

## Faculty Development Programme



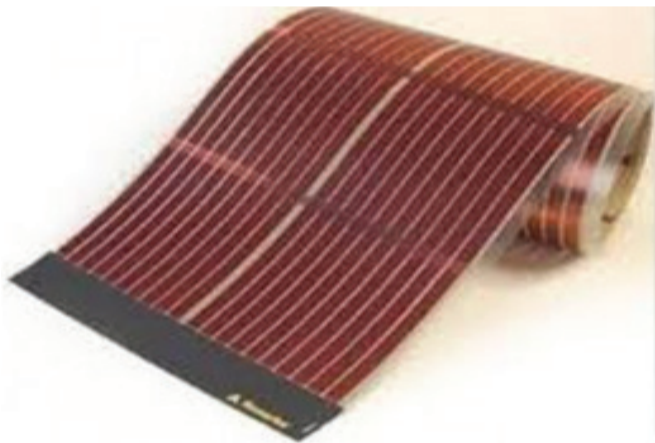
**A**VGST Sponsored FDP on “Data Acquisition and Control Systems for Space Application” was conducted during 17th Dec to 20th Dec, 2018. The FDP was conducted with the support of ISRO (Indian Space Research Organization), Bengaluru.

Some of the prominent people who attended the FDP were  
**a.** Mr. Subramanya Udupa, Deputy Director, Controls and Digital Area, ISRO. He delivered the keynote address on Data Acquisition and Control Systems in Space.

**b.** Dr. Vinod Kumar, Deputy Division Head, ISRO. He delivered sessions on Real-time autonomous spacecraft attitude and orbit control systems: A necessity.

**c.** Mr. Satish Thokla, Aerodef and Space Industry Manager, Mathworks, India. He spoke on Global trends in Space Systems.

## Infrared Plastic Solar Cells



**S**olar energy plays a major role in present days. It is a renewable source of energy. This presentation is about the new type of solar cell. Plastic solar cells could one day become five more times more efficient than current solar cell technology. Nanotechnology is the nexus of sciences. It includes anything smaller than 100 nanometers with novel properties. The conventional solar cells that are used to harness solar energy are less efficient and cannot function properly on a cloudy day. The use of nanotechnology in the solar cells created an opportunity to overcome this problem, thereby increasing the efficiency. The plastic solar cell uses nanotechnology and contains the first solar cells able to harness the sun's invisible, infrared rays. The working of this type of solar cell is the same as that of conventional solar cells but these solar cells are small and harness all the rays from the sun's radiation because of their small size and light weight, they exhibit unusual and interesting properties. The plastic formulations also open the

possibility of printing solar cells onto various surfaces, much as how ink is printed on a newspaper, because of this property they can be painted anywhere. The painted screens can be used as power portable electronic goods like iPod's, cell phone, pocket calculators etc. Ultra high efficient plastic solar cells can even work under low light conditions and also under artificial light long with the increased wavelength region. Designed: The plastic solar cell created by Berkeley research group is actually a hybrid, comprised of tiny Nano-rods dispersed in an organic polymer or plastic. The thickness is of 200 Nano-meters, a thousandth the thickness of a human hair, is a factor of 10 less than the micron-thickness of semiconductor solar cells. When Nano-rods absorb light of a specific wavelength, they generate an electron plus an electron hole -- a vacancy in the crystal that moves around just like an electron.

**Improvement:**

Better light collection and concentration employed in the solar cells. In plastic cells, nano rods are closely packed and transfer their electrons more directly to the electrolyte. They also hope to tune the nano rods to absorb different colors to span the spectrum of sunlight.

**Advantages:**

- The plastic solar cells are flexible.
- It cannot be broken easily as conventional solar cells.
- The cost is more than the traditional.

Semiconductor solar cells that are in use now. Today's high efficiency solar cells require very sophisticated processes inside a clean room and complex engineering to make the semiconductor sandwiches and because they are baked inside a vacuum chamber, their size should be relatively small.

**Limitation:**

- The biggest problem with this is cost effectiveness. But that could change with new material. But chemists have found a way to make cheap plastic solar cells flexible enough to paint onto any surface and potentially able to provide electricity for wearable electronics or other low power devices.
- Relatively shorter life span when continuously exposed to sunlight.
- Could possibly require higher maintenance and constant monitoring.

**Conclusion:**

Plastic solar cells help in exploiting the infrared radiation. It includes anything smaller than 100 nanometers with novel properties. More effective when compared to conventional solar cells. They can even work on cloudy days. Though at present cost is a major drawback, it can be solved in the near future.

**Application:**

- Coating the cell
- Ocean navigation aids
- Hydrogen powered car
- Telecommunication systems



## LEO CLUB

Leo Club (Neozonites Locus) organized a freeze mob for Cancer Awareness (lung cancer and breast cancer) at New Horizon College Marathalli on 02-11-2018 from 01:10PM to 02:00PM. Members of the club went around the campus, spread awareness about the disease and collected donations from the students. The club collected a total of Rs3,300. The money was later donated to KIDWAI Cancer Hospital.



## The Endangered Care

We are drifting apart from our family  
But are we aware of it, "not really"  
Ignorance for the people from our past  
And encouragement for others for their future  
Is this what we called our culture.

Care for each other in every mouth  
Foreclose to know their whereabouts  
But this new desolation with no known option  
Will cause a diversified destruction.

Days after days, months after months, years after years fade  
Trade of love and care is all that's made  
Compassion, kindness, care will create a trestle for our weep  
So, let us strive against the endangered care steep.

-By

Kashifa S, 4th Sem BCA,  
New Horizon College, Marathalli

## Golden Butterfly

I was lying on my bed, using my phone  
Thinking, wondering what my future holds  
As the rain was dripping from the sky  
Through my window I saw, a golden butterfly...

I ran towards the door to catch that magic  
Thinking If I lost it, it would be tragic  
As I opened the door, I saw something unbelievable  
The whole world was frozen, it was unimaginable  
The people, the cars, the smoke across the hill  
Even the raindrops were standing still.

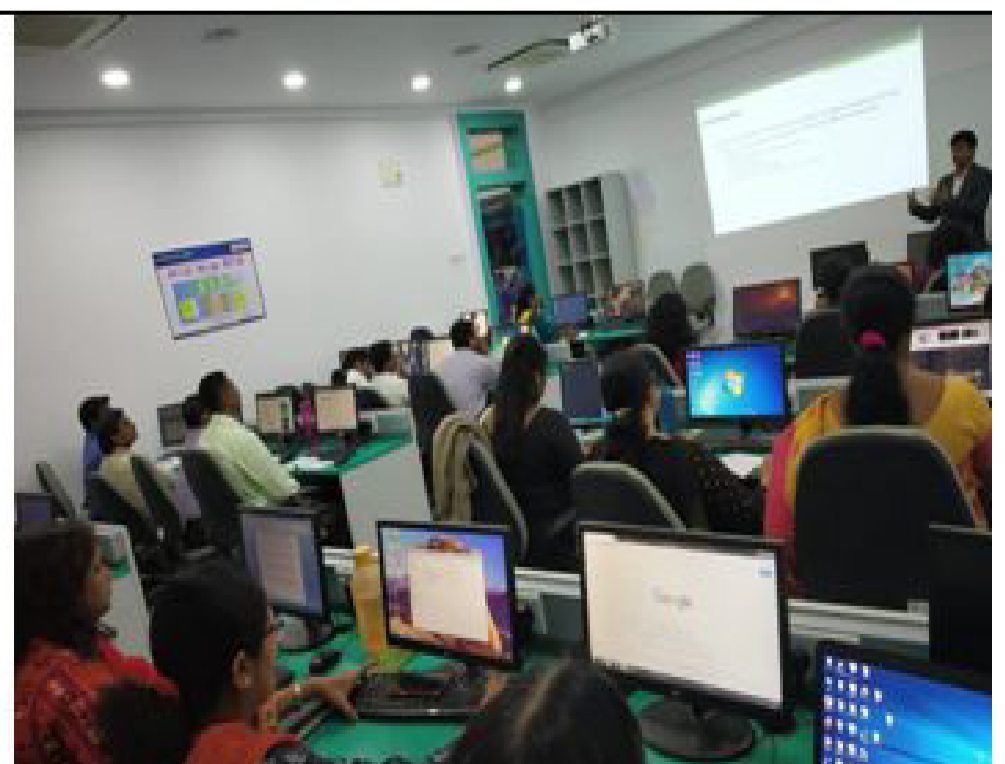
I ran to chase my golden butterfly  
Couldn't reach it but I had to try  
Running laughing I forgot about the world  
Tired and exhausted I fell on the ground, curled  
Lying there I raised my hand high  
And there on my finger sat my golden butterfly  
As soon as it touched me the time started moving  
The rain on my face I felt first time, so soothing.

-By

Prabhav Sharma, IV BCA

## FDP on Machine Learning & Artificial Intelligence Fundamentals

The audience got an insight on the overall flow in the field of Data Science. Some of the key points of the session were "How Machine – Learning plays an important role in different stages of analytics, Machine Learning Algorithms – Mathematical Space representation, Machine Learning Categories, Linear Regression, and SVM Model – Overview, Python for Machine Learning – Key Packages. Also, a practical session was conducted on Python Jupyter by applying Logistic Regression, SVM, and Linear Regression on various sample data sets.



Faculties from CSE, ISE, MCA, ME, ECE (07.12.2018)



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### Admission Circular

#### FOR PLAYGROUP, NURSERY, LKG AND UKG FOR THE ACADEMIC YEAR 2019-20

Dear Parents, Hari Om!

Registration forms for admission for the academic year 2019-20 for PLAYGROUP, NURSERY LKG AND UKG can be downloaded from the website [www.newhorizonvidyamandir.in](http://www.newhorizonvidyamandir.in) from 16<sup>th</sup> August 2018 onwards.

Filled in registration forms are to be submitted at New Horizon Vidya Mandir only on 29<sup>th</sup> September 2018 / 1<sup>st</sup> October 2018 / 2<sup>nd</sup> October 2018. The registration fee is Rs.500/-.  
Parents can take a tour of the campus after the submission of registration forms.  
The timings are :- 9.00 am to 2.30 pm.

Please submit the filled in registration form with the following enclosed:

1. The latest passport size photograph of the child
2. Photocopy of the birth certificate
3. Copy of the Aadhar of the child



Principal-NHVM

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