NEW HORIZON COLLEGE OF ENGINEERING
AUTONOMOUS COLLEGE Permanently Affiliated to VTU, Approved by AICTE & UGC
Accredited by NAAC with 'A' Grade

The Connect

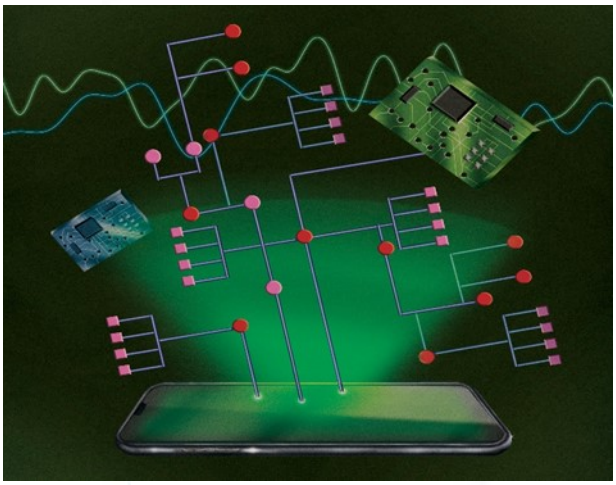
DEPARTMENT OF ELECTRONICS AND COMMUNICATION

Issue 11,July 2020

Tiny AI

We can now run powerful AI algorithms on our phones.

AI has a problem: in the quest to build more powerful algorithms, researchers are using ever greater amounts of data and computing power, and relying on centralized cloud services. This not only generates alarming amounts of carbon emissions but also limits the speed and privacy of AI applications.



But a countertrend of tiny AI is changing that. Tech giants and academic researchers are working on new algorithms to shrink existing deep-learning models without losing their capabilities. Meanwhile, an emerging generation of specialized AI chips promises to pack more computational power into tighter physical spaces, and train and run AI on far less energy.

These advances are just starting to become available to consumers. Last May, Google announced that it can now run Google Assistant on users' phones without sending requests to a remote server. As of iOS 13, Apple runs Siri's speech recognition capabilities and its QuickType keyboard locally on the iPhone.

IBM and Amazon now also offer developer platforms for making and deploying tiny AI.

All this could bring about many benefits. Existing services like voice assistants, autocorrect, and digital cameras will get better and faster without having to ping the cloud every time they need access to a deep-learning model. Tiny AI will also make new applications possible, like mobile-based medical-image analysis or self-driving cars with faster reaction times. Finally, localized AI is better for privacy, since your data no longer needs to leave your device to improve a service or a feature.

Inside this issue:

INDUSTRIAL VISIT
(COORDINATORS : Prof. Jayanthi, Prof. Puvirajan)

Date	Place of Visit	Semester
24-01-2020	Karnataka Hybrid Micro Devices Ltd, Bangalore	VI
20-02-2020	Master Control Facility, Hassan	VI,VIII
29-02-2020	Indian Institute of science , Bangalore	IV
04-03-2020	U R Rao Satellite Centre, Bangalore	IV

KHMD

MCF, HASSAN

IISC, BANGALORE

U R RAO SATELLITE CENTRE, BANGALORE

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STUDENT ACHEIVEMENTS

MOHAMED GHASSAN AND DEVASRUTA OF VI DEMESTER HAVE WON IN "HACKBOUT" IN NITTE MEENAKSHI INSTITUTE OF TECHNOLOGY

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STUDENT ACHEIVEMENTS

UNISEC INDIA

www.unisec-india.in

National Design and Research Forum

In Association with

University Space Engineering Consortium (UNISEC)-INDIA

08 February 2020 at Jeppiaar Institute of Technology, Sriperumpudur, Chennai, Tamilnadu, INDIA

International CanSat Workshop: Space Quest and Launching of CanSats

Young Research Engineer Award

Presented to

Ms. ATHIRA. A.K

New Horizon College of Engineering
Bangalore - 560013
INDIA

For carrying out vibrant activities related to Small Satellites, involving Students and Academic Institutions under the banner of UNISEC India in the areas of NanoSats, CanSats and CubeSats

Prof. R.M. Vasagam
Chairman, National Advisory and Awards Committee, UNISEC India
Padma Shri Awardee

Dr. K. Gopalakrishnan
Secretary General
UNISEC India

Dr. V. Dillibabu
Director
NDRF

Dr. M. Annadurai
Chairman, NDRF
Vice President, TANSCST
Padma Shri Awardee

NDRF/2020/011

ATHIRA REVEIVES "YOUNG RESEARCH ENGINEER AWARD" BY NATIONAL DESIGN AND RESEARCH FORUM AND UNISEC-INDIA

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FACULTY ACHEIVEMENTS

DR. NISHA RECEIVING THE BEST RESEARCHER AWARD FROM IEEE BANGALORE SECTION CHAIR (2020)- MR.PUNEETH MISHRA, SCIENTIST -ISRO

DR. NAVEEN GOWDA AWARDED WITH DOCTORATE DEGREE IN UNDERWATER COMMUNICATION AND EMBEDDED SYSTEM DESIGN

GUEST LECTURES

(COORDINATORS : Prof. Divya Sharma, Prof Tessy Tommy)

Date	Resource person	Title	Semester
3-02-2020	Mr. Galphade Prafulla	FPGA	IV
15-02-2020	Mr. Praveen Kumar	Arm Programming on Android Devices	VI
20-02-2020	Mr. Jyotirmoy Koner	Microwave Active & Passive Devices	VI

WEBINARS

(COORDINATORS : Prof. MOHANKUMAR NAIK)

Date	Resource person	Title	Semester
25-04-2020	FAME Technologies, Bangalore.	Developing Resilience, How to bounce back challenges and changes	VI
16-05-2020	FAME Technologies, Bangalore.	Cracking the code of career development, Unlocking the Potential Talent.	VI/VIII
30-05-2020	Mr. Renjith C V Electrical Architect product Designer Philips India Ltd, Pune	Career options and opportunities for Electronics and Communication Engineering Graduates	VIII

WORKSHOP

(COORDINATORS : Prof. Piruthiviraj, Prof Rajesh)

Date	Resource person	Title	Semester
16-06-2020	Mr. Rakshith Senior Application Engineer CoreEL Technologies Bangalore	Introduction to MATLAB and SIMULINK	VI

TECHNOLOGY SHARING CLUB

(COORDINATORS : Prof. Divya Sharma , Prof. Neethu Johny)

What we're about:

We as a club will provide the right platform to develop your thoughts to innovations which will suffice the need of the hour. Also gives you sorted insight on technology be it former or newfound. An open forum will also be provided for discussions. Lack of Knowledge often leads to mishaps, here at our club we aim to prevent any such mishaps by enhancing your knowledge through fun-learning. We will also provide adequate opportunities for you to share technical thoughts and technical symposiums.

Objective:

To provide insight into existing and evolving technology and product

ROLE	NAME
President	Prajwal
Vice-president	Mohammad Ghassan
Secretary	ParithoshVema
Treasurer	Harsh Srivastava
Committee Member	AnjuGopinath
Committee Member	Preshika
Committee Member	Shiva
Committee Member	Shakthi A
Committee Member	Aathira V
Committee Member	Bharath M
Committee Member	Kiran

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TECHNOLOGY SHARING CLUB

Event	Date	Description
Brain Games 2.0	27-02-2020	Brain games are something that you do for fun, and is like going out to play. Examples of brain games are things like Sudoku, crossword puzzles, quizzes, and word problems. Brain training, on the other hand, is more like going to the gym. It's a system of exercising the brain to improve aspects of cognition like memory, attention, focus, and brain speed. Posit Science's BrainHQ exercises are a good example of brain training. IT HAD THREE ROUNDS : • Technical quiz • Debug and decode • Teknovation

BRAIN GAMES 2.0

ELECTRONICS HOBBY CLUB

(COORDINATORS : Prof. Rajesh , Prof. Richard Lincoln Paulraj)

What we're about:

The goal of this club is to implement and demonstrate electronics-based hobby projects and products. By motivating the enthusiasts in trying out the avenues of hardware and software domains of the electronics and communication, this club is aimed at enriching the intelligence as well as wisdom of the technical community.

The Club aims to cater to the various needs to keep in pace with the ever evolving field of electronics Innovation, Imagination and Application is the motto of the club. We aim to provide a platform for the students to showcase their innovative ideas. The Club deals from basics of electronics till the latest developments The Ideas learnt in theory classes can be applied in the real world.

Objective:

To implement and demonstrate electronics-based hobby projects and products to enable students to have hands on experience on current technologies.

ROLE	NAME
President	Yaseer faiz ahmed
Vice-president	jerin
Secretary	Sushma
Treasurer	Kishan kumar
Committee Member	Manoj
Committee Member	Bharath
Committee Member	Srinidhi
Committee Member	Suraj
Committee Member	Sanskruth
Committee Member	Varun
Committee Member	Rohit
Committee Member	Akash

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ELECTRONICS HOBBY CLUB

Event	Date	Description
A & D Circuit Analysis	06-03-2020	• The workshop's aim was to enlighten the basic circuits and concepts which students will never learn from theory classes and labs. • The workshop was very hands-on where participants made their own circuits once the concept was explained to them. • These concepts were helpful for them even for their future understandings and as well as for their up-coming projects. • Students learnt about various electronic devices and IC's used and also had the opportunity to explore their functionalities.

A & D CIRCUIT ANALYSIS

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Vision

To create high quality engineering professionals who can serve the society and earn global recognition.

Mission

- To build strong foundation in Electronics and Communication Engineering aspects by exposing students to state of the art technology and research.
- To strengthen the curriculum through interaction with industry experts to equip the students with the required competency.
- To mould students to share technical knowledge and to practice professional and moral values.

Program Educational Objectives

PEO 1: To produce graduates with understanding of fundamentals and applications of Electronics and Communication Engineering.

PEO 2: To hone graduates with ability to apply, analyze, design and develop electronic systems.

PEO 3: To enhance graduates with latest technologies to enable them to engineer products for real world problems.

PEO 4: To build leadership qualities, management skills, communication skills, moral values, team spirit and lifelong learning ability for the graduates.

PROGRAM OUTCOMES

B. E graduate should possess the following Program Outcomes-

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

Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems in Electronics and Communication Engineering 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 of Electronics and Communication Engineering 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 in Electronics and Communication Engineering, 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 in Electronics and Communication Engineering 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 in Electronics and Communication Engineering.

Environment and sustainability: Understand the impact of the professional engineering solutions of Electronics and Communication Engineering 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 en*gage in independent and life-long learning in the broadest context of technological change.*

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

PROGRAM SPECIFIC OUTCOMES

Program Specific Outcomes	
PSO1	To demonstrate the ability to design and develop complex systems in the areas of next generation Communication Systems, IoT based Embedded Systems, Advanced Signal and Image Processing, latest Semiconductor technologies, RF and Power Systems
PSO2	To demonstrate the ability to solve complex Electronics and Communication Engineering problems using latest hardware and software tools along with analytical skills to contribute to useful, frugal and eco-friendly solutions.

DEPARTMENT OF ELECTRONICS AND COMMUNICATION

New Horizon College of Engineering
New Horizon Knowledge park,
Ring Road Marathalli

http://newhorizonindia.edu/nhengineering/department-of-electronics-and-communication-engineering/

Today the world has shrunk and the global village is marching towards technological revolution predominantly due to innovations in the field of Electronics and Communication. The field of Electronics and Communication opens the doors to a myriad of opportunities and exciting challenges for the go-getters.

The department of electronics & communication engineering is accredited by the National Board of Accreditation (NBA). The vision of the department is to create high quality engineering professionals who can transform society and earn global recognition.

The department is bestowed with well designed and well maintained infrastructure. It is well equipped with interactive classrooms and laboratories with latest equipment for students to experiment and state of the art facilities. The department also offers the VTU research centre for Ph.D. and M.Sc. (Engg.), for research.

Dr. Sanjeev Sharma
Professor & Head

The enthusiastic teaching fraternity of the department besides being highly qualified, have the acumen to instil in students the urge to do better and bring out the best in them. Most of them have considerable experience in academics and research as. Few of them have industrial experience as well.

The Electronics & Communication Engineering Program with its autonomous status is re-designed to cater to the needs of industry. The courses focus on intriguing areas like Embedded Systems, Communication, VLSI, Signal Processing, and Information technologies. Industry-relevant technology courses are a feather on the cap in the department.To run the same technology experts from reputed organization like IBM, HP, Texas Instruments, Sankalp Semiconductors, Audience Communication, Intel, ISRO, IISc. and other reputed institutes visit the department. The interaction of students with the experts gives them a niche over their peers in a world where technological growth and development is fast pacing and prepares them to chalk out solutions for the real world problems. To keep them updated on the technological scale, various workshops, seminars, competitive events, conferences and industrial visits are also organized on a regular basis.

To give them practical exposure and develop their technical and interpersonal skills the students of ECE department are required to execute various projects throughout their studies. Also they're motivated to publish research papers, and participate in national and international conferences as well. They take the lead in planning and executing various activities through Electronics Hobby Club, Technology Sharing Club, and Professional Connect club which definitely gives them an enthralling experience.

Furthermore the students also undergo special placement training through value added programs. Most of them get placed in reputed organizations such as Intel, Texas Instruments, AMD, Qualcomm, ARM, Schneider Electric, Bosch, Cisco Systems, Juniper Networks, Vmware, Sony, Nokia, Accenture, Cap Gemini, IBM, HP, TCS, Infosys, Wipro, Mindtree and many more. Some students pursue higher studies in Indian and foreign universities, while there are quite a few of them who start their own ventures thereby contributing immensely in the growth of our society.

As the famous quote goes "All work and no play makes Jack a dull boy. Students also engage themselves in cultural, sports and social activities. Many have taken it one step ahead and won gold medals and several trophies in sports and cultural events organized at different levels and several other institutions.

Overall, the department provides a very positive and nurturing environment, for students to develop and grow into into knowledgeable, skilled and productive Electronics & Communication Engineers.