

# INSTITUTIONAL ACTIVITIES

## ❖ **INDUCTION PROGRAM – 2019**

3 day Induction Programme was organized on from 29<sup>th</sup> July – 31<sup>st</sup> 2019 to welcome new students and to introduce them to college environment and rules.



## ❖ FRESHERS PARTY ( ABHINANDAN 2K19)

Abhinandan 2K19 was organized on 14<sup>th</sup> September, 2019 to welcome the new students.







### ❖ **SWACHH BHARAT ABHIYAN**

NSS committee of LKCE organized Swachh Bharat Abhiyan. The students and faculty of the college took part enthusiastically in cleaning the campus premises and contributed with a sense of responsibility of making India a clean country.







### ❖ **TREE PLANTATION AT VILLAGE DHADDA**

NSS Committee of LKCE has adopted the Village Dhadra and conducted a tree plantation activity there with a view point “Plant a tree and plant a hope for future”. NSS has planted 50 tree saplings of different variety along the road side of the village and are much appreciated by Panchayat and the villagers.



### ❖ **TREE PLANTATION**

LKCE has successfully organized the event of Tree Plantation under the NSS with an objective to keep the environment green, clean, safe and healthy. The event was focused on highlighting the importance of tree plantation as they are the foremost source for producing oxygen in environment and help to reduce the level of Carbon dioxide. Saplings including Amla, Lemon, Guava, Moringa etc. were planted in and around the campus by the students.





### ❖ **POSTER MAKING ON “WATER IS LIFE”**

In order to impart the importance of water among students SSC committee of LKCE organized Poster Making Competition on topic “Water is Life”. Total number of 32 teams took part in competition out of which best three teams are chosen and awarded.



### ❖ **YOGA DAY CELEBRATED**

International Yoga day was organized by the NSS committee of LKCE on 21st June 2019. The students and faculty of the camp college took part enthusiastically in the Yoga and contributed with a sense of responsibility of making India a healthy country.





### ❖ **ONE DAY FDP “NBA ACCREDITATION AND ITS PROCESS”**

With a view of keeping their faculty abreast with the Outcome based Education, a one day FDP was organized in LKCE, Jal. Dr. Akshay Girdhar from IT department of GNDEC, Ludhiana was the resource person of workshop titled as “NBA Accreditation and its Process”. He made the faculty aware of difference between I/O based model and Outcome based education model and how education scenario has shifted to student centric approach.



❖ **DEPARTMENT OF CIVIL ENGINEERING**

❖ **DEPARTMENTAL ACTIVITIES**

❖ **GUEST LECTURE**

❖ Department of Civil Engineering of Lyallpur Khalsa College of Engineering organized a Guest lecture on 21.8.2019. Dr. Senthil Kasilingam, from NIT Jalandhar was invited as the guest speaker for the day.



❖ **COMPETITION**

❖ CE department of LKCE organized an event “Intra-Departmental competition on Presentation/ Paper Presentation” on the topic “Sustainable Environment” on 19.9.2019.





## ❖ INDUSTRIAL VISIT

❖ The department of CE of Lyallpur Khalsa College of engineering arranged an industrial visit at Nirmal Kutia, Seechewal & Sultanpur Lodhi on 16.10.2019.



## ❖ COMPETITION

❖ Department of Civil Engineering of LKCE organized an intra-departmental "Planning & Design Competition" on 22.10.2019.



## ❖ FACULTY ACHIEVEMENTS

❖ Dr. Amanjot Singh Bindra & Er. Harsh Kumar attended DST Sponsored one week Short term course on "Computational Modeling: Applications in Structural and Geomechanics problems" on July 13'2019.



## ❖ STUDENT ACHIEVEMENTS



## ❖ ARTICLES BY STUDENTS

### Topic: PLASTIC ROADS

By: Shubham Singh Rana, CE 5<sup>th</sup> semester

Plastic use in road construction is not new. Recent studies in this direction have shown some hope in terms of using Plastic-waste in road construction i.e., Plastic roads. Plastic roads mainly use plastic Carry-bags, disposable cups, and PET bottles that are collected from garbage dumps as an important ingredient of the Construction material. When mixed with hot bitumen, plastics melt to form an oily Coat over the aggregate and the mixture is laid on the road surface like a normal tar road.

Basic process involved in construction of plastic roads:-

- Segregation
- Cleaning process
- Shredding process
- Collection process
- Mixing ( wet or dry)

#### Advantage of Plastic road over Conventional roads

- Use higher percentage of plastic waste.
- Reduce the need of bitumen by around 10%.
- Increase the strength and performance of road.
- Reduce the cost to around Rs45000/km. of single lane road.
- Generate jobs for rag pickers.
- Improvement in fatigue life of roads.



- Better resistance towards rain water and cold weather.

Now question arises, Why it is utilized or preferred?

- Disposal of waste plastic is a major problem.
- It is non biodegradable
- Burning of these waste plastic bags causes environmental pollution.
- Studies proved that waste plastic enhances the property of the mix.

## **Topic: INNOVATIONS NEEDED TO PREVENT GLOBAL WATER CRISES**

**By: Anmol Singh, CE 3<sup>rd</sup> semester**

Commonly it is said that the world is covered with water. But only 2.5% of Earth's water is drinkable out of which 31% is accessible for use, as about 69% of the fresh water is in the form of glacier and ice caps. So, less than 1% of the Earth's water is drinkable.

Many countries in the world are facing the menace of water crises. India is ranked 13th on the list of countries with extremely high water risk.

During the 2011 census, India entered the league of water deficient nations.

There is a problem of us that, we only blame on others. When we discuss with someone about the deficiency of water in our country. People say that only governments are responsible for this, but in actual, both the citizens and governments are responsible.

India's water crises is often attributed to lack of government planning, increased corporate privatization, industrial and human waste into water bodies, government corruption, overpopulation, and inefficient use of water in agriculture (India is top among the top growers of agriculture produce in the world and therefore the consumption of water for irrigation is highest).

Due to hazardous wastes in rivers, the helpless farmers are using fresh groundwater for irrigation. This leads to huge fall in ground water level in few decades.

To tackle this problem we have a great innovation "Seechewal model". The sewage waste water treatment plant is the best innovative idea by Sant Baba Balbir Singh Seechewal. It is the most economical way to install this plant at our residential areas.

The treated water by this model can be used in agriculture for irrigation purposes and it is "BOON" for crops.

Punjab's 'Seechewal model' of river cleaning involves eco-friendly and natural processes to treat sewage and waste water. Now, it will also be implemented by Delhi govt to clean Yamuna river.

## **❖ DEPARTMENT OF APPLIED SCIENCES**

### **❖ DEPARTMENTAL ACTIVITIES**

#### **❖ INDUSTRIAL VISIT**

❖ The department of Applied Sciences organised an industrial visit on 27/9/19 to Netzsmart Pvt. Ltd., Mohali. It was an enormous facility. Mr. Vishal Tandon (IT professional), delivered a presentation on 'Digital Marketing'. He familiarized students with many concepts of Digital Marketing. The visit was quite knowledgeable.





## ❖ SEMINAR

❖ One day seminar on ' Artificial Intelligence and Machine Learning ' was organised by the department of Applied Science in collaboration with Itronix Solutions at LKCE on 30/9/19 . Er.Karan Arora , Founder and CEO of Itronix Solutions , was the guest speaker. The topics discussed were :-

1. Web Search and Recommendation Engines
2. Facial Recognition
3. Recognition through images
4. Virtual personal assistants : Amazon Alexa, Google Assistant, Iphone Siri and IBM Watson
5. Web Scrapping Techniques

It was quite a knowlegable interaction & very participative for the students.





### ❖ **SCIENCE MODEL EXHIBITION**

❖ The department of applied sciences organized an exhibition on 25/9/19 regarding the Science Models for the students of first year. The students presented various science models which were amazing & very informative. The students and the audience at the exhibition enjoyed well and learned a lot. It was a great event.





## ❖ DEPARTMENT OF MECHNICAL ENGINEERING

### ❖ DEPARTMENTAL ACHIEVEMENTS

1. Mr. Harmanpreet Singh, Student of ME-8th selected in Jaro Education.



Harmanpreet Singh  
B.Tech (ME)



## ❖ DEPARTMENTAL ACTIVITIES

### ❖ QUIZ COMPETITION

❖ Quiz Competition was organized by Social Sensitization Committee of Mechanical Engineering Department on 23-09-2019.



### ❖ EXPERT LECTURE

❖ An Expert lecture on the topic of “Genetic Algorithm” (GA) was conducted on 29 August, 2019 by Research and Development committee of Mechanical Engineering Department



## ❖ ONE DAY WORKSHOP

❖ The department of Mechanical Engineering organized a one day workshop on Quantitative Aptitude for the students of Mechanical Engineering of the college on 15 October 2019.



## ❖ INDUSTRIAL VISIT

❖ The educational trip was conducted by the Department Mechanical Engineering at to Arti International, Chandigarh Road, Ludhiana on 11th October 2019.





## ❖ EXPERT TALK

❖ An Expert Talk was organized by Academic Affairs Committee of Department of Mechanical Engineering on 18th October 2019.

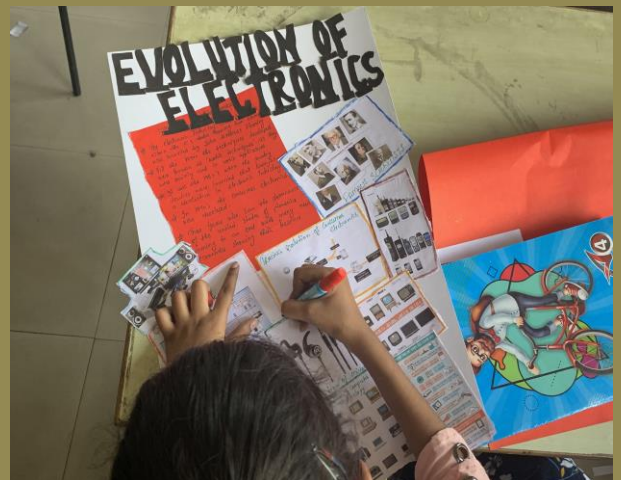


## ❖ DEPARTMENT OF ELECTRONICS & COMMUNICATIONS

### ❖ DEPARTMENTAL ACTIVITIES

#### ❖ TECHNICAL COLLAGE MAKING

❖ ECE department organized an event “Technical Collage Making Competition”. The students created vivid and vibrant collages on various themes including satellite communication, evolution of electronics, Real life applications of DSP, Communication Systems etc.





## ❖ INDUSTRIAL VISIT

❖ In order to bridge the gap between academia and industry, Department of ECE arranged one day industrial visit for B.Tech ECE 3rd and 5th Sem students to WONDER AUTOMATION SYSTEMS, Mohali.





## ❖ WORKSHOP ON ARDUINO

❖ ECE Deptt in collaboration with the training and placement cell conducted one day Workshop cum FDP on Arduino” for the faculty and students of B-Tech ECE. The main objective of this workshop was to provide the fundamental knowledge of Arduino Processor with hands on practice to enhance the technical and practical skills of audience.



## ❖ HUMANITARIAN DAY

❖ The students of ECE deptt. in association with students from Deptt. of ME did a street play (nukkad naatak) to raise the awareness on Humanity to celebrate World Humanitarian Day. The theme of the play was “Humans For Humans”.



## ❖ GATE AWARENESS SEMINAR AND MOCK INTERVIEW SESSION

❖ A mock Interview session and Awareness Program on Graduate Aptitude Test in Engineering (GATE) was organized by ECE Deptt. Mr. Jitendra Tiwari addressed the students on the importance of writing the GATE exam. He explained in detail the impact of GATE score in Higher Education and Job opportunities at Public Sector Undertakings.

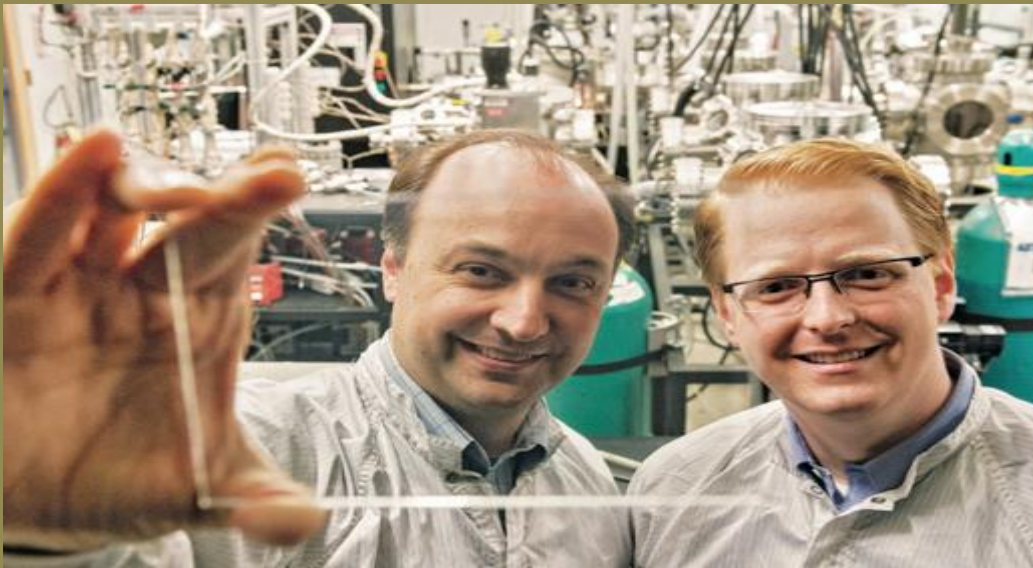


## ❖ STUDENT ARTICLES

### Topic: TRANSPARENT SOLAR PANELS by Aakriti Srivastava B.Tech ECE 7<sup>th</sup> Sem

#SOLAR PANELS.... What comes in mind of yours??!! Square boxes black piece of semiconductor material. Have you ever thought of transparent solar panels? Transparent solar panels!!! Isn't that out of the world thought!! Something really interesting.

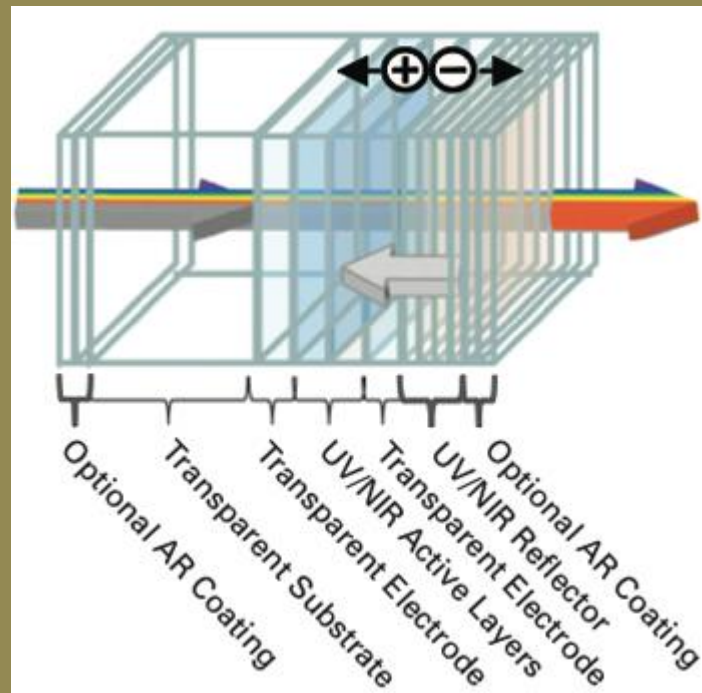
Researchers of MIT University had made the concept of transparent solar panels a reality. The first thought came in minds of researchers in year 2010.



How do these solar panels will work? Think of situation where our normal window pane is going to be used as power generator. In the total electromagnetic spectrum we have visible spectrum which can be received by human eyes, so only visible spectrum is allowed to pass through the pane and rest ultraviolet and IR spectrum is going to be used by solar panels. There were two main challenges in developing solar panels which are transparent.

The first one is developing a material which absorbs the required spectrum of light and second one is developing transparent cells for energy storage. The later issue is resolved by developing transparent photovoltaic cell. The construction of these cells is as shown:





## Topic: USEFUL WEBSITES MICROCONTROLLER PROJECTS

Compiled by Er. Pallavi Sharma

### [Eeweb.com](http://Eeweb.com)

### [best-microcontrollerprojects.com](http://best-microcontrollerprojects.com)

Cofounders Joe Wolin and Cody Miller formed Aspen Labs LLC in 2007 with the goal of creating a business media company that focuses on the needs of engineers. In 2010, they partnered with DigiKey Corp. and launched EEWeb, a premier electrical engineering community for hardware designers. The website has a lot of useful information along with projects related to MCUs.

If you are looking for MCU projects and resources, look no further. Here you have MCU Tools Projects and Tutorials designed by John Main, a professional electronics design engineer based in the UK. Each project includes a source code, description and schematics that you can use as a basis for starting your own projects or just use these stand-alone.

### [electronicsforu.com](http://electronicsforu.com)

### [pic-microcontroller.com/ pic-projects](http://pic-microcontroller.com/pic-projects)

[www.electronicsforu.com](http://www.electronicsforu.com) serves as a storehouse of information for the electronics and technology industry. It has the latest news and information about new products in the electronics sector, not to forget the hugely popular EFY-tested circuits, reproduced from *Electronics For You* magazine. There is also a section on MCU projects, which has been always an area of interest for the visitors of the website.

This website has good content related to different MCUs. It is maintained by a young engineer for sharing his projects and tips and tricks using MCUs. The site has hundreds of projects that can be useful for hobbyists as well as students.

### [arduino.cc](http://arduino.cc)

Arduino is an open source physical computing platform based on a simple MCU board. Arduino official website has a section where you can find a list of Arduino based project ideas. The list is helpful for both the novice and the experienced. Project Ideas section has been divided into three categories (easy, intermediate and advanced) for easy navigation.

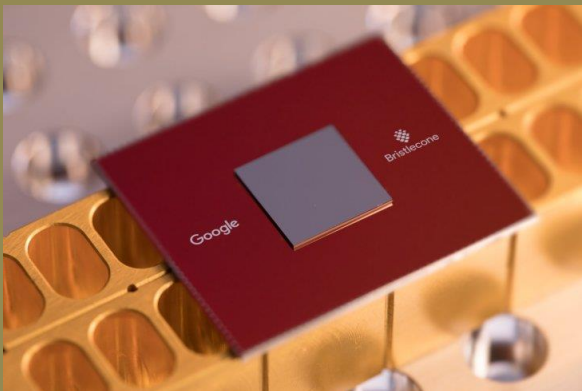
## Topic: FUTURE OF COMPUTING AND PROCESSOR

by Gurveer Singh B.Tech ECE 7<sup>th</sup> Sem

Classical computer have now become the inseparable part of human life, in the present date if we look around our surrounding, then we find there is presence of classical computer everywhere for example: mobile phone, personal computer, laptop etc.

But classical computer have some limitation like they are slow to perform complex structure and it is impossible to create some molecular structure. Even our super computer is not able to do these operations. So is it the last stage of computing? NO, Now we have something that is beyond our mind named as FUTURE OF COMPUTING that is “QUANTUM COMPUTER” these computer work on Q-processor .In present time we have 512 Q-bits processor that have very high incomparable speed as compared to classical computer main reason of use this processor is that, it requires 0 energy to perform computing task so we can say it is power efficient as well.

But there are some limitations and one of them is that this processor requires 0°C to operate and is much cooler than the space temperature and to maintain this temperature is little bit difficult. But it is possible and is being done by some big organization like GOOGLE, IBM, NASA with Q-processor and this processor is really doing an excellent job.



Goggle processor having 52 Q-bits



NASA using D-wave's Q-bit computer having 512 Q-bits