



VOLUME 8 ISSUE 2

IGNITION

IGNITE THE IM AGINATION

Department of Mechanical Engineering,

College of Engineering (Poly.), Pandharpur

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Neeraj Chopra

(नीरज चोपड़ा ; born 24 December 1997) is an Indian track and field athlete who competes in the javelin throw event. He is a Junior Commissioned Officer (JCO) in the Indian Army. Chopra won the gold medal at the 2020 Tokyo Olympics, and in doing so, became the first track and field athlete to win a gold medal for India at the Olympics. In the 2016 IAAF World U20 Championships, Chopra achieved a world under-20 record of 86.48 m. He participated in the 2018 Commonwealth Games and the 2018 Asian Games, being the flag-bearer at the latter, and won gold medals in both the events. In his debut at the 2020 Summer Olympics, Chopra won gold medal on 7 August 2021 with a throw of 87.58m on his second attempt. As of 2021, he is one of only two Indians to have won an individual Olympic gold medal (the other being Abhinav Bindra), as well as the youngest-ever Indian gold medalist in an individual event and the only one to have won gold in his Olympic debut. As a result, Chopra won the gold medal in the final on 7 August with a throw of 87.58 m, becoming the first Indian Olympian to win a gold medal in athletics, and the first post-independence Indian Olympic medalist in athletics. India won this medal after 121 years. Chopra won gold in the 2017 Asian Athletics Championships with a throw of 85.23 meters. In the men's javelin throw at 2018 Commonwealth Games, he registered a season-best effort of 86.47 metres, becoming the first Indian to win the javelin throw at the Commonwealth Games. In May 2018, he again broke the national record at the Doha Diamond League with a throw of 87.43 meters.

National awards and decorations –

- ❖ Arjuna Award - 2018
- ❖ Vishisht Seva Medal (VSM) - 2020 Republic Day honours

Prasad Disale (TY B)

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- NBA Accredited
- One faculty has completed M.Tech.
- 05 staffs are appearing for M.E./M.Tech. program.
- 14 - Students scored above 100/100 in various subjects.
- 158 - Students scored above 97/100 in various subjects.

Vision

To be recognized for one of the excellence Mechanical Engineering in Maharashtra for overall development in quality education, professional ethics and societal need.

Mission

1. To impart value based technical education in Mechanical Engineering.
2. To enhance the technical knowledge of students.
3. To make the students ready with various skill sets in Mechanical Engineering.
4. To motivate students for lifelong

Message from the Head of Department

Dear student friends,

I wish all of you a happy "74th Independence Day". Celebration of Independence Day is very happy moment for every Indian. Teachers are always there to guide you to achieve their goals, develop quality of discipline, and focus on academic study by doing hard work. So, get in touch with your teachers and move on and on. From March 2020 we all are fighting against COVID-19 and in this pandemic situation we have to keep our mind stable by doing yoga, use of hand sanitizers, maintain at least 1 metre distance between ourselves and others. All students are now familiar with On Line Technical Education. In this Pandemic situation we continued our teaching- learning because of Engineering Technology by using mobile, PC, laptops as learning media for attending lectures and practical. The successful efforts of our scientist for finding COVID-19 vaccine should result in complete vaccination so I appeal you all to get yourself vaccinated. It is only the solution to be safe from COVID-19 so that we can start our normal life with full energy and confidence. I wish you all the best for academic year 2021-22.

Mr.S.V.Kulkarni

4D and 5D printing technology

4-dimensional printing technology: The term 4D printing was first coined by TED professor Skylar Tibbits in his February, 2013 speech at the MIT Conference. 4-dimensional printing (4D printing; also known as 4D bioprinting, active origami, or shape morphing systems) uses the same techniques of 3D printing through computer-programmed deposition of material in successive layers to create a three-dimensional object. However, in 4D printing, the resulting 3D shape is able to morph into different forms in response to environmental stimulus, with the 4th dimension being the time-dependent shape change after the printing. It is therefore a type of programmable matter, wherein after the fabrication process, the printed product reacts with parameters within the environment (humidity, temperature, voltage, etc.) and changes its form accordingly.

5-dimensional printing technology: American universities gave the concept of 5D printing in 2016. Today, it is being implemented by Mitsubishi Electric Research Labs (MERL) through their senior principal research scientist, WILLIAM YERAZUNIS. 5D printing is a new branch of additive manufacturing. In this technology, the print head & the printable object have five degrees of freedom. Instead of the flat layer, it produces curved layers. The main advantage of this technology is to create a part with a curved layer with improved strength.

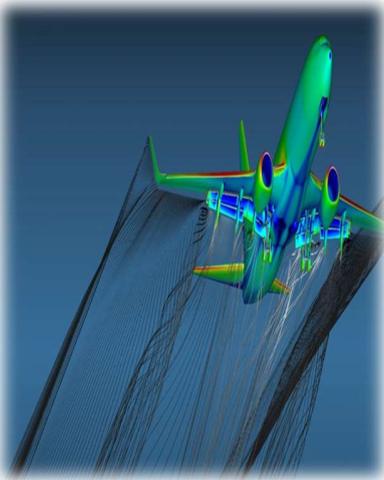
Difference between 3D, 4D & 5D printing:

3D Printing	4D printing	5D printing
Definition	Process of manufacturing of 3d object by CAD model by adding print material layer by layer.	



/Khare Dakshata (TY B)

❖ CFD : COMPUTATIONAL FLUID DYNAMICS



CFD is the analysis of systems involving fluid flow, heat transfer and associated phenomena such as chemical reactions by means of computer-based simulation. It is very important to know velocity, pressure and temperature fields in a large no. of applications involving fluids i.e liquids and gases. The performance of devices such as turbo machinery and heat exchangers is determined entirely by the pattern of fluid motion within them. CFD is Science of determining a numerical solution to the governing equations of fluid flow whilst advancing the solution through space or time to obtain a numerical description of the complete flow field of interest. CAREER OPPORTUNITIES IN CFD – AN OVERVIEW CFD offers career opportunities in different areas based on the specific interest and skill set of the students

- Code development
- Development of various modules of CFD software
- Can be for general purpose software or for codes for specific application.
- Application of CFD software
- For solving industrial problems in diverse areas
- Testing & Validation of CFD codes
- Usually for QA of multipurpose commercial software
- v Documentation for CFD codes
- Writing technical documents like user guides for commercial CFD codes

In industry, opportunities in CFD application are relatively more than those in development, testing and documentation.

/Gohad Sumedha (TY A)

List of all the ISRO achievements in 2021

Spacecraft Launched by ISRO in 2021

In the year 2021, ISRO launched a total of three spacecraft as mentioned below: **1- UNITYsat** **2- Satish Dhawan SAT (SDSAT)**

1- UNITYsat: On 28 February 2021, UNITYsat was successfully launched from PSLV-C51/Amazonia-1 launch vehicle. It is a student satellite and was jointly developed by Jeppiaar Institute of Technology, Sriperumbudur (JITsat), G.H.Raisoni College of Engineering, Nagpur (GHRCEsat) and Sri Shakti Institute of Engineering and Technology, Coimbatore (Sri Shakti Sat).

2- Satish Dhawan SAT (SDSAT): On 28 February 2021, Satish Dhawan SAT (SDSAT) was successfully launched from PSLV-C51/Amazonia-1 launch vehicle. It is a student satellite built by Space Kidz India.

/Bagal Trupti (TY A)

Value Addition

- ❖ Mechanical department have conducted Alumni meet 2k21 on date 11th July 2021 by platform online mode
- ❖ 14 students selected in Bharat Forge Ltd. & 06 students selected in tata motors Ltd.
- ❖ Dr.N.D.Misal, Mr.A.D.Sapkal, Mr.A.A.Pawar & Mr.R.H.More have published Paper in IJNTR Journal.
- ❖ Department of Mechanical Engineering have organized Two Days FDP on topic "Advances in Thermal Engineering" at SVERI's COE (Polytechnic), Pandharpur on 15th Feb to 16th Feb. 2021.
- ❖ Mechanical department have conducted guest lectures on various topics by Mr. Shankar Thorat (Sr.Application Engineer, Accurate gauging and instruments, Pune.), Dhanvijaya Khatmode (Programmer Analyst, Cognizant, pune), Swapnil Mahajan (Graduate Trainee, SKODA Volskovogan India Pvt.Ltd.)
- ❖ Mr.A.D.Sapkal, Sumedha Gohad, Kalyani Bhosale, Pragati Dudhale, Trupti Bagal & Snehal Kamble have published Paper in IRJMETS Journal.
- ❖ Mr.A.D.Sapkal, Mr.S.V.Kulkarni & Mr.U.B.Andh have published Paper in Relevance of Engineering and Science for Environment and Society- R{ES}2, 2021.



MSBTE RESULT: - WINTER 2020**Second Year**

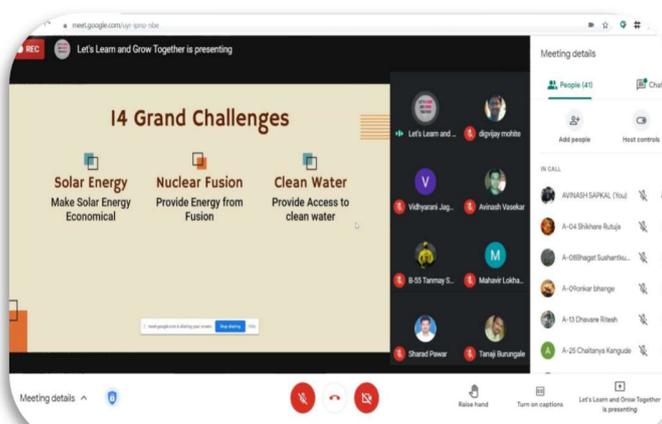
Sr. No	Name of Student	Marks %
1	DOMBE PRASAD DHANANJAY	94.00
2	BHANDARKAVTHE GURURAJ SURESH	92.00
3	DOSHI ATHARVA BHARAT	92.00
4	YADAV NIKITA VITTHAL	91.37

Third Year

Sr. No	Name of Student	Marks %
1	DISALE PRASAD PRADIP	98.57
2	GOHAD SUMEDHA TRIVIKRAM	98.29
3	SARADE KESHAV RAJENDRA	98.10
4	BAGAL TRUPTI BHAGWAT	98.10

❖ The students who scored above 100/100 in respective subjects

Sr.No	Name of Student	Subject	Sr.No	Name of Student	Subject
1	DISALE PRASAD PRADIP	PER	8	SARADE KESHAV RAJENDRA	AMP
2	SARADE KESHAV RAJENDRA	PER	9	MORE SAGAR SANTOSH	AMP
3	DHUMAL VAIBHAV SACHIN	PER	10	KHANDEKAR HEMANT RAJGOPAL	AMP
4	NAKATE ADITYA KANTILAL	PER	11	GOHAD SUMEDHA TRIVIKRAM	AMP
5	BAGAL TRUPTI BHAGWAT	PER	12	BAGAL TRUPTI BHAGWAT	AMP
6	SOLANKAR PRAKASH BIRA	PER	13	SOLANKAR PRAKASH BIRA	AMP
7	DISALE PRASAD PRADIP	AMP	14	KHANDEKAR HEMANT RAJGOPAL	EMD

DEPARTMENTAL EVENTS**Organized FDP****EDITORIAL-**

It gives me a great pleasure to present the eighth volume of our departmental newsletter **IGNITION** to you which gives us the opportunity to put forth the achievements of our Department. In this issue, we have covered different activity carried out at the Department of Mechanical Engineering. I am thankful to all the faculties & students who have contributed to this newsletter.

Mr. Y.D. Chavan

**Campus Drive - Suzlon Global Services Ltd.**