

The background of the cover is a complex, abstract geometric pattern composed of various shapes like squares, circles, and triangles in different shades of green. A single, thin white vertical line runs down the center of the page, extending from the top to the middle where it meets the title.

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GLIMPSE

A Newsletter by Department of Electronics and Communication Engineering
Christ College of Engineering, Irinjalakuda

BONE FRACTURE DETECTION USING DIGITAL IMAGE PROCESSING

Anupama C.D, Malavika Viswanath and Pooja A.S of S8 ECE published a research paper in International Journal for Modern Trends in Science and Technology. The group of students developed an Image Processing Technique to detect bone cracks without using CT scans or MRI scans under the guidance of Asst. Prof. Della Reasa Valiaveetil of ECE Department. The procedure employs the use of X-Ray Imaging and the Digital Image Processing is performed on the X-Ray scan obtained. The journal was published on April 1st 2021 in IJMTSTs seventh volume of the fourth issue.

The devised method of Digital Image Processing is useful in medical applications to detect cracks in less time and also helps doctors to identify the severity of the cracks. The developed technique is also very cost effective and gets a clear image without the use of expensive scanning methods like MRI, CT, etc. The proposed method is designed for an easier approach by the usage of a single application alone.

<http://www.ijmtst.com/vol7issue04.html>

RESYNC: RELAY SYNCHRONIZER

RESYNC is a device developed by Albin Joseph C. R and Krishnaprasad C of Semester 6 Electronics and Communication Engineering Department of Christ College of Engineering, Irinjalakuda. It was developed to automate a submersible water pump which is used to water the crops on the farm of Sir Geo Paul who is a faculty in the Civil Engineering Department of the college.

The device is primarily developed to automate the submersible water pump which is used to irrigate the crops on the farm. The device has a wide range of specifications, is less expensive and affordable which makes it stand out from the ones available in the market.

VISION

To become pioneer in higher learning and research, and to produce creative solution to societal needs

MISSION

- To make students self-dependent and useful for the society
- To implement best teaching - learning practices by providing excellent facilities and quality education
- To mould character of every student by providing value-based education

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RESYNC has two timers that allow the user to set two different times. The user can set the starting time and duration of working of the pump. An OLED information display is provided for the user to interact with the automation system. The display is even provided with light and dark themes. A Rotary Encoder is provided to navigate through the smooth and very responsive menu in the display.

A major feature of RESYNC is POD. This grabs our attention as it is a very useful and necessary feature especially in the case of Sir Geo's farm. The POD stands for 'Power Off Detect' which ensure that when electrical power is cut off during working duration, the system detects the situation and resumes from that instant when power is available and completes the remaining duration. POD hereby guarantees that crops get the same amount of water regularly.

Another important feature of RESYNC is LWC which stands for 'Lower Water Cutoff' Arduino NANO microcontroller is used for

DID YOU KNOW

The invention of the PCB is generally accredited to Paul Eisler, an Austrian inventor. Eisler developed the first PCB when working on a radio set in 1936.

processing and controlling RESYNC, DS3231 RTC (Real Time Clock) module is used to measure the passage of time.

RESYNC is small in size and is well built and it is going to impress the user with its functions and performance. It is truly a game changer and is going to capture the market.



Nexus - Webinar Series

A virtual industry interactive webinar series, "NEXUS" was hosted by the Department of Electronics and Communication Engineering, in association with IETE students forum, CCE on October 28 to 31. We have been fortunate enough to have renowned personalities from academic, industry, and other areas during this 3 days of webinar series. We had eminent personalities like Abhishek R Patil (Founder and CEO of Zcientia Labs), Mr Anoop K Jayan (JTO, BSNL, Ernakulam) and Ms Rema Tirutheri (team leader, wireless project, C-DOT, Bangalore). We covered topics on "Looking beyond Btech degree", "Trending revolutionary telecom technology" and how to prepare for technology careers of tomorrow.

Nexus was formally inaugurated on 28 October 2020 by Fr. John Paliakara CMI, executive director CCE, followed by a technical session on "preparation for technical careers of tomorrow" by the resource person of the day Mr. Abhishek R Patil. We had participants from all over Kerala and had a great response from all the students.

PRISMA

The Department of Electronics and Communication Engineering in association with the Innovation and Entrepreneurship Development Cell, Christ College of Engineering, Irinjalakuda, launched 'PRISMA', a fusion of tech-entertainment events on November 3rd 2020 and ended on November 7th 2020. A website dedicated to 'PRISMA' was launched on October 27th 2020 however the event was officially inaugurated on 3rd November 6pm.

The theme of the event 'PRISMA' was to present the vastness and diverse side of Engineering, it was about meeting those engineers who made a difference in all the other fields they stepped into. It consisted of many events ranging from Game Mania, a cryptographic challenge KRYPTOS and Talk Shows with famous personalities like MLA Mr. K.S Sabarinathan, TEDx speaker Mr. David Timis, playback singer and composer Mr. Sachin Warriar, ACM India Council Secretary Mrs. Rashmi Mohan, Prof. Premakumar N.R, Asst. Commissioner GST and IRS officer Mr. Syam Nath S and Music Maestro Mr. Shine Tharakan.

The event was a huge success. We reached our goal of showing the ability of an engineer to achieve success in any field they work and how versatile an engineer can be. It encouraged young engineers and graduates to not just restrict to the technical aspects of engineering but also to explore and try out new fields be it politics, entertainment, administration, etc. And we look forward to host more such events in the future with better documentation and planning.



DIGITAL CIRCUIT DESIGN WORKSHOP

A virtual hands-on workshop on 'Design and Implementation of Digital Circuits in Xilinx ISE Simulator' was organized by the Department of Electronics and Communication engineering on 30th of July 2020. It was a two-day session that ended on 31st of July 2020 and was led by Ms. Manju I Kollannur and Ms. Della Reasa Valiaveetil, Assistant Professors of the Department of Electronics and Communication Engineering, CCE. The two-day event covered how to design circuits and simulate them using Xilinx ISE software. The objective of this event was to provide the students an insight into the various software they would need during their projects and Post-graduation. The 2-day interactive session ended with a great response from the side of students and faculty.

DID YOU KNOW

Printed circuit boards are almost always green because they are made from a glass-epoxy, which is naturally green.

PROTOTYPING BASICS USING TINKER CAD

The add-on course on 'Simulation of Circuits using Tinker CAD' was conducted from 19th October 2020 to 24th October 2020 which was an essential one as it gave the students more knowledge on how to design and simulate electronic circuits. The course was led by Mrs Sreelekha T and Mrs Deepika Kadavath who are the faculties of Electronics and Communications Engineering Department of Christ College of Engineering, Irinjalakuda. There were 57 participants for this course who gained the skills and are now capable of designing circuits on their own. The course was conducted free of cost but it had covered all advanced areas and also as it was a hands-on course, it consequently made all the participants well versed with both the technique of designing the circuits and the Tinker CAD software. The course focused on designing, simulating and prototyping electronic circuits. Tinker CAD is free online software developed by Autodesk and it is well known for its ability of 3-D modelling of electronic circuits.

The participants utilized the lockdown period wisely by learning these new skills and also, they honestly cooperated with the resource persons to make this initiative a success. The course is surely going to help the participants in their future career as engineers because they have acquired a considerable amount of skills and experience in designing and simulating circuits.

DID YOU KNOW

The Intel 4004 was the world's first commercial microprocessor released by Intel Corporation in 1971

The word computer is an acronym for Commonly Operating Machine Purposely Used for Technological and Educational Research.

SUDOKU $\frac{1}{1}^2$

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