

Online session on
"Polycrystalline Diamond Thin Film Sciences & their Applications"
14th May 2022

Institution's Innovation Council (IIC), Ministry of Education (MoE) Dronacharya Group of Institutions, Greater Noida organized an online session on “**Polycrystalline Diamond Thin Film Sciences & their Applications**” on **14th May, 2022**. 250 students from 1st years attended the session.

The orator of the session was **Ms. (Dr.) Elida de Obaldia**. She is an International Research Advisor, University of Panama, Centennial Avenue, Panama. She is also associated with Natural Science & Engineering Research Laboratory, University of Texas, USA.

Prof. (Dr.) K.K. Saini, started the session with the welcome note for **Dr. Elida** and an inaugural speech was also delivered to start the session.

She explained, in today's time, Lithium Ion Batteries have dominated the mobile battery space. She added that typically modern phones are operating for 12 hours per day and lasts only for about 2 years.

She further explained that the life time of batteries could be improved by protecting the anode with a layer of polycrystalline diamond.

She explained the methodologies, the growth of the industry and the results that could be achieved. All the topics were explained with the help of graphs and diagrams, so that the students could easily grasp the same.

She inspired participants with her expertise and the students of DGI were highly benefitted through the session.

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Online Session On

**Polycrystalline Diamond Thin Film
Sciences & Their Applications**

SAT 14th May 2022
9:00 AM - 10:30 AM

Key Note Speaker



Ms. (Dr.) Elida De Obaldia
International Research Advisor
University of Panama, Centennial Avenue
Panama, Rep. Of Panama



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Introduction

- Lithium Ion batteries dominate the mobility space in batteries
- Typical modern phones can operate for 12 hours of heavy use, and last about 2 years.
- There avenues of research are seeking to improve the capacity and the life time. Increasing an average of 5Wh/gr per year, but still not at the level that society demands.
- We are attempting to improve the **life time** by protecting the anode with a layer of polycrystalline diamond.

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Parámetros cruciales

- Material activo (cátodo y ánodo) – que tan conductor es mi material activo
- Contaminación del electrolito – ppm de Oxígeno en la cámara.
 $\text{LiPF}_6 + \text{O}_2 + \text{H}_2\text{O} \rightarrow \text{HF} + \dots$
- Oxidación de los electrodos – capa resistiva




Dronathon - 2022

Internal Smart India Hackathon (SIH) 2022

9th March 2022

Dronacharya Group of Institutions, Greater Noida organized Dronathon Internal Smart India Hackathon 2022 . 30 Teams participated in the Hackathon. Coordinators of the event were **Prof. Bipin Pandey, Prof. Gaurav Chaudhary, Dr. Pallavi Verma, Dr. Hari Mohan Rai, Prof Rajat Kumar and Prof. Dheeraj Gurjar**. Smart India Hackathon is a nationwide initiative to provide students a platform to solve some of the pressing problems we face in our daily lives. Students across India compete creatively to solve problems of Ministries, Departments and Industries to give solutions Harness. Talented youngsters from all over the country offer out-of-the box solutions to problems.Eminent jury members mentored and evaluated the ideas and prototypes presented by the participating teams.After all the presentations, 25 Teams (10 Software and 15 Hardware) and 5 Teams in waitlist were selected by the jury panel for Smart India Hackathon 2022 participation.



75th Azadi Ka Amrit Mahotsav

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SMART INDIA HACKATHON 2022

Dronathon-2022

(Internal Smart India Hackathon (SIH) - 2022)

Venue : Dronacharya Group of Institutions, Greater Noida
Date of Event : 9th March 2022
Last date of registration : 7th March 2022

Call for Idea Presentation :

- Students can find the problem statements at <https://sih.gov.in/sih2022PS>
- Each team would mandatorily comprise of 6 members including the team leader and at least one female member.

Event Coordinators:

Prof. Bipin Pandey (7014443698)	Dr. Hari Mohan Rai (8700004620)
Prof. Gaurav Chaudhary (9816323296)	Prof. Rajat Kumar (8626219796)
Dr. Pallavi Verma (9910348910)	Prof. Dheeraj Gurjar (8989571867)



Webinar on
Energy Management & Auxiliary Load Estimation in Hybrid Electric Trucks
30th April 2022

Institution's Innovation Council (MoE), Dronacharya Group of Institutions, Greater Noida organized an webinar on “**Energy Management & Auxiliary Load Estimation in Hybrid Electric Trucks**” for ME Department students. 75 students attended the webinar. **Mr. Satvik Khuntia** (Research Associate Ohio State University, Columbus, United States).

Mr. Satvik Khuntia started the session on topic “Predictive Powertrain Control for Optimal Fuel Loads Management in a Mild Hybrid Long Haul Trucks. He explained step by step topic related to the project.

The topics covered by Mr. Satvik during the webinar were

- Energy Review
- HEV architecture
- World of trucks
- State of the art
- HVAC Energy Consumption
- User Activity Prediction

He also explained three factors affecting vehicle economy. They are Vehicle Attribute, Powertrain Attribute and Operating Conditions. Next he explained the topic “**Hybridization to save fuel**” and its pros and cons. Next he explained Suzuki Hybrid Vehicles and overall HVAC Diagram.

In the end, he cleared the doubts of the students. It was a very interactive session.

Glimpses:

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INSTITUTION'S
INNOVATION
COUNCIL
(Ministry of HRD Initiatives)

▶ Webinar On

"Energy Management & Auxiliary Load
Estimation in Hybrid Electric Trucks"

SAT 30 April, 2022 10:00 AM - 11:30 AM 2022

Platform : MS Teams

Organized By :
Mechanical Engineering Department

Mr. Satvik Khuntia
Research Associate
Ohio State University, Columbus,
United States

gnindia.dronacharya.info

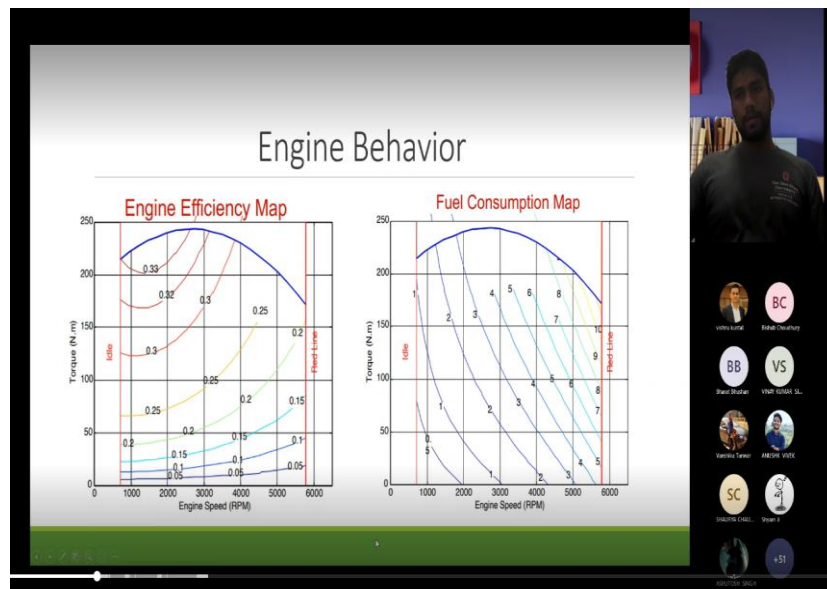
PACCAR TECHNICAL CENTER

THE OHIO STATE UNIVERSITY
CENTER FOR AUTOMOTIVE RESEARCH

U.S. DEPARTMENT OF ENERGY

Predictive Powertrain Control for
Optimal Hotel Loads Management in a
Mild Hybrid Long Haul Trucks

SATVIK KHUNTIA
GRADUATE RESEARCH ASSOCIATE – CENTER FOR AUTOMOTIVE RESEARCH
MASTERS' STUDENT – THE OHIO STATE UNIVERSITY



The objective of the Dronathon was to give students a platform to showcase their innovative projects

Student got to know the areas of improvement in their project so that they can perform best in SIH

Innovate Best Out of Waste

11th May 2022

Institution Innovation Cell (IIC), Ministry of Education (MoE), Dronacharya Group of Institutions, Greater Noida organized “Innovate Best Out of Waste” on 11th May, 2022 on the occasion of National Technology Day. The faculty coordinator was Dr. Bishub Choudhary. With the growing increase in wastes in our society from households to industrial wastes, we now require a very innovative approach to get rid of them. Recycling and reusing the valuable waste material can result in development of fantastic and usable products. Rather than putting these waste materials into the landfills, various innovative and creative ideas can be put together to bring something new and useful. Everyday wastes such as plastic, glasses, newspapers or electronic are not only waste of limited resources but also are harmful to the environment.

The event was to bring such ideas to students and to help them think themselves on such ways of reusing everyday materials that will not only reduce the waste but provide them with useful household products.

All the participants took part in it with great enthusiasm. Winners of the event were:

Aniket Kumar 15499 ME

Abhishek

Kumar 15494 ME

Yashika Goyal 16190 CSE

It was a wonderful and interesting event. All enjoyed as well as learnt a lot.