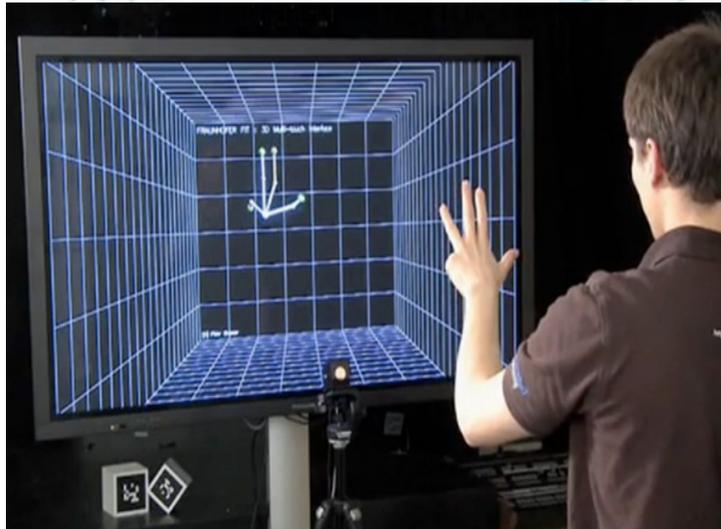# NEW HORIZON COLLEGE OF ENGINEERING

The Connect

DEPARTMENT OF ELECTRONICS AND COMMUNICATION

Issue 12,Feb 2021

Touchless Touchscreen Technology

Touch screen displays are ubiquitous worldwide.Frequent touching a touchscreen display with a pointing device such as a finger can result in the gradual desensitization of the touchscreen to input and can ultimately lead to failure of the touchscreen. To avoid this a simple user interface for Touchless control of electrically operated equipment is being developed. EllipticLabs innovative technology lets you control your gadgets like Computers, MP3 players or mobile phones without touching them. A simple user interface for Touchless control of electrically operated equipment. Unlike other systems which depend on distance to the sensor or sensor selection this system depends on hand and or finger motions, a hand wave in a certain direction, or a flick of the hand in one area, or holding the hand in one area or pointing with one finger for example. The device is based on optical pattern recognition using a solid state optical

Everybody loves a touch screen and when you get a gadget with touch screen the experience is really exhilarating. When the I-phone was introduced, everyone felt the same.But gradually, the exhilaration started fading. While using the phone with the finger tip or with the stylus the screen started getting lots of finger prints and scratches. When we use a screen protector; still dirty marks over such beautiful glossy screen is a strict no-no. Same thing happens with I-pod touch. . Most of the time we have to wipe the screen to get a better unobtrusive view of the screen.

Rakesh M, V Sem

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STUDENT ACHEIVEMENTS

NEW HORIZON
COLLEGE OF ENGINEERING

Congratulations

FOR GETTING PLACED IN

JSOL CORPORATION

JAPAN

CTC: 23.5 Lacs
Per Annum

Stanislaus Lasrado
BE(ECE)

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STUDENT ACHEIVEMENTS

NEW HORIZON COLLEGE OF ENGINEERING

Congratulations on your Placement

2020-21 Batch

INTELLIGENT SCIENCE

JAPAN

Shophy Tyagi
BE – ISE

Jayadeep G P
BE – ECE

CTC – 21.00 LPA

WE ARE PROUD OF YOU

NEW HORIZON COLLEGE OF ENGINEERING

MOMENT OF GLORY

PLACED

RIYA RAKESH
BE, BATCH'21

CONGRATULATIONS FOR GETTING PLACED IN
CISCO SYSTEMS INDIA PVT. LTD

CISCO

nhce.official   newhorizonindia.edu

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FACULTY ACHEIVEMENTS

5KW SOLAR PV PANELS INSTALLED ON THE ROOFTOP OF NETAJI SUBHAS CHANDRA BOSE BLOCK, NEW HORIZON COLLEGE OF ENGINEERING, BANGALORE
(By DR. NISHA and Team)

DR. RAJESH AWARDED WITH DOCTORATE DEGREE IN MEDICAL IMAGE PROCESSING

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FACULTY ACHEIVEMENTS

DR. M JAYANTHI AWARDED WITH "BEST PROJECT OF THE YEAR" FROM KSCST

DR. ARAVINDA K AWARDED WITH DOCTORATE DEGREE IN VLSI CIRCUIT DESIGN AND VERIFICATION

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

Date	Resource person	Title	Semester
6-10-20	Mr. Ram Kumar	VLSI Design	V
10-11-20	Mr. Praveen Kumar	8051 programming	V
14-12-20	Mr. Tejas Dunakhe	Artificial Intelligence in Robotics	VII
21-12-20	Mr.Prafulla Galphade	Finite State Machine	III
22-12-20	Mr. Kundana Lal	Rise of Artificial intelligence and its impact on social and economic fabric	V
24-12-20	Mr. Manas Guptha	Innovations in AI and ML	VII
29-12-20	Ms. Soumya Agarwal	Chaotic Images	VII

WORKSHOP
(COORDINATORS : Prof. Piruthiviraj)

Date	Resource person	Title	Semester
23-10-2020	Mr. Ganesh Attarde, Founder GB Softronics Solutions Bangalore	Online Workshop on Python : Introduction and Beyond	V
18-11-2020	Mr. Kotresh M Director, Indian Tech Keys Bangalore	Online Workshop on Implementation of Embedded Systems & IoT for Product Development	VII
28-11-2020	Mr. Praveen Kumar Founder - Ekagga Technology, Bangalore	Online Workshop on Overview of IOT and Necessity of MQTT Protocol	V
12-12-2020	Mr. Parinay Lavatre Consultant MeeChip Technology Private Limited, Bangalore.	Online Workshop on Elecronic Circuits and Identification of Components	III

WEBINARS
(COORDINATORS : DR. GURULAKSHMI, DR DHIVYA M. DR. RAJESH G, MR. RICHARD , MS.LIPSA DASH, MS. MAMTA, DR. PIRUTHIVIRAJ P)

Date	Resource person	Title	Participants
10-07-2020	Mr. PrafullaGalphade, Senior Principal Program Manager Cadence Design Systems (India) Pvt. Ltd.,	Semiconductor Products: Demand in the Market, Development in Industry and Need of the Consumer	External
17-07-2020	Abhishek Dixit Senior System Engineer Juniper Networks Bangalore	AI Based LAN Networks	External
24-07-2020	Mr. Rajeev Kumar Gowtham, Principal Project Manager, ARM, Bengaluru.	Semiconductor Industry -2020	External
31-07-2020	Ms. Saumya Agarwal Software Engineer Identity services engineer, Cisco Pvt Ltd, Bengaluru	Hackers in CyberWorld	External
07-08-2020	Mr. Uttpal Desai, Engineering Manager, Intel, India	5G Network	External
14-08-2020	Mr Naseemuddin Ansari, Sr Staff Engineer, Qualcomm, Bengaluru,	Introduction to Mmwave Sensing: Signal Processing System for Multitarget Object Detection FMCW Radar	External
21-08-2020	Mr Asish Suresh Khachane, Sr. Engineer, Filed Application –Xilinx Excelpoint Systems Pvt. Ltd. Bengaluru	EXPERTATHON – 2020 Tech-talk series 7 on "AI/ML Product Design based on Zynq Ultrascale +MPSOC"	External

TECHNOLOGY SHARING CLUB
(COORDINATORS : Prof. Divya Sharma , Prof. Reema Sharma)

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.
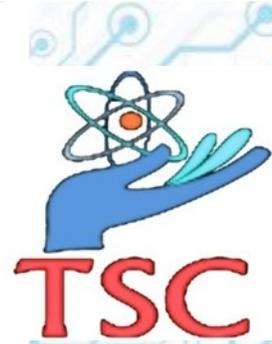
Objective:

To provide insight into existing and evolving technology and product

ROLE	NAME
President	Mohammad Ghassan
Vice-president	Suraj Suresh
Secretary	Shiva S
Treasurer	Aathira V
Committee Member	Shakthi A
Committee Member	Kiran J
Committee Member	Kamala Vennela V
Committee Member	Melita Rose
Committee Member	Vyshak Shetty
Committee Member	Devanshi S
Committee Member	Bhargav Dayal

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TECHNOLOGY SHARING CLUB

Event	Date	Description
Technical Talk	26-09-2020	Online Technical Talk was Conducted by Mr. Naveen B Naryan, Online Marketing Expert- Media Bracket. The speaker demonstrated how you to create webpages and blogs.
RIGHT QUICK! - Quiz	25-11-2020	An online technical quiz was conducted. 25 questions based on technologies, gadgets, aptitude, coding etc were asked in the quiz.

TECHNICAL TALK
RIGHT QUICK-QUIZ

ELECTRONICS HOBBY CLUB
(COORDINATORS : Prof. Dharmambal , 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
Committee Member	Sahana Kulkarni
Committee Member	Tanushree Aravind Kumbhare

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ELECTRONICS HOBBY CLUB

Event	Date	Description
A online Workshop on LOGISIM	02-11-2020	Attendees came across a hands-on experience on LOGISIM tool, and concepts related to Digital electronics like computer architecture, logic formations and other various concepts were taught.
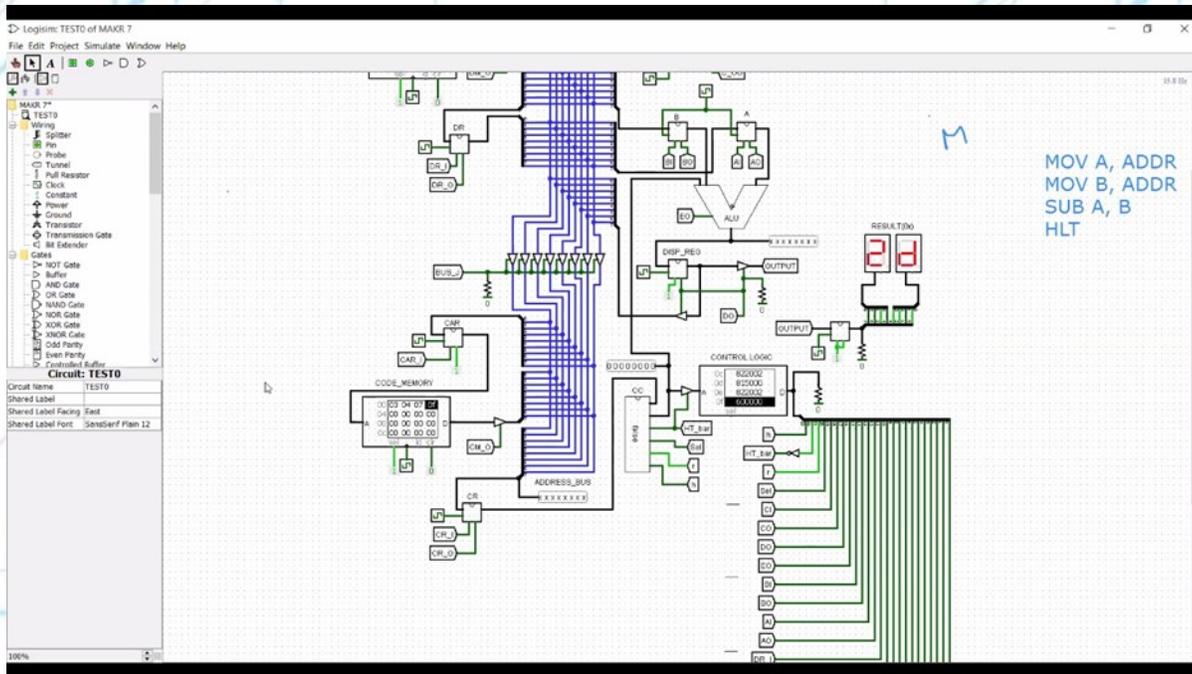
A online Workshop on LOGISIM

PROFESSIONAL CONNECT CLUB
(COORDINATORS : Prof. Naveen H , Prof. Gurulakshmi)

What we're about:

We help you connect with professionals, professional bodies, research organizations and companies.

We organize guest lectures, seminars, workshops, conferences and competition on technologies, projects and products.

We organize field trips to companies, research institutions and industry exhibitions. We help to facilitate active participation in external technical events.

Objective:

To connect with engineering professionals and conduct technical events.

| ROLE	NAME
President	Devashrutha
Vice-president	Bharath M
Secretary	S Rishitha
Treasurer	Naveen K M
Committee Member	Shoib Ahmed
Committee Member	Riya Rakesh
Committee Member	Lingesh T
Committee Member	Isabella Paul
Committee Member	Kavya S
Committee Member	Nikhil A Bhinge
Committee Member	Lakshya Sharma
Committee Member	Bhoomika P

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PROFESSIONAL CONNECT CLUB

Event	Date	Description
SUBTRONICS – Learn to Build Water Drone	07-11-2020	The workshop made the students to learn about the working, operations and applications of a submarine. Though virtually, the event gathered a lot of audience intrigued to learn and build their own submarine from scratch. The working and the importance of the different parts of the submarine such as Pressure hull, Ballast tanks, Tower etc were introduced and their importance was explained in detail. The workshop was also enriched with the presentation of a 3D modelled remotely operated surface water drone for water waste management system. The ROV would collect the waste materials accumulated on the surface of water at places such as ponds and seas.
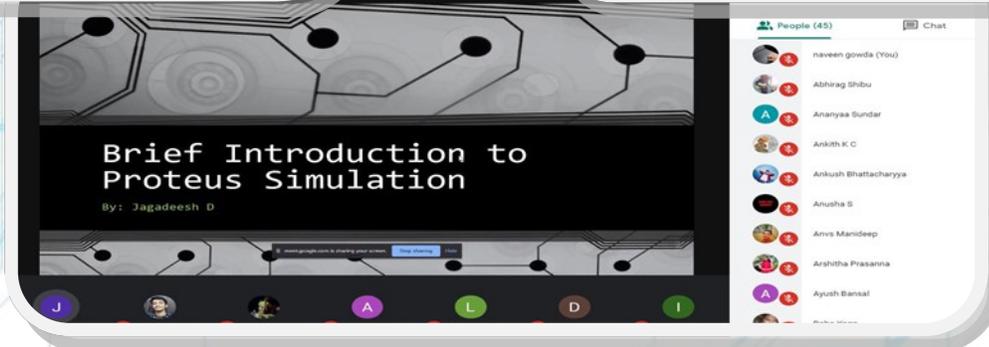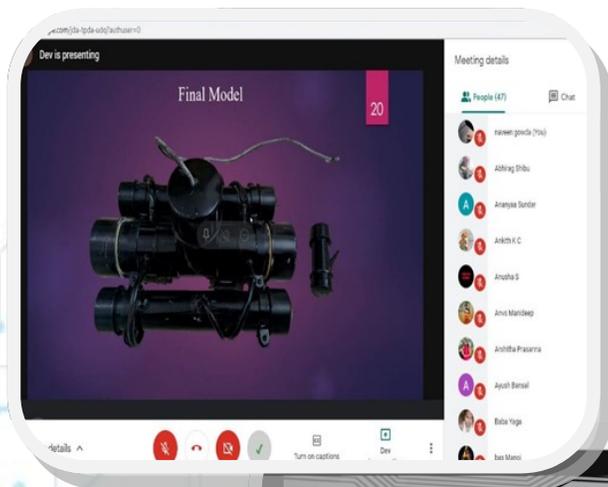
SUBTRONICS– LEARN TO BUILD WATER DRONE

The Connect

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.

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.

Dr. Sanjeev Sharma
Professor & Head

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.