience which enhanced our knowledge in drone assembly and under water image processing. We got our queries clarified in no time which enhanced our ease of work in the project. It was a good experience to work in Avian Aerospace. The class on 3D design and printing gave us a practical experience and knowledge on designing and printing. Overall it was a wonderful experience to boost our theoretical knowledge and implement it practically. The concepts of 2D Ortho mosaic, 3D photogrammetry, and image enhancement have practical applications in several major areas

OUTCOMES

Undertaking an internship at Avian Aerospace in Bangalore promises a wealth of invaluable outcomes that combine hands-on experience with cutting-edge technology and immersive learning in the fields of real-time drone operations and digital image processing. This transformative experience equips interns with the skills and knowledge needed to excel in the dynamic aerospace industry.

VCET STARTUPS

VCET START-UP

OMNIFFICIENT SOLUTIONS

Dr. N. Suresh Kumar
Founder

Dr. K. Kavitha
Founder

Dr. B. Sridevi
Founder

Received a fund of Rs.9.75 Lakh by MSME on a Project titled "Redpal-A Wristwatch Based Assistance For Old Age People

MSME Number : UDYAM-TN-32-0019888

VELAMMAL COLLEGE OF ENGINEERING AND TECHNOLOGY (Autonomous), Madurai

VCET START-UP

VITALSENSE

Mr.V.Karthick
Director

Mr.N.S.Raaja Kartikeya
Director of Operations

Ms.S.Ammu Nishitha
Managing Director

Mr.S.Dinesh
Executive Officer

VISION AND MISSION

"To empower individuals to take control of their health and improve their overall well-being through innovative and accurate health monitoring technology, education and personalized guidance."

OBJECTIVES

- Develop and market cutting-edge health monitoring devices that are accurate, easy-to-use, and affordable.
- Invest in research and development to stay at the forefront of health monitoring technology.

VELAMMAL COLLEGE OF ENGINEERING AND TECHNOLOGY (AUTONOMOUS), MADURAI

VCET START-UP

DIVERSIFIED SOLUTIONS

OBJECTIVES

To Promote Research and Development activities on Signal Processing.
To Provide Services for clients need on capacity, channel estimation, Beam framing, synchronization, MIMO etc technologies.

MISSION

To render global service in signal processing driven by our passion for innovation.

VISION

To be leaders in customer satisfaction, employee-empowerment, and to serve with dignity.

VELAMMAL COLLEGE OF ENGINEERING AND TECHNOLOGY (AUTONOMOUS), MADURAI

Mr.A.SURAN
PRESIDENT & FOUNDER

Mr.M.VIGNESHWARAN
VICE PRESIDENT

Mr.S.S.AATHITHYA NILAVAN
CHIEF EXECUTIVE OFFICER

Mr.M.G.PRASANNA VENKATESH
CHIEF FINANCIAL OFFICER

Mr.S.VASANTH
MANAGING DIRECTOR

Mr.S.HARSHAN
CHIEF R&D OFFICER

VCET START-UP

GREEN HEAL TECHNOLOGIES

VISION AND MISSION

- To make a positive impact on society and the environment.
- To continually innovate and build a strong brand that is well-recognizable and well-regarded by customers.
- To attract and retain customers through excellent customer service and high-quality products andservices.

Mr.T.J.ARWIN PARASU
PRESIDENT

Mr.A.THANASEELAN
CHIEF EXECUTIVE OFFICER

Mr.L.VINOTH KUMAR
ADVISOR(TECHNOLOGY DEVELOPMENT)

OBJECTIVES

- To develop projects based on Embedded systems to aid assistance to clients and provide solutions to the challenges faced by them.
- To ultimately become successful and have a sustainable business that provides values to its customers.

Mr.S.NITHIN NARAYANAN
DIRECTOR OF OPERATIONS

Mr.J.JAGAPRATHABAN
DIRECTOR OF MARKETING

VELAMMAL COLLEGE OF ENGINEERING AND TECHNOLOGY (Autonomous), Madurai

VCET START-UP

NEOFINITY SOLUTIONS

NEOFINITY SOLUTIONS

VISION AND MISSION

- To create unique and innovative Healthcare Solutions in Neonatal Unit
- To develop life saving devices in Neonatal care

Ms.S.Shivani Suvathek
Managing Director

Mr.A.Al Mohamed Bilal
Director of Administration

OBJECTIVES

- To design and develop wearable biomedical devices.

Mr.A.Vishal Jonathan
Director of Operation

Dr.P.Karthikeyan
Advisor-R&D

VELAMMAL COLLEGE OF ENGINEERING AND TECHNOLOGY (AUTONOMOUS), MADURAI

MULTIPLEXING TECHNOLOGIES

VCET START-UP

Velammal College of Engineering and Technology (Autonomous),Madurai

Mr.A.Suban
Founder & Director

Mr.V.Veera Pandi
Chief Executive Officer

Mr.P.Gopinath
Chief Operation Officer

MISSION

To be a strategic partner of global hi-tech product manufacturers for co-creating new generation technology products. Provide innovative and leading-edge technology solutions throughout the product lifecycle.

Mr.B.Surya
Chief Technology Officer

Mr.K.Vishal
Board of Directors

Mr.D.Sathish Kumar
Board of Directors

VISION

To be a reliable Embedded Solutions Partner of leading Global Players in infotainment networking and industrial automation domains

OBJECTIVE

To be a strategic partner of global hi-tech product manufacturers for co-creating new generation Technology product. To provide innovative and leading edge technology solutions throughout the product life cycle.

POETRY

In memories I hold you close,
A friend so dear, the one I chose.
Through laughter, tears, and days gone by, Your presence still stays, though you flied away.
A cherished bond that time won't cleave, In my heart, you'll live forever.
Though you're gone, your spirit's near,
In whispered echoes that I hear.
The stars above, they shine so bright,
Guiding me through the darkest night.
Though you're in a world beyond my view, Our friendship stays strong, forever true.
So this is to you, my dearest friend,
Your memory I'll never bend. In my thoughts, you'll always stay,
As my journey on, day by day.

- R.Ramya-III ECE A

Solitude!!
Time to reflect, and
Time to strengthen as well;
Time to learn, and
Time to find faults as well;
Time to cherish, and
Time to forget as well;
Time for joy and
Time for grief as well;
And Time at which,
I mean a lot to myself!!

-Samyuktaa.V
II ECE A

மகளே
மறுஉயிரே....!!!
நான்
இன்றில்லையென்றாலும்
என்றும் நானாய் ஒளிரும்
புது மலரே...!!!
வானத்திலிருந்து
இறங்கிவர ஆசைதான் உன்
தந்தைக்கு....!!!
விதியின் பிடியில் திரும்ப
இயலா பயணம் வழி
தெரியவில்லையடி
என் சின்ன ராணியே...!!!
விழிகலங்குதடி என் இளைய
வானியே..!!!
உனதாசை நிறைவேற்றும்
முன்
எனதாயுள் பறித்தான்
இறைவன்..!!!
எனதாசை அதை கேட்கும்
முன் முந்திக்கொண்டான
காலனெனும் சண்டாலன்
என்னை நினைத்து
கலங்காதே
உன் எதிர்காலம் நினைத்து
வருந்தாதே நினைத்தவை
நடக்கும் கனவுகள் பலிக்கும்
காலங்கள் ஜொலிக்கும்...!!!
அன்பு மகளே..!!
உன் சாதனை பயணம் தூரம்
அதிகம் அதில்
துயரங்களும் சரிசமம் நீ
சாதிப்பாய்
சாதனை உனை அழைக்கும்
இறைவன் அருள்வான
உன் தந்தையும் உடன்
வருவேன்...!!!
என் தாயே!!!
என்றும் அழகாய் சிரித்திட
இமயம் வரையில்
சென்றிட
விழியறியா உருவமாய்
உன்னுடன் என்றும்
இருப்பேன் ஏக்கத்தோடு...

-நிவாஸ்.வ
II ECE B

என் பாதத்தை தன் மார்பில் தாங்கி தன்
வியர்வை துளிகள் என் மேல் உதிர என்
கன்னத்தில் முத்தம் வைத்த அன்புள்ள ஆசான்
அப்பா

-ப.பரத்குமார்
II ECE B

PICTURE GALLERY

Alagu Udhayashree R
II ECE A

Nivash V
II ECE B

MadanaGopal M
II ECE A

Deepak A U
II ECE A

Ramya R
III ECE A

Harini T P
III ECE A

Sivakumar N
II ECE A

Karthik
II ECE A

Jegan Bala S
II ECE A

ART GALLERY

M.Saffrin
II ECE A

R.Harini
II ECE A

T.P.HARINI
III ECE A

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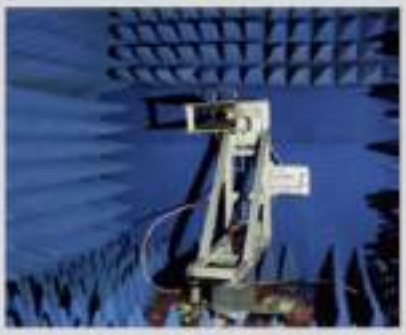

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VLSI IMPLEMENTATION OF DSP ALGORITHMS USING VEDIC MATHEMATICS

Digital Signal Processing (DSP) has become an integral part of various technological domains, ranging from communication systems to multimedia applications. The efficient execution of DSP algorithms demands high-speed processing, low power consumption, and compact hardware architectures. In recent years, Vedic Mathematics (VM) techniques have garnered attention for their potential to expedite mathematical computations and offer novel perspectives on algorithmic optimizations. This research proposes the VLSI implementation of DSP algorithms using Vedic Mathematics principles to achieve enhanced performance metrics.

The objective of this study is to explore the synergy between DSP algorithms and Vedic Mathematics techniques in the realm of Very Large Scale Integration (VLSI). By leveraging the multi-digit multiplication, division, and other arithmetic techniques provided by Vedic Mathematics, the research aims to design and implement VLSI architectures that accelerate the execution of DSP algorithms while maintaining or improving power efficiency.

The research methodology involves the following steps:

- ***Selection of DSP algorithms: Several commonly used DSP algorithms will be chosen as representative examples, such as Fast Fourier Transform (FFT), Discrete Cosine Transform (DCT), and digital filtering.***
- ***Identification of VM techniques: Relevant Vedic Mathematics techniques will be identified and adapted to the selected DSP algorithms, aiming to exploit their mathematical properties for faster computation.***
- ***Architecture design: VLSI architectures will be designed based on the adapted DSP algorithms and Vedic Mathematics techniques. Special attention will be given to parallelism, data flow, and resource optimization.***
- ***Hardware implementation: The proposed VLSI architectures will be realized on FPGA or ASIC platforms, taking into account the specifics of digital circuit design and layout considerations.***
- ***Performance evaluation: The implemented architectures will be benchmarked against conventional DSP implementations in terms of speed, power consumption, and area utilization.***
- ***Comparative analysis: A comprehensive analysis will be conducted to compare the proposed Vedic Mathematics-based VLSI implementations with traditional DSP implementations and other optimization approaches.***

The anticipated outcome of this research is twofold: firstly, the development of VLSI architectures that showcase the advantages of using Vedic Mathematics techniques in DSP algorithm acceleration, and secondly, insights into the applicability of Vedic Mathematics across diverse mathematical and computational domains. The findings could potentially lead to a paradigm shift in DSP algorithm design methodologies, opening new avenues for efficient, high-speed, and power-conscious signal processing systems.

-Mr.R.Karthi kumar,
Asst.Prof/ECE

Chandrayaan-3, India's Moon Lander and Rover

Highlights:

- ***Chandrayaan-3 is a Moon lander and rover mission by India's space agency ISRO.***
- ***The spacecraft launched on July 14, 2023 and touched down in the Moon's south polar region on August 23, 2023.***
- ***The Chandrayaan-3 lander and rover are equipped with science instruments designed to deepen our understanding of the Moon.***
- ***Chandrayaan-3 is the third Moon mission by India's space agency ISRO. The goal is to place a lander and rover on the lunar surface and operate them for roughly one lunar day, or 14 Earth days. The small rover, which weighs just 26 kilograms (57 pounds), flew to the Moon inside the lander. Both vehicles are equipped with science instruments to study the surface.***
- ***Chandrayaan-3 completed a soft landing in the Moon's south polar region on August 23, 2023.***

by:
Ms.A.Alaimahal,
Asst.Prof/ECE

ALUMNI

CORNER

Being passionate towards communication field from childhood, I decided to pursue my UG in Electronics and Communication Engineering Department from VCET. Department faculty members supported and helped me in all aspects, which really helped me to explore beyond textual. In simple words we can say Department of ECE has well wisher and supporter as a HOD, Mentor and ever caring person as a class incharge, career advisor as a placement incharge, collective wisdom as a faculty members and technical assist as lab incharges and supporting faculties. Department of ECE provided me a healthy environment to carry out my inter department collaborative research in areas like Networking, VLSI Design, Internet of Things, Robotics, etc. Because of the above reason I was able to attain conceptual knowledge in our technical domain and able to pursue my career in networking domain as a System Engineer in Tata Consultancy Services who associates with Ericsson R&D as a client for 5G communication .

-RAJENDRA PRASAD T,
SYSTEM ENGINEER,
TATA CONSULTANCY
SERVICE.

I'm Muthumari from 2018-2022 (Online-Offline) batch student! I must thank to my dad because he only suggested me to choose Engg with stream ECE. I scold him always why you told me to choose ECE. Now, I thanked him for chosen the best Department! Electronics and Communication are the two most happening entities of modern technology. The demand for both of these has remained quite high in the last few years and is expected to reach the apex within another ten years. We can also show the flexibility of choosing software field over hardware field. Being an ECE student, I have seen proper and well-equipped laboratories, workshops, projects, and industrial visits and various activities are established in my ECE Department. With these all activities have helped me a lot to achieve my placement in various companies. I would like to thank ECE department for helping me to become what I am today. The faculty (I can proudly say as my friends) encouraged me all the time from starting day to the end. I have improved my Personal and Professional skills such as self-confidence, strong communication and leadership skills. I can still remember those lab days and class days our notes were flying in the air and also we got experience in catching notes! With our lectures notes, We easily cracked our technical part in placement and got good marks in labortary VIVA. I have missed 2 years of my engg life because of covid! I wish I could go back to missed 2 years by any time machine! Jokes Apart, ECE is surely a beneficial stream for engineering aspirants.

-MUTHUMARI B
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