



VIGNAN'S INSTITUTE OF MANAGEMENT AND TECHNOLOGY FOR WOMEN

TECHINNOVATION

NEWS LETTER

JUL - SEP, 2020

DEPT. OF ECE

VOLUME NO.: 17

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 90. The strength was enhanced to 120 during 2010. The Department had added Post graduate programme in VLSI during the year 2011 and Embedded Systems during 2014 with an intake of 18 each.

The Department has state-of-art laboratories equipped with advanced and well maintained equipment, continuously updated application software packages, more than adequate computing systems with 24x7, 30 MBPS internet facility.

Department 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.

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

Program Educational Objectives

- 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 to 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 the students to work in teams, take independent decisions, and integrate engineering issues for a successful career in a multi-disciplinary environment.
- PEO4: To promote entrepreneurship among the students to become successful entrepreneurs with professional ethics.

Program Educational Objectives

A graduate of the Electronics and Communication Engineering Program will be able to

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.

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

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

Program Outcomes (Adapted from NBA)

Engineering Graduates will be able to:

Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

Problem Analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

Design/Development of Solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

Conduct Investigations of Complex Problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

Modern Tool Usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

The Engineer and Society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

Environment and Sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

Project Management and Finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

Life-long Learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

WOMEN EMPOWERMENT

Women Empowerment held in JULY 2020 to empower women with all their rights like males in family, society, school, college, and country. It allows them to make independent decisions for their personal development; Indian women's position is backward due to gender inequality. They shouldn't be considered the weak gender because they make up half the country's population; they're half its strength.



TEACHER'S DAY CELEBRATIONS

On September 5, 2020, the ECE Department celebrated Teacher's Day with great zeal. It is a day when teachers deserve to be honored for their tireless efforts in shaping the nation's future. The department celebrated this milestone with zeal.

INDEPENDENCE DAY CELEBRATIONS

The Vignan Institute of Management and Technology for Women will host an Independence Day celebration on August 15, 2020. On the university campus the significance of the Indian constitution and the four principles of justice, liberty, equality, and fraternity enshrined in the Indian constitution's preamble. Due to the pandemic situation, students can only attend in virtual mode.

ENGINEER'S DAY CELEBRATIONS

Every year, September 15th is designated as Engineer's Day in India. Students and faculty gathered in the auditorium to watch ECE Department Head Mr. Vijay Kumar R Urkude cut the cake to begin the celebrations. The youngsters performed awe-inspiring dance, singing, and ramp-walking routines. Dr. G. Apparao Naidu, the school's acclaimed principal, gave a stirring speech that inspired the kids.



NATURE AWARENESS PROGRAMME

129 students engaged in an online nature program on September 12, 2020. Life's inner stirrings, fears, and struggles rarely settle down. Maybe a waterfall, tree frog, or pine forest smell breaks the silence. In nature, we transition from consuming technology and doing great things to simply being.

Slowing down into nature's rhythm, which is part of us, helps us learn to listen to it with our whole being.

In our fast-paced society, being in nature brings many of us "home" and to a place of ease. Some of us have lost this connection and now fear nature. Jon Young, a naturalist and youth educator, teaches students about "nature insufficiency," which results from a post-industrial era of building, development, resource extraction, and technology.

FACULTY ACHIEVEMENTS



FACULTY ARTICLE

The article “**DESIGN AND IMPLEMENTATION OF FIR FILTER USING FPGA**” is written by Mr. J. SUNIL KUMAR, as a Assistant Professor.

ABSTRACT: FIR filter (Finite impulse response) – The finite impulse response filter is the most basic components in digital signal processing systems and are widely used in Communications , image processing and pattern recognition. Based on FPGA (editable logic device). In Digital signal processing, Filter is used almost in all devices. Filters are used to extract the useful part from the input signal and the required part of the signal is reached to the receiver. For linear characteristics devices, FIR filter is used which is nothing but a combination of multiplier and adder . In this project, FIR filter has been designed by using Vedic multiplier and CLA adder.

CONCLUSION: A FIR filter has been designed by using Vedic multiplier, which is working on the concept of crosswise multiplication. Proposed FIR filter has been designed by using behavioral modeling. Synthesis of proposed work has been done successfully. Proposed MAC unit can work for n number of bits. For this project, synthesis has been done for 32-bit. MAC unit.

PUBLICATIONS (2019-20)

S.NO.	AUTHOR(S)	JOURNAL NAME	TITLE OF THE PAPER	ISSN NUMBER
1.	MR. P. HARIKRISHNA & DR. SHAIK JAKEER HUSSAIN	TRAITEMENT DU SIGNAL	AN IMPROVED R-PEAKS MARKING METHOD USING FOURIER DECOMPOSITION AND TEAGER ENERGY OPERATOR	ISSN: 0765-0019
2.	MR. P. HARIKRISHNA & DR. SHAIK JAKEER HUSSAIN	JOURNAL OF COMPUTATIONAL & THEORETICAL NANOSCIENCE	CIRCULANT MATRIX-BASED CONTINUOUS WAVELET TRANSFORM FOR ACHIEVING LOW COMPLEXITY ELECTROCARDIOGRAM FEATURE EXTRACTION IN HEALTH MONITORING APPLICATIONS	ISSN: 0765-0019
3.	MR. J. SUNILKUMAR ET. AL.,	IJMECE	DESIGN AND IMPLEMENTATION OF FIR FILTER USING FPGA	ISSN: 2249-7455
4.	MR. J. SUNILKUMAR	IJMECE	A NOVEL APPROACH TO DESIGN AND IMPLEMENTATION OF N-BIT LFSR	ISSN: 2249-7455

FACULTY DEVELOPMENT PROGRAMMES

S.NO.	NAME OF THE FACULTY	DESIGNATION	TITLE OF THE PROGRAMME	DURATION
1.	MR. VIJAY KUMAR R URKUDE	ASSOCIATE PROFESSOR	CYBER SECURITY	22 JULY 2020 TO 26 JULY 2020

FACULTY ARTICLE

The article “**CONTROL OF WIRELESS POWER TRANSFER SYSTEM FOR DYNAMIC CHARGING OF ELECTRIC VEHICLE**” is written by Mrs. G. SWATHI, as a Assistant Professor.

ABSTRACT: In order to limit the production of pollutant gases, the transportation sector, Both public and private, has turned its attention to Electric Vehicles (Evs). The most important barrier to commercializing and spreading EVs are the Issues regarding the battery. The batteries are heavy, bulky, expensive, and Have a limited lifetime. Furthermore, frequent charging and limited operating Range due to the low energy density are other obstacles to developing Evs worldwide. Dynamic Wireless Power Transfer (WPT) is a possible solution In order to solve the problems related to the battery.



CONCLUSION: The application of WPT for charging an EV during movement is a feasible solution for solving the limited driving range of EVs. Starting two decades ago, many wireless charging solutions have been presented in the literature, and some of them have been developed practically for various transportation applications. However, there are still several critical issues, especially regarding the control of the charging process during the movement of the vehicle.



STUDENT ARTICLE

The Article “**TIME-VARYING FORMATION CONTROL FOR UNMANNED AERIAL VEHICLES**” is Written By MANDALA SUPRIYA, Roll Num: 16UP1A0472

ABSTRACT: Formation control analysis and design problems for unmanned aerial vehicle (UAV) swarm systems to achieve time-varying formations are investigated. To achieve predefined time-varying formations, formation protocols are presented for UAV swarm systems first, where the velocities of UAVs can be different when achieving formations. Then, consensus-based approaches are applied to deal with the time-varying formation control problems for UAV swarm systems.

STUDENT ACTIVITIES & ACHIEVEMENTS

PAPER PRESENTATION

S.NO.	NAME OF THE STUDENT	ROLL NUMBER	BRANCH	ACADEMIC YEAR	EVENT	HOST
1.	SHYAM REDDY VARSHA	17UP1A0489	II ECE	2019-20	CULTURAL	VBIT
2.	S AMRUTHA VARSHINI	17UP1A0494	II ECE	2019-20	CULTURAL	VBIT
3.	MAMILLAPALLY MOUNIKA	17UP1A0474	II ECE	2019-20	CULTURAL	VBIT
4.	KONDURU HARSHITHA	17UP1A0469	II ECE	2019-20	CULTURAL	VBIT
5.	MADDIRALA VASAVI	17UP1A0472	II ECE	2019-20	CULTURAL	VBIT

TOP RANKERS

S.NO.	NAME OF THE STUDENT	ROLL NUMBER	BRANCH	ACADEMIC YEAR	% OF MARKS	RANK (INSTITUTE)
1.	KULSUM KHKNAM NAYYAR	17UP1A0420	ECE	2020-21	76.35	FIRST
2.	MAMILLAPALLY MOUNIKA	17UP1A0474	ECE	2020-21	76.04	SECOND

CAMPUS RECRUITMENT

S.NO.	COMPANY'S NAME	ON/OFF CAMPUS	BRANCH	OFFERS	PACKAGE	ROLE
1.	BYJUS	ON	ECE	1	10.0 LPA	BDE
2.	HCL	ON	ECE	6	3.5 LPA	SOFTWARE DEVELOPER
3.	POPCORN APPS	ON	ECE	1	2.2 LPA	SOFTWARE DEVELOPER
4.	QSPIDER	ON	ECE	25	CSR	TRAINEE



ORIENTATION DAY CELEBRATIONS 2020

The festivities commemorating Orientation Day took place on September 20th, 2020 at Vignan's Institute of Management and Technology for Women.