

**Mechanical Engineering Department**  
**Cultural / Co-curricular/ Extra-curricular Activities**  
**AY 2021-2022 (ODD Semester)**

**Departmental Activities Incharge: Mr. Dhiraj Bhandarkar**

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2	Technical Event <b>MechFest 2k21</b> “ <b>Mechanizers 2K21</b> ”	Competition	07 <sup>th</sup> Aug. 2021	14 – 19
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Shri Vile Parle Kelavani Mandal's  
**Institute of Technology, Dhule**  
Department of Mechanical Engineering  
**Event Report MECHiQ-2k21**



The banner features a central image of a wireframe car with the text "MECHiQ-2021" overlaid. To the left is a gear and brain icon, and to the right is a silhouette of a head filled with various icons. The text "Department of Mechanical Engineering Welcomes You All for Quiz Contest" is prominently displayed above the car. Logos for SVKM and MECH-FEST 2021 are in the corners. A QR code and a photo of a child with a lightbulb idea are at the bottom.

SHRI VILE PARLE KELAVANI MANDAL'S  
**Institute of Technology, Dhule**  
Approved by AICTE New Delhi | Affiliated to DBATU, Lonere

Department of Mechanical Engineering  
Welcomes You All for Quiz Contest

**MECHiQ-2021**

**MECH-FEST 2021**

**MECH IQ 2K21**

**Date – 05<sup>th</sup> August, 2021**

**Time – 10.30 A.M.**

**Registration Form Link**  
<https://forms.office.com/r/mSpUUub78v>

No registration/participation fees.  
E-certificates for all participants.  
**Contact : 9420790961 / 7820972717**

**Quiz is based on**

1. 5<sup>th</sup> & 6<sup>th</sup> semester syllabus of Third Year Diploma in Mechanical/Automobile/Production/Metallurgy
2. General Aptitude / Awareness
3. In case of same scores of multiple students, Submission Timestamp will be decisive criteria.

Dr. Amol Badgujar  
Event Coordinator

Dr. Hitesh Thakare  
Event Coordinator

Prof. Mohammed Juneduddin  
HOD, Mechanical Engineering Department

Dr. Nilesh Salunke  
Principal

“MECHiQ-2k21”, a technical quiz competition was organized by department of Mechanical Engineering, SVKM’s Institute of Technology, Dhule on 5<sup>th</sup> August 2021 (Thursday) between 12: 00 p.m. to 12:30 pm. The event was targeted for final year diploma students of Mechanical and allied branches. The event got great response from participants with **92 registrations**. The quiz was based on general awareness and third year Diploma Mechanical Engineering syllabus. The quiz comprised of 50 multiple choice questions to be solved in short span of 30 minutes, thereby assessing technical and general aptitude of Diploma students. **30** students successfully completed quiz within given timeframe.

Hearty Congratulations  
Winners & Runner Ups of  
**MECH-iQ – 2k21**



**Department of Mechanical Engineering, SVKM's IOT, Dhule**

Following are toppers from this quiz competition.

**Mr. Harshal Vijay Ingale** from Government Polytechnic, Dhule.

**Mr. Siddesh Nitin Dalal** from Government Polytechnic, Dhule.

**Ms. Mansi Vijay Chavan** from Government Polytechnic, Dhule.

The winners and runners-up were felicitated with trophies and cash prizes during valedictory session on 17<sup>th</sup> August 2021. All other successful participants were provided with e-Certificate of participation by the organizers. The online feedback forwarded by participants was positive. The other necessary details about **MECHiQ-2k21** event is attached with report.

**Dr. Amol Badgujar**  
Event Coordinator

**Dr. Hitesh Thakare**  
Event Coordinator

**Prof. Mohammed Juneduddin**  
Convener, MechFest-2k21  
HOD Mechanical

**Date:** 15-08-2021

**Place:** Dhule

## **Enclosures**

1. List of students registered
2. List of successful participants
3. Screenshots of emails were sent to the participants after registration was closed.
4. Rules/Instruction of the events.
5. The sample certificate.
6. Feedback form -screenshots.
7. Image taken during valedictory function, showing the winners receiving prizes (17th August-2021)

# 1. List of Students Registered

Name of Candidate (Starting with Surname)	Mobile Number	Email ID	Name of Diploma College
Dhole Sandip Gulabrao	9373194356	sandipdp2002@gmail.com	Government Polytechnic Dhule SSVPS'S BAPUSAHEB SHIVAJIRAO DEORE POLYTECHNIC, DHULE
Wankhede Chaitanya Kishor	7620740836	wankhedechaitanya2@gmail.com	Government Polytechnic Dhule
Haral Gauri Satish NIKAM PRASHANT DNYANESHWAR	9373072720 9881574473	hrlgauri@gmail.com prashantnikam2019@gmail.com	Government Polytechnic Dhule SSPM's Vasanttrao More Polytechnic, Parola
Patil Vishal purushottam	No mobile	vishalppatil8470@gmail.com	Government Polytechnic Nandurbar
Pawara Rakesh Madan	8007374615	rakeshpawara650@gmail.com	Government Polytechnic Dhule
Prajapati urvashi Rajesh	7020151842 9637926312	prijptrvsh@gmail.com	Nikam Institute of Technology (Polytechnic) Dhule
Patil yashraj Nandlal SAINDANE SWAPNIL CHANDRAKANT	7666206817 8421142545	yashrajpatil590@gmail.com swapnilsaindane98@gmail.com	Nikam Institute of Technology (Polytechnic) Dhule SSPM's Vasanttrao More Polytechnic, Parola
PATHAN AAMIR KHAN ASHFAQUE AHMEDAD	9021010151	Khanaamir111111@gmail.com	Government Polytechnic Nandurbar
Patil Prashant Rajendra	7507286704	patilprashant2420@gmail.com	Government Polytechnic Dhule
Bhavsar Darshana Sudhakar	9527750880	darshanabhavsar341@gmail.com	Government Polytechnic Dhule
WAGH RAJ NAVAL	9373300290 9637926312	Waghraj631@gmail.com	Government Polytechnic Dhule Nikam Institute of Technology (Polytechnic) Dhule
Patil yashraj Nandlal	7666206817	yashrajpatil590@gmail.com	Government Polytechnic Dhule SSPM's Vasanttrao More Polytechnic, Parola
Salunke Karan Nanaji	7350140411	Karansalunke735@gmail.com	R C Patel Polytechnic, Shirpur
Patil Vishal purushottam	No mobile	vishalppatil8470@gmail.com	R C Patel Polytechnic, Shirpur
Chambhar Ravi Raju	8208709661	chambharr9@gmail.com	Government Polytechnic Dhule
Vaibhav Kailas Bilade	9623321707	vaibhavbilade@gmail.com	Government Polytechnic Dhule
More krunal Ramesh	9145457449	kunal9145457449@gmail.com	G. H. Raison Polytechnic, Jalgaon SSVPS'S BAPUSAHEB SHIVAJIRAO DEORE POLYTECHNIC, DHULE
Chaudhari Devendra Anil	7757870784	dacsac02@gmail.com	R C Patel Polytechnic, Shirpur
Prasad Deepak Roundal	7588735747	prasadroundal123@gmail.com	R C Patel Polytechnic, Shirpur
Deshmukh Kalpesh Dhansing	8788764420	kalpeshdeahmukh194@gmail.com	Government Polytechnic Nandurbar
Dode Abhishek Gajanan	7218503500	dodeabhishek72@gmail.com	Ahinsa polytechnic
PAWAR PRAKASH RAMESH	8080453274	prakshpawar2000@gmail.com	R C Patel Polytechnic, Shirpur
PATIL ATUL	7066609214	atulsalunkhe98872@gmail.com	R C Patel Polytechnic, Shirpur
Sonawaneahendra Vishnu	9579786815	mahendravsonawane2001@gmail.com	Government Polytechnic Nandurbar
Vikas Yashavant Gavali	9373222940	vikasgavali039@gmail.com	Government Polytechnic Dhule
Bhatu Ganesh Bhavsar	9403667688	bhavsar.bhatu88@gmail.com	Government Polytechnic Dhule
Deore Nikhil Sanjiv JAYRAJ MEGHRAJ MONDHEKAR	7057318771 9112773626	nikhilsanjivdeore@gmail.com jayrajmondhekar20420@gmail.com	Government Polytechnic Dhule
Badgujar jitendra dattu	8668574950	Jitendrabadgujar98@gmail.com	Ahinsa Polytechnic, Dondaicha
Girase Raj Rajendrasing	8378866060	giraseraj35@gmail.com	Ahinsa Polytechnic, Dondaicha
Bagul Urvashi Sudhakar MAHAJAN GOVARDHAN SHANTARAM	7990965973 9503851249	ayushibagul163@gmail.com govardhanmahajan02@gmail.com	Government Polytechnic Dhule
BHOKARE HARSHAL AJAY	7083726561	harshalbhokare2002@gmail.com	Government Polytechnic Dhule
Patil Gunvant Dinkar	7798581693	gunvantpatil4545@gmail.com	Government Polytechnic Nandurbar

Avhad Rohit Rajendra	9325539270	rohitavhad2503@gmail.com	Government Polytechnic Dhule
Girase Nilesh Bhimsing	9766234115	nileshrajput7174@gmail.com	Government Polytechnic Nandurbar
Chavan Jay Jitesh	8830389680	jay01chavan@gmail.com	Government Polytechnic Dhule
Deore chetan Sunil	8007784752	Chikhudeore@gamil.com	Government Polytechnic Dhule
ANSARI MUHAMMAD USAID MUHAMMAD IBRAHIM	7774947838	ansariusaid3392@gmail.com	Government Polytechnic Dhule
Wadile Purushottam Babu	7875196894	purushottamwadile2001@gmail.com	Government Polytechnic Dhule
RAGADE UDAY SURESH	8208886026	udayragade482002@gmail.com	Government Polytechnic Dhule
Patil Dipanjali Sharad	8007475674	dipanjaliPatil1121@gmail.com	Government Polytechnic Dhule
Nikam Sakshi Sunilrao	7262081308	sakshinikam600@gmail.com	Government Polytechnic Dhule
Dhatrak Dnyaneshwar Daga	8766415333	dhatrakdnyaneshwar246@gmail.com	Ahinsa Polytechnic, Dondaicha Nikam Institute of Technology (Polytechnic) Dhule
Shaikh shoeb shaikh Mukhtar	9028134787	shaikhshoeb4787@gmail.com	
Yeole Himanshu Pravin	9049623351	yeolehimanshu2002@gmail.com	G.H.Raisoni Polytechnic Jalgaon
LOHAR SACHIN VASUDEO	9561758806	sachhu6699@gmail.com	SSPM's Vasanttrao More Polytechnic, Parola
CHAUDHARI YOGESH VILAS	9075180562	yogeshchaudhari0410@gmail.com	SSPM's Vasanttrao More Polytechnic, Parola
Pakhale kalpesh rajendra	7875502483	Kalpeshpakhale@gmail.com	Nikam Institute of Technology (Polytechnic) Dhule
Shinde Harshal Vasudev	7719975705	harshal77199@gmail.com	Government Polytechnic Nandurbar
Chavan Mansi Vijay	9373621728	mavch10112001@gmail.com	Government Polytechnic Dhule
Hemant Ratnakar Wani	8830618145	hemantwani2000@gmail.com	Government Polytechnic Nandurbar
Haral Gauri Satish	9373072720	hrlgauri@gmail.com	Government Polytechnic Dhule
Hemant Dilip Girase	9921477671	hemantgirase1996@gmail.com	Nikam Institute of Technology (Polytechnic) Dhule
Patil kalpesh Rajubhai	9403461134	Kp888694@gmail.com	Government Polytechnic Nandurbar
Suraj Lalu Ahire	9325439213	Pintuahire1@gmail.com	Government Polytechnic Dhule
TADAVI YOGESH BHIMSING	9404507313	tadvij 292@gmail.com	Nikam Institute of Technology (Polytechnic) Dhule
Pawara dinesh kushal	94202 61394	Pawarad884@gmail.com	Nikam Institute of Technology (Polytechnic) Dhule
Nerkar rahul barku	8767522381	rahulnerkar21303@gmail.com	Government Polytechnic Dhule
Dhiraj Dinesh Badgujar	7709303638	dhirajbadgujar86@gmail.com	Smt. Sharchchandrika Suresh Patil Institute of Technology
Ingale Harshal Vijay	9359519789	ingaleharshalv@gmail.com	Government Polytechnic Dhule
Mali Vishal Ashok	7498386808	vishalmali15714@gmail.com	Government Polytechnic Dhule
Mali Vishal Ashok	7498386808	vishalmali15714@gmail.com	Government Polytechnic Dhule
Mahajan Durgesh Sunil	8530615472	durgesmahajan31@gmail.on	Government Polytechnic Dhule
Baisane Rahul Kashinath	7499437070	rahulbaisane161@gmail.com	Government Polytechnic Dhule
Rane vishal prakash	9422774254	ranev247@gmail.com	Gh raisoni polytechnic jalgaon
PAGARE CHAITANYA JAYVANT	9373168944	chaitanya8903@gmail.com	Government Polytechnic Dhule
Utkarsh Vishwasrao Patil	8668582651	utkarshpatil1110@gmail.com	Government Polytechnic Dhule
More Aaditya Dnyaneshwar	7666379985	adityamore2100@gmail.com	Government Polytechnic Dhule
Gurav Shivcharan Vilas	7058866008	guravshivcharan123@gmail.com	Nikam Institute of Technology (Polytechnic) Dhule
Manyar Mohammad Ali Mohammad Raza	8793150774	Mohammadali2314@gmail.com	Ahinsa Polytechnic, Dondaicha
WANI KUNAL DILIP	7066111343	kunal706611@gmail.com	SSPM's Vasanttrao More Polytechnic, Parola

Lokesh Rajendra Puranik	8766831921	puraniklokesh74@gmail.com	Government Polytechnic Nandurbar
Dipak Kailas Chaudhari	9730501094	chaudharidipak854@gmail.com	Government Polytechnic Dhule
Dipak Kailas Chaudhari	9730501094	chaudharidipak854@gmail.com	Government Polytechnic Dhule
Sonawane rahul bhagwan	7020552230	rp0771337@gmail.com	GANGAMAI POLYTECHNIC Nagaon Dhule
PATHAN AAMIR KHAN ASHFAQUE AHEMAD	9021010151	Khanaamir111111@gmail.com	SSPM's Vasantao More Polytechnic, Parola
GAIKAWAD AKSHAY DILIP	7218292078	akshaygaikwad58719@gmail.com	Government Polytechnic Dhule
Sonawane Akash	7745050422	Akashsonawane2409@gmail.com	Government Polytechnic Dhule
Chaitanya Kishor Wankhede	7620740836	wankhedechaitanya2@gmail.com	SSVPS'S BAPUSAHEB SHIVAJIRAO DEORE POLYTECHNIC, DHULE
Dalal siddesh Nitin	9970505605	dalalsiddesh2000@gmail.com	Government Polytechnic Dhule
Dalal siddesh Nitin	9970505605	dalalsiddesh2000@gmail.com	Government Polytechnic Dhule
Jadhav Yash Sanjay	9359867943	yashj1506@gmail.com	SSVPS'S BAPUSAHEB SHIVAJIRAO DEORE POLYTECHNIC, DHULE
Badgujar Nikhil Himmat	9403614378	badgujarn09@gmail.com	Smt. Sharchchandrika Suresh Patil Institute of Technology
Mali dnyaneshwar chhotu	9075282155	malidnyaneshwarchotu14750077@Ema li.c	Ahinsa Polytechnic, Dondaicha
patil dianjali sharad	8007475674	dipanjalipatil1121@gamil.com	Government Polytechnic Dhule
JAYRAJ MEGHRAJ MONDHEKAR	9112773626	jayrajmondhekar20420@gmail.com	Government Polytechnic Dhule
Muffadal tayyeb Sakriwala	9421038692	muffadalsakriwala2424@gmail.com	SSVPS'S BAPUSAHEB SHIVAJIRAO DEORE POLYTECHNIC, DHULE
Sujay gulve	9370444598	sujaygulve@gmail.com	SSVPS'S BAPUSAHEB SHIVAJIRAO DEORE POLYTECHNIC, DHULE
Mali dnyaneshwar chhotu	9075282155	malidnyaneshwarchotu14750077@Ema li.c	Ahinsa Polytechnic, Dondaicha

## 2. List of successful participants


Name of Candidate	Mobile Number	Email ID	College Name
Prasad Deepak Roundal	7588735747	prasadroundal123@gmail.com	Ssvps polytechnic Dhule
Deshmukh Kalpesh	8788764420	kalpeshdeahmukh194@gmail.com	R C Patel Polytechnic shirpur
Avhad Rohit Rajendra	9325539270	rohitavhad2503@gmail.com	Government Polytechnic Dhule
Harshal Vasudev shinde	7719975705	harshal77199@gmail.com	Government polytechnic Nandurbara
Devendra Anil Chaudhari	7757870784	dacsac02@gmail.com	G.H. Rasoni Polytechnic, Jalgaon
Durgesh Sunil Mahajan	8530615472	durgeshmahajan31@gmail.com	SMDR Government polytechnic Dhule
NIKAM PRASHANT DNYANESHWAR	9881574473	prashantnikam2019@gmail.com	Government Polytechnic Dhule
Nerkar Rahul Barku	8767522381	rahulnerkar21303@gmail.com	Government polytechnic dhule
Lokesh Rajendra Puranik	8766831921	puraniklokesh74@gmail.com	Gp Nandurbar
Sakshi Sunilrao Nikam	7262081308	sakshinikam600@gmail.com	Government polytechnic dhule
Deore chetan Sunil	8007784752	Chikhudeore@gmail.com	Government polytechnic dhule
UDAY SURESH RAGADE	8208886026	udayragade482002@gmail.com	S.M.D.R GOVERNMENT POLYTECHNIC DHULE
Himanshu Pravin Yeole	9049623351	yeolehimanshu2002@gmail.com	G. H. Rasoni Polytechnic Jalgaon
Gunvant Dinkar Patil	7798581693	gunvantpatil4545@gmail.com	Government Polytechnic Nandurbar
Siddesh Nitin Dalal	9970505605	dalalsiddesh2000@gmail.com	Government polytechnic dhule
JAYRAJ MEGHRAJ MONDHEKAR	9112773626	jayrajmondhekar20420@gmail.com	GOVERNMENT POLYTECHNIC DHULE
Ingale Harshal Vijay	9359519789	ingaleharshalv@gmail.com	S.M.D.R. Government Polytechnic, Dhule
Jadhav Yash Sanjay	9359867943	yashj1506@gmail.com	S.S.V.P's.bapusaheb shivajirao deore polytechnic dhule
Ahire suraj lalu	9325439213	Pintuahire1@gmail.com	SMDR GOVERNMENT POLYTECHNIC DHULE
Raj rajendrasing girase	8378866060	giraseraj35@gmail.com	Ahinsa politechnic
Chambhar Ravi Raju	8208709661	chambharr9@gmail.com	R C Patel polytechnic, shirpur
Pawara Rakesh Madan	8007374615	rakeshpawara650@gmail.com	Government Polytechnic Nandurbar
Sandip Gulabrao Dhole	9373194356	sandipdp2002@gmail.com	g p dhule
Mansi Vijay Chavan	9373621728	mavch10112001@gmail.com	Government polytechnic,dhule.
Dipanjali Sharad Patil	8007475674	dipanjaliPatil1121@gmail.com	Government polytechnic dhule
Urvashi Sudhakar Bagul	7990965973	ayushibagul163@gmail.com	Government polytechnic dhule
Mali Vishal Ashok	7498386808	vishalmali15714@gmail.com	S.M.D.R.Government Polytechnique Dhule
PAGARE CHAITANYA JAYVANT	9373168944	chaitanya8903@gmail.com	S.M.D.R. Government Polytechnic Dhule
LOHAR SACHIN VASUDEO	9561758806	sachhu6699@gmail.com	SSPM's Vasantrao More Polytechnic
Manyar Mohammad Ali Mohammad Raza	8793150774	mohammadali2314@gmail.com	Ahinsa Polytechnic Dondaicha





### 3. Screenshots of emails were sent to the participants after registration was closed.

Invitation for MechFest 2021 Inauguration and instructions for MechIQ 2021 event

Flag for follow up.

 Amol Badgujar (Dr)  
Wed 8/4/2021 4:56 PM  
To: sandipdp2002@gmail.com; wankhedechaitanya2@gmail.com; hrlgauri@gmail.com; prashantnikam2019@gmail.com +67 others  
Cc: Hitesh Thakare (Dr.); Mohammed Juneduddin

 MechIQ\_2K21rules.pdf  
694 KB

 MechFest-2K21-Inaugur...  
343 KB


2 attachments (1 MB) Download all Save all to OneDrive - Shri Vile Parle Kelavani Mandal

Dear Students,  
We department of Mechanical Engineering, SVKM's Institute of Technology, Dhule invite you to attend the inauguration ceremony of MechFest 2021. The invitation containing link for same is attached. If you are joining via Mobile phone, then make sure that you have downloaded **Microsoft Teams App**.  
We will commence with Mech IQ event immediately after inauguration ceremony probably at 11:15 AM.  
**Test will start sharp at 11:30 and you will receive a separate email for test link.**  
Instructions for Mech IQ are also attached herewith.

Thanks & Regards,

**Dr. Amol Badgujar**  
Ph.D. (IIT Bombay)  
Assistant Professor  
Department of Mechanical Engineering  
SVKM's Institute of Technology, Dhule  
Email: amol.badgujar@svkm.ac.in  
Phone: +91 9420790961

Link for MechIQ-2021 quiz

 Amol Badgujar (Dr)  
Thu 8/5/2021 11:46 AM  
To: sandipdp2002@gmail.com; wankhedechaitanya2@gmail.com; hrlgauri@gmail.com; prashantnikam2019@gmail.com +74 others

Dear Students,  
Please click on the link below to attempt MechIQ-2021 quiz event.  
Link will open only after 12:00 AM.  
Quiz should be submitted on or before 12:30 PM

[https://forms.office.com/Pages/ResponsePage.aspx?id=SEFPx0bXxCUqsmX6\\_I1y8gfvA\\_Wa8Y7VfVYAXuaVEZSIUNkdKUUo5RDO3TIVSTjgxQVBWVWVixT1BYUS4u](https://forms.office.com/Pages/ResponsePage.aspx?id=SEFPx0bXxCUqsmX6_I1y8gfvA_Wa8Y7VfVYAXuaVEZSIUNkdKUUo5RDO3TIVSTjgxQVBWVWVixT1BYUS4u)

**Dr. Amol Badgujar**  
Ph.D. (IIT Bombay)  
Assistant Professor  
Department of Mechanical Engineering  
SVKM's Institute of Technology, Dhule  
Email: amol.badgujar@svkm.ac.in  
Phone: +91 9420790961

## 4. Rules/Instruction of the events



# Rules for Mech-iQ-2021



- **MCQ Quiz:** 50 questions will be asked. Time Duration 30 min.
- **No negative marking**
- **MCQs are based upon Diploma Mechanical Engineering syllabus and general awareness**
- In case of same marks (Tie) by various participants, then minimum response time / submission of quiz will be considered to decide winners.
- Only one response allowed per participant. Multiple responses will lead to disqualification.
- Quiz link will be shared on What's App group at 11.25 am on 05 August 2021 after Inaugural session.
- Participants **MUST** be ready with their smartphone handset/PC/Laptop fully charged before start of Quiz and ensure proper internet connection.
- Winners and Runner ups will receive **Cash Prize, trophies and e-certificate of appreciation.**
- All other participants will receive e- certificate of participation.

**All the Best**

## 5. The sample Winner certificate



## The sample Participant certificate



## 6. Feedback form -screenshots

Feedback for MECHIQ-2021 Event

\* Required

1. How was your overall experience ? \*

☆ ☆ ☆ ☆ ☆

2. How was Punctuality of events ? \*

☆ ☆ ☆ ☆ ☆

3. How was ease of Registration ? \*

☆ ☆ ☆ ☆ ☆

4. Did coordinators clarify your queries ? \*

4. Did coordinators clarify your queries ? \*

☆ ☆ ☆ ☆ ☆

5. Was MECHIQ-2021 event useful to you ? \*

☆ ☆ ☆ ☆ ☆

6. Quality of questions in competition ? \*

☆ ☆ ☆ ☆ ☆

Submit

This content is created by the owner of the form. The data

**7. Image taken during valedictory function, showing the winners receiving prized (17th August-2021)**





Shri Vile Parle Kelavani Mandal's  
**INSTITUTE OF TECHNOLOGY, DHULE**  
 Department of Mechanical Engineering

**Report on**

**“MechFest-2K21\_Mechanizer\_One Day National Level Project Competition”**

The Project-Based Learning approach creates a constructive learning environment in which students construct their own Projects. In order to improve learning environment, SVKM's Institute of Technology, Department of Mechanical Engineering organised a Project Competition for students. So, Online One Day National Level Project Competition was organised for Diploma Mechanical Engineering by SVKM's IOT, Dhule on 7<sup>th</sup> of August 2021.

Students of various diploma colleges of different streams invited for competition. Students had presented and demonstrated their projects in presence of Judges, Head of Department and departmental Faculties. The details of competition are:

<b>MechFest-2K21_Mechanizers</b>	
<b>Date of Event</b>	7 <sup>th</sup> August 2021
<b>Time</b>	10:15 AM to 4:00 AM
<b>Total No. Participants (Team)</b>	09
<b>Name of Judges for Event</b>	Prof. Yogesh D. Sonawane Prof. Satish R. Patil

The Projects are evaluated on the Following Criteria and some snapshots are attached below:

Sr. No.	Criteria	4	3	2	1
1	Concept (Project idea with conceptual mapping)				
2	Technical (Project Supported with technical literature)				
3	Navigation (Flow of Presentation)				
4	Grammar and Spelling				

The brochure features logos for SVKM's IOT, SVKM, and MECH-FEST. It includes the following text:

**MECHANIZERS**  
*National Level Online Project Competition*

**Instructions:**

- ❑ Participants are supposed to present their Final Year project along with the prototype model (optional).
- ❑ Participants are supposed to make Power point presentation of slides should not be more than twelve, which should include brief introduction, technical data, analysis, findings, conclusion etc.
- ❑ The title sheet of the Power Point Presentation should clearly bear the names of project group members, Contact number and details of the college they represent.
- ❑ Maximum 4 students can participate in a group.
- ❑ The decision of judges will be final and binding on all participants.

**Registration Fees:** Registration for the competition is free.

**Eligibility Criteria:** The Online Project Competition is open to Mechanical students studying in Final Year Diploma.

**Scheduled date for Competition:** 7th August 2021, 10am to 4 pm.

**Registration Link:** <https://forms.office.com/vXnTRV9QQCfr>  
 \*Registration will close on 6th August 4pm\*

**Platform:** MS-Teams or Google Meet or Zoom

**QR code for Registration:** [QR Code]

**Contact Information:**

Prof. Yogesh Sonawane Event Coordinator: 9975708447	Prof. Satish Patil Event Coordinator: 9403258345	Prof. Mohammed Juneduddin HOD, Mechanical Engineering Department	Prof. Dr. Nilesh Salunke Principal
--	---	---	---------------------------------------

Figure 1: Brochure of Event

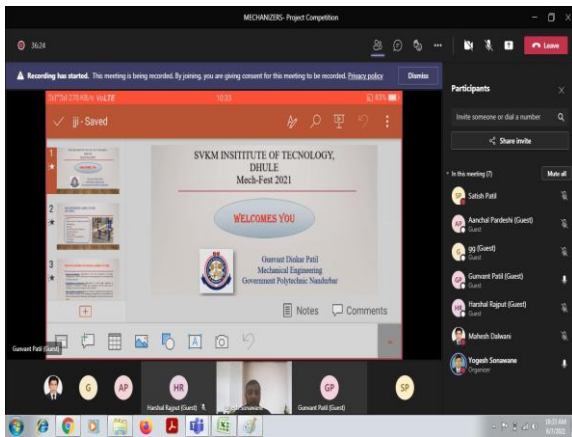


Figure 2: Presentation by Participant

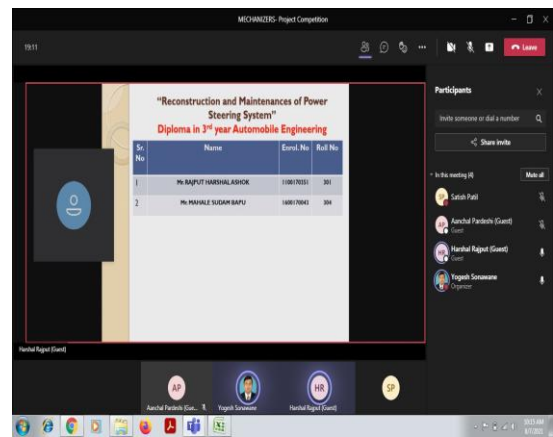


Figure : Presentation by Participant

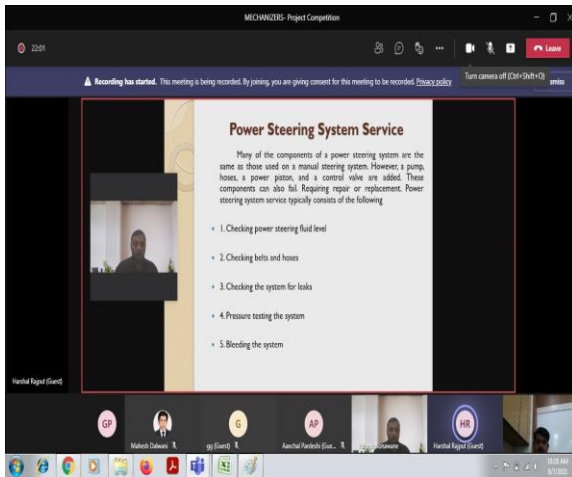


Figure 4: Presentation by Participant

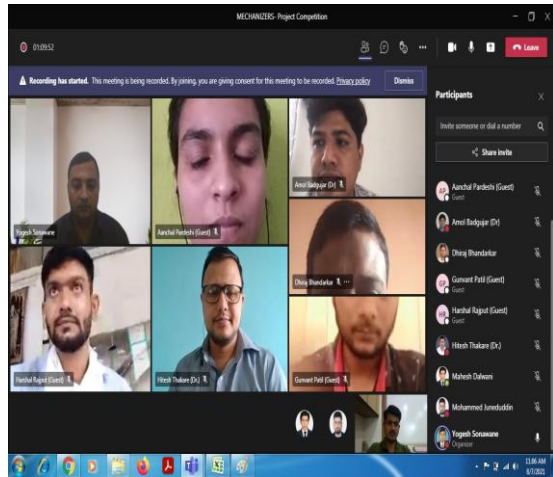


Figure 5: Vote of Thanks to all



Figure 7: Winners of Mechanizers



Figure 7: Certificate of Participation

**Prof. Yogesh Sonawane**  
Event coordinator

**Prof. Satish Patil**  
Event coordinator

**Prof. Mohammed Juneduddin**  
HOD, Mechanical Engg. Dept.

Enclosures



1. List of students Registered
2. List of Student Successfully Participated
3. Rules of Event
4. Sample Certificates
5. Feedback form Screenshots
6. Images of Valedictory Function
7. Evaluation Sheets.

1. List of students Registered

Sr No	Name of the Candidate	Mobile Number	Topic Name	College Name
1	Rajput Harshal Ashok	7741899048	Maintenances of power Stering System	Government Polytechnic Dhule
	Mahale Sudam Babu	8605071692		
2	Prakash bhausing pawara	9307628035	Solar water distillation	R. C. Patel Polytechnic, Shirpur
3	Patil Guntant Dinkar	7798581693	Multipropose Agriculture Machine	Government Polytechnic Nandurbar
4	Shaikh shoeb shaikh Mukhtar	9028134787	Show working of I C Engine	Nikam Institute of Technology (Polytechnic)
5	Himanshu Pravin Yeole	9049623351	Fabrication of Paper Plate Making Machine	G.H.Raisoni Polytechnic Jalgaon
	Devendra Anil Chaudhari	7757870784		
6	PAWARA DINESH KUSHAL	94202 61394	"SPRING LOADED MATERIAL HANDLING"	Nikam Institute of Technology (Polytechnic)
7	vishal Rane	9422774254	Vaccum assisted climber	Gh raisoni polytechnic jalgaon
8	Tushar ShreeKrishna mahajan	8263832557	Soller parabolic water heating system	R. C. Patel Polytechnic, Shirpur
9	AANCHAL SATISH PARDESHI	8530490320	MINI HYDRAULIC PRESS MACHINE	Nikam Institute of Technology (Polytechnic)

2. List of Student Successfully Participated

Sr No	Name of the Candidate	Mobile Number	Topic Name	College Name
1	Rajput Harshal Ashok	7741899048	Maintenances of power Stering System	Government Polytechnic Dhule
	Mahale Sudam Babu	8605071692		
2	Patil Guntant Dinkar	7798581693	Multipropose Agriculture Machine	Government Polytechnic Nandurbar
3	vishal Rane	9422774254	Vaccum assisted climber	Gh raisoni polytechnic jalgaon
4	AANCHAL SATISH PARDESHI	8530490320	MINI HYDRAULIC PRESS MACHINE	Nikam Institute of Polytechnic

### 3. Rules of Event

1. Participants are supposed to present their Final Year project along with the prototype model (optional).
2. Participants are supposed to make Power point presentation of slides should not be more than twelve, which should include brief introduction, technical data, analysis, findings, conclusion etc.
3. The title sheet of the Power Point Presentation should clearly bear the names of project group members, Contact number and details of the college they represent.
4. Maximum 4 students can participate in a group.
5. The decision of judges will be final and binding on all participants.

### 4. Winner and Sample Certificates



### 5. Feedback form Screenshots

Feedback form for One Day Online Project Competition "MECHANIZERS"

Organized by Department of Mechanical Engineering and Mechanical Engineering Student's Association (MESA) of SVKM's IOT, Dhule

\* Required

1. Group No \*

Enter your answer

2. Name of candidate (First Middle Surname, which is to be printed on CERTIFICATE) \*

Enter your answer

Enter your answer

6. Entry Process for Competition was \*

☆☆☆☆

7. Flow of Competition was \*

☆☆☆☆

8. Such Competitions must be organized for students in future also \*

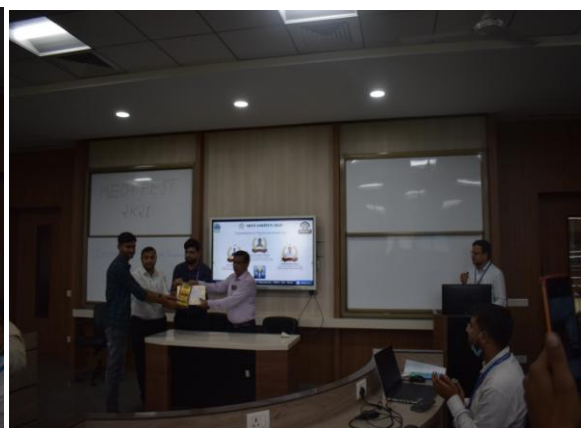
Yes

No

9. Are you interested to visit SVKM Institute of Technology \*

Yes

## 6. Images of Valedictory Function



## 7. Evaluation Sheets

### 1. Anchal Pardeshi

Sr. No.	Criteria	4	3	2	1
1	Concept (Project idea with conceptual mapping)	4			
2	Technical (Project Supported with technical literature)		3		
3	Navigation (Flow of Presentation)	4			
4	Grammar and Spelling	4			
	Total		<b>15</b>		

### 2. Gunvant Patil

Sr. No.	Criteria	4	3	2	1
1	Concept (Project idea with conceptual mapping)	4			

2	Technical (Project Supported with technical literature)		3		
3	Navigation (Flow of Presentation)		3		
4	Grammar and Spelling	4			
	Total		<b>14</b>		

**3. Harshal Rajput and Nishant Mahale**

<b>Sr. No.</b>	<b>Criteria</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>
1	Concept (Project idea with conceptual mapping)	4			
2	Technical (Project Supported with technical literature)		3		
3	Navigation (Flow of Presentation)			2	
4	Grammar and Spelling		3		
	Total		<b>12</b>		



SHRI VILE PARLE KELAVANI MANDAL'S  
**Institute of Technology, Dhule**

Approved by AICTE | Affiliated to DBATU



## Event Report

### Abstract

CAD-WAR 2k21 is an event which was organized on 10 August 2021 by the Department of Mechanical Engineering, Shri Vile Parle Kelavani Mandal's (SVKM's) Institute of Technology, Dhule under the umbrella of MechFest 2k21.

### Event Coordinators

1. Prof. Bhushan Behede
2. Prof. Dhiraj Bhandarkar

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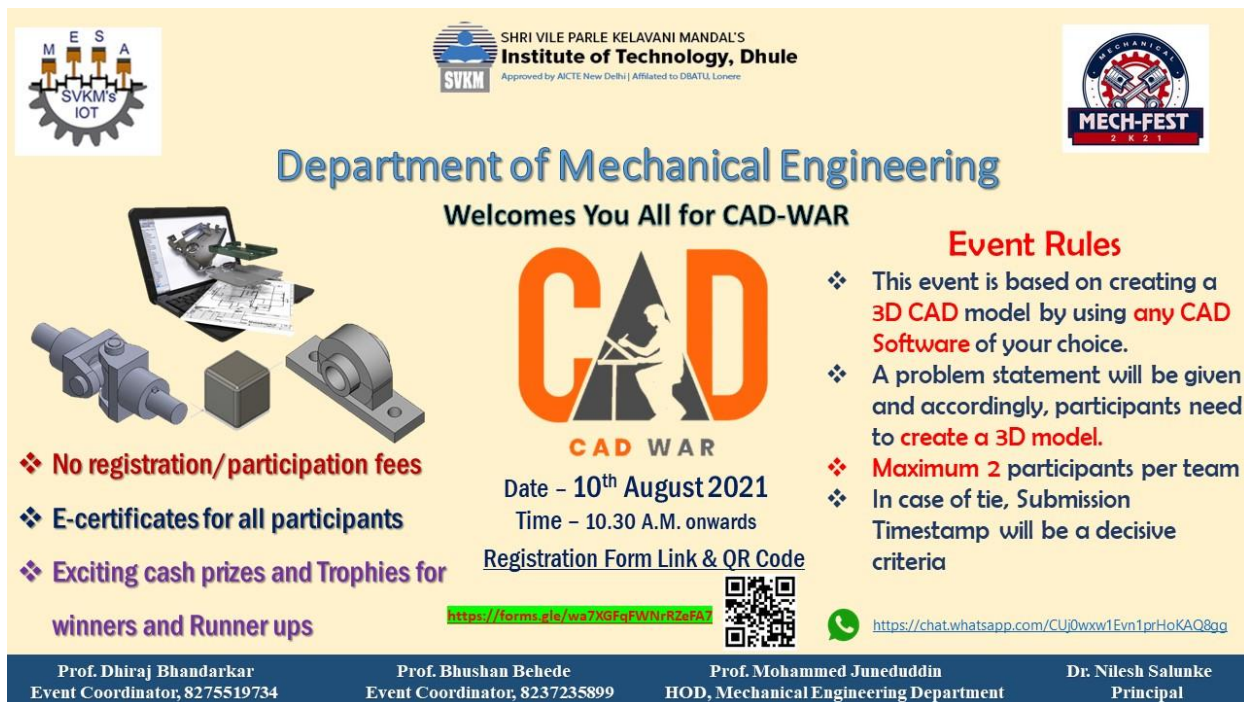
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## 1. Event Introduction

CAD-WAR 2k21 organized by the Department of Mechanical Engineering, SVKM Institute of Technology, Dhule under the umbrella of MechFest 2k21

CAD-WAR is a technical event based on software AUTOCAD/INVENTOR PROFESSIONAL/AUTODESK FUSION 360/SIEMENS NX/SOILD EDGE/SOLID-WORKS/CATIA/CREO/Any other. Design of product is everything. Design is the primary stage of manufacturing. This event is a challenge for everyone. You can show your skills or prove to yourself that you are a unique designer. You can grow by design knowledge and improve your skills by this event individually. Therefore, let us show your skills at this event. The fastest and Skillful person will be the winner of this event.

## 2. Event Flyer



The flyer features a yellow background with a blue header. At the top left is the SVKM's IOT logo, and at the top right is the MECH-FEST 2K21 logo. The central text reads 'Department of Mechanical Engineering Welcomes You All for CAD-WAR'. Below this is a large 'CAD' logo with a silhouette of a person working at a computer. To the left of the 'CAD' logo are images of a laptop, a 3D model of a mechanical part, and a physical 3D printed part. To the right of the 'CAD' logo is a list of 'Event Rules'. At the bottom, there is a registration form link, a QR code, and a WhatsApp chat link. The footer contains the names and contact information of the event coordinators and the principal.

**Department of Mechanical Engineering**  
Welcomes You All for CAD-WAR

**Event Rules**

- ❖ This event is based on creating a 3D CAD model by using **any CAD Software** of your choice.
- ❖ A problem statement will be given and accordingly, participants need to **create a 3D model**.
- ❖ **Maximum 2** participants per team
- ❖ In case of tie, Submission Timestamp will be a decisive criteria

**CAD WAR**  
Date - 10<sup>th</sup> August 2021  
Time - 10.30 A.M. onwards  
Registration Form Link & QR Code

<https://forms.gle/wa7XGFqFWNrRZeFA7>

<https://chat.whatsapp.com/CUj0ww1Evn1prHoKA08gg>

Prof. Dhiraj Bhandarkar  
Event Coordinator, 8275519734

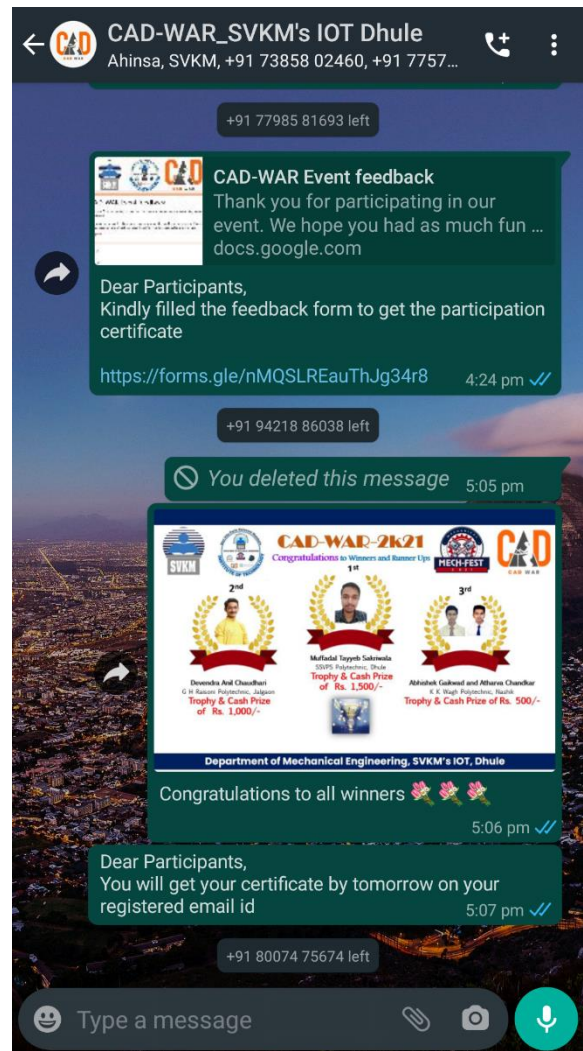
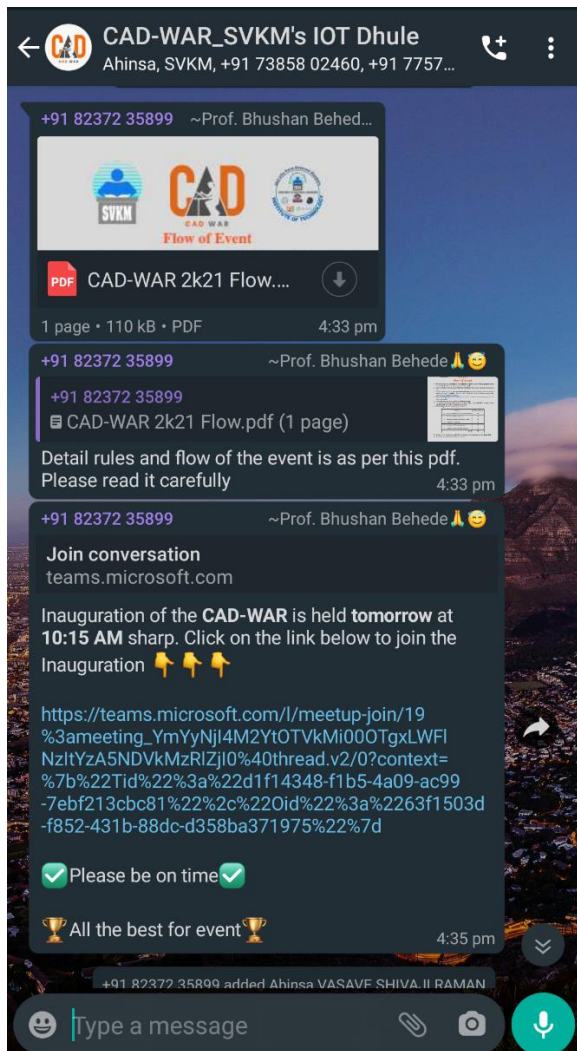
Prof. Bhushan Behede  
Event Coordinator, 8237235899

Prof. Mohammed Juneduddin  
HOD, Mechanical Engineering Department

Dr. Nilesh Salunke  
Principal



### 3. Publicity of the Event



## 4. Rules/Instruction of the events



### Flow of Event

1. We will provide you **2 problems** on your **registered E-mail ID** and the **WhatsApp group** created exactly at **10:30 AM**, out of which you have to select **any 1**.
2. Draw a **3D model** of the same in the **software of your choice**, which you have given in the registration form.
3. You can upload your file in **.iges (preferred)/.part/.jpeg** or any type of format as per your selected software by **Any 1 member** from the team, filling this form to submit drawing files: <https://forms.gle/GPJqPr7vQgSeuNEw7>
4. If you cannot upload your answer file/files, then contact coordinators immediately well before the submission deadline.
5. Please **do not post** the answer file in any **WhatsApp group**.
6. The total time for drawing and uploading the answers is **3 hrs.** i.e. up to **01:30 PM**. Answers received **after 01:30 PM will not be considered for the event**.
7. **The marking scheme** of the drawing is as follows -

Criteria	Maximum Marks
1. Proper and effective use of tools/commands	10
2. Manufacturability of the part	10
3. Drawing as per the dimensions provided	10
4. Completion of Drawing	10
5. Accuracy and Time management	05
6. Aesthetic features applied to the parts	05
<b>Total</b>	<b>50</b>

8. Winners will be declared after **4:30 PM**. E-Certificates will be dispatched up to **11 august 2021**.
9. If you have, any queries then feel free to contact us.

**Prof. Bhushan C. Behede**  
8237235899

**Prof. Dhiraj Bhandarkar**  
9511715313

## 5. Registration details

---

### 5.1 Registration Form:

#### CAD-WAR Event registration

\*Event Date and Timing: 10 August - 10:30 AM to 01:30 PM

\*Event Details:

CAD-WAR is a technical event based on software AUTOCAD/INVENTOR PROFESSIONAL/AUTODESK FUSION 360/SIEMENS NX/SOILD EDGE/SOLID-WORKS/CATIA/CREO/Any other. Design of product is everything. Design is primary stage of manufacturing. This event a challenges to everyone. You can show your skills or prove yourself that you are a unique designer. You can grow by design knowledge and improve your skills by this event individually. Therefore, let's show your skills in this event. Fastest and Skillful person will be Winner of this event.

\*Event Rules:

---> This event is based on creating a 3D CAD model by using any CAD Software of your choice.

---> A problem statement (2D Drawing Views) will be given and accordingly, participants need to create a 3D model.

---> Maximum 2 participants per team

---> In case of tie, Submission Timestamp will be a decisive criteria

\*If you are using WhatsApp then please Join WhatsApp group -

<https://chat.whatsapp.com/CUj0wxw1Evn1prHoKAQ8gg>

\* Required

1. Number of students in a Group (Maximum-2 and minimum-1 student can participate) \*

Mark only one oval.

1

2

2. Select the CAD Software of your choice from the list \*

*Mark only one oval.*

- Solidworks
- AutoCAD
- CATIA
- PRO-E
- AutoCAD Inventor
- Creo Parametric 3D Modeling Software
- Fusion 360
- Inventor
- Solidedge
- ANSYS
- Other: \_\_\_\_\_

3. Full Name of Participant No. 1 (Surname First) \*

\_\_\_\_\_

4. Mobile Number of Participant No. 1 (Preferably WhatsApp) \*

\_\_\_\_\_

5. Email ID of Participant No. 1 \*

\_\_\_\_\_

6. Diploma Branch of Participant No. 1 \*

*Mark only one oval.*

- Automobile Engineering
- Mechanical Engineering
- Production Engineering
- Other

7. College of Participant No. 1 \*

*Mark only one oval.*

- Shri Shivaji Vidya Prasarak Sanstha's Late Bapusaheb Shivajirao Deore Polytechnic, Dhule
- Adarsh Polytechnic, Dhule
- Government Polytechnic Dhule
- Nagaon Education Society, S Gangamai Polytechnic, Nagaon, Dhule
- Netaji Subhashchandra Bose Education Trust's Netaji Polytechnic College
- Nikam Institute of Technology (Polytechnic)
- R. C. Patel Polytechnic, Shirpur
- Sanjay Education Society's Polytechnic
- Shri Jaykumar Rawal Institute of Technology, Dondaicha (Polytechnic)
- Ves's Ahinsa Polytechnic, Dondaicha
- Other: \_\_\_\_\_

8. Parent's Mobile Number of Participant No. 1 (Prefer WhatsApp)

\_\_\_\_\_

9. Have you joined WhatsApp group?

Mark only one oval.

Yes

No (I don't use WhatsApp)

Details of  
Participating  
Member No. 2

Please enter the details of Second member of your team. If your team contains only 1 Member then leave the questions and finally submit the form.

10. Full Name of Participant No. 2 (Surname First) \*

---

11. Mobile Number of Participant No. 2 (Preferably WhatsApp) \*

---

12. Email ID of Participant No. 2 \*

---

13. Diploma Branch of Participant No. 2 \*

Mark only one oval.

Automobile Engineering

Mechanical Engineering

Production Engineering

Other

14. College of Participant No. 2 \*

*Mark only one oval.*

- Shri Shivaji Vidya Prasarak Sanstha's Late Bapusaheb Shivajirao Deore Polytechnic, Dhule
- Adarsh Polytechnic, Dhule
- Government Polytechnic Dhule
- Nagaon Education Society, S Gangamai Polytechnic, Nagaon, Dhule
- Netaji Subhashchandra Bose Education Trust's Netaji Polytechnic College
- Nikam Institute of Technology (Polytechnic)
- R. C. Patel Polytechnic, Shirpur
- Sanjay Education Society's Polytechnic
- Shri Jaykumar Rawal Institute of Technology, Dondaicha (Polytechnic)
- Ves's Ahinsa Polytechnic, Dondaicha
- Any Other college

15. Parent's Mobile Number of Participant No. 2 (Prefer WhatsApp)

---

16. Have you joined WhatsApp group?

*Mark only one oval.*

- Yes
- No (I don't use WhatsApp)

---

This content is neither created nor endorsed by Google.

Google Forms

## 5.2 Link of the registration responses received from the participants

[https://svkmmumbai-my.sharepoint.com/:x/r/personal/mohammed\\_juneduddin\\_svkm\\_ac\\_in/Documents/MechFest-21/CADWAR/Registraion%20Details-Excel%20and%20.pdf%20File/CAD-WAR%20Event%20Registration%20Details.xlsx?d=w1210b22004e145e9b41601321367655e&csf=1&web=1&e=KPLanr](https://svkmmumbai-my.sharepoint.com/:x/r/personal/mohammed_juneduddin_svkm_ac_in/Documents/MechFest-21/CADWAR/Registraion%20Details-Excel%20and%20.pdf%20File/CAD-WAR%20Event%20Registration%20Details.xlsx?d=w1210b22004e145e9b41601321367655e&csf=1&web=1&e=KPLanr)

## 5.3 The total number of students registered: 18

## 5.4 List of Students who have registered

Sr No.	Full Name of Participant No. 1 (Surname First)
1	Patil yashraj Nandlal
2	Adake Aditya Balvant
3	Chaudhari Devendra Anil
4	Patil Gunvant Dinkar
5	PAWARA DINESH KUSHAL
6	Harshal Machhindra Shelar
7	Yeole Himanshu Pravin
8	Nikam Prashant Dnyaneshwar
9	Pathan Arbaz sikandar khan
10	Nilesh chaudhari
11	Abhishek gaikwad
12	Dipanjali Sharad Patil
13	Patil Yashraj Nandlal
14	Daspute Harshal Jitendra
15	Varade Param Anil
16	Shivaji raman vasave
17	Sakriwala muffadal tayyeb
18	Pardeshi aanchal satish

## 5.5 The total number of actual participation: 07



## 5.6 The list of actual participation

Sr. No.	Name of Participant No. 1	Name of Participant No. 2 (If you are single participant then leave it blank)
1	Harshal Daspute	-
2	Devendra Anil Chaudhari	
3	Abhishek Sunil Gaikwad	Atharva Ramesh Chandkar
4	Muffadal tayyeb sakriwala	
5	Aditya Balvant Adake	Neha Uday Deshpande
6	Param Anil Varade	
7	Pardeshi aanchal satish	
8	Dipanjali Sharad Patil	

## 6. Communication with Participants

**Event Rules and Regulations communicate with participants through registered mail ID (Screenshots of emails were sent to the participants after registration was closed.)**

Detailed Rules and Regulations for CADWAR 2k21 organised by SVKM Institute of Technology, Dhule held on 10th August 2021 at 10:15 AM - Message - Mail

Reply Reply all Forward Archive Delete Set flag

Detailed Rules and Regulations for CADWAR 2k21 organised by SVKM Institute of Technology, Dhule held on 10th August 2021 at 10:15 AM

Dhiraj Bhandarkar <Dhiraj.Bhandarkar@svkm.ac.in>  
8/9/2021 4:54 PM

To: yashrajpatil590@gmail.com; adityadesake45@gmail.com; dacsac02@gmail.com; gunvantpatil4545@gmail.com; Pawarad804@gmail.com; harshal7709728902@gmail.com; yeolehimanshu2002@gmail.com; prishantnrikam2019@gmail.com; arbaz832950@gmail.com; Nc242003@gmail.com; abhishekgalkwadnashik@gmail.com; dipanjaliptil1121@gmail.com; yashrajpatil590@gmail.com; harshaldaspute123@gmail.com; param.varade2001@gmail.com; muffadatsakriwala2424@gmail.com; aanchalpardeshi@gmail.com; dnehauday@gmail.com; dacsac02@gmail.com; atharvachandkar2103@gmail.com; vasaveshivaji7@gmail.com Cc: Bhushan Behede; Mohammed Juneduddin

CAD-WAR 2k21 Flow.pdf  
107.62 KB

Dear participants,

**CADWAR 2k21** organized by the **Department of Mechanical Engineering, SVKM Institute of Technology, Dhule** under the umbrella of **MechFest 2k21**

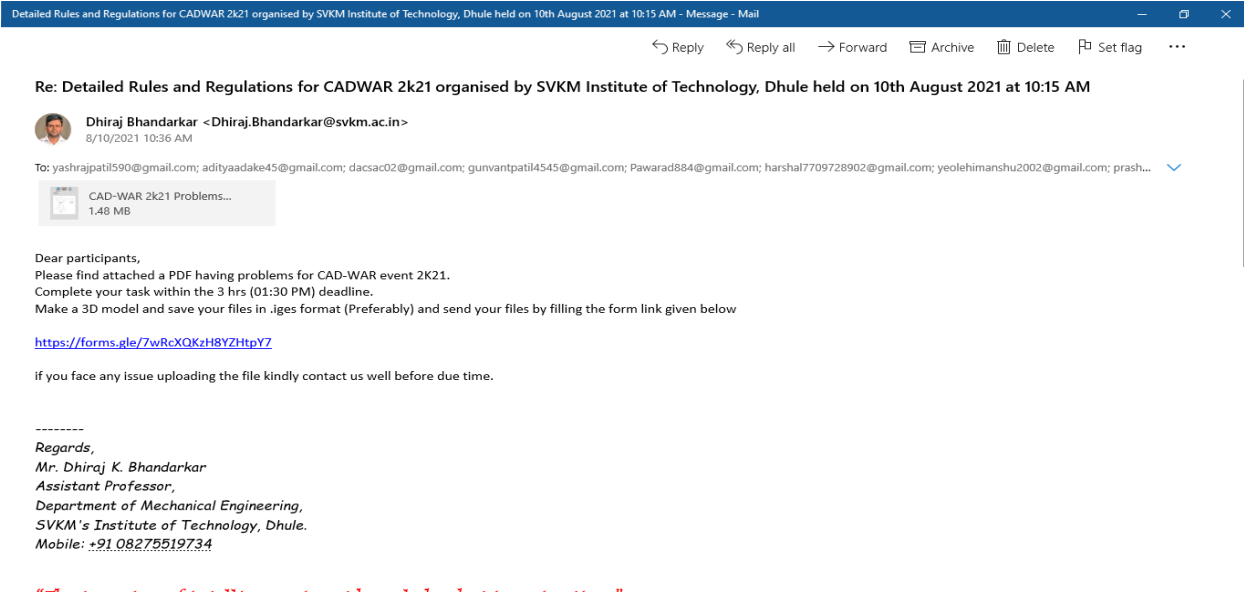
CAD-WAR is a technical event based on software AUTOCAD/INVENTOR PROFESSIONAL/AUTODESK FUSION 360/SIEMENS NX/SOLID EDGE/SOLID-WORKS/CATIA/CREO/Any other. Design of product is everything. Design is the primary stage of manufacturing. This event is a challenge for everyone. You can show your skills or prove to yourself that you are a unique designer. You can grow by design knowledge and improve your skills by this event individually. Therefore, let's show your skills at this event. The fastest and skillful person will be the winner of this event.

For **Event Rules and Regulations** please find the attached PDF

See you tomorrow at 10:15 AM, join the session by clicking the link below  
[https://teams.microsoft.com/join/19%3ameeting\\_7mYvNj4M2Y0TVkM000TgxLWEjNzIYzASNDVKMzRlZi0%40thread.v2/0?context=%7b%22id%22%3a%22d1f14348-f1b5-4a09-ac99-7ebf213cb81%22%2c%22oid%22%3a%2263f1503d-f852-431b-88dc-d358ba371975%22%7d](https://teams.microsoft.com/join/19%3ameeting_7mYvNj4M2Y0TVkM000TgxLWEjNzIYzASNDVKMzRlZi0%40thread.v2/0?context=%7b%22id%22%3a%22d1f14348-f1b5-4a09-ac99-7ebf213cb81%22%2c%22oid%22%3a%2263f1503d-f852-431b-88dc-d358ba371975%22%7d)

Join conversation  
teams.microsoft.com

**Event Problems communicate with participants through registered mail ID (Screenshots of emails were sent to the participants after registration was closed.)**



## 7. Conduction of the event

Event is conducted online on 10 August 2021 from 10:15 AM using Microsoft Teams. All the participants and faculties of Mechanical Engineering were invited to the inauguration ceremony.

### 7.1 Inauguration Ceremony

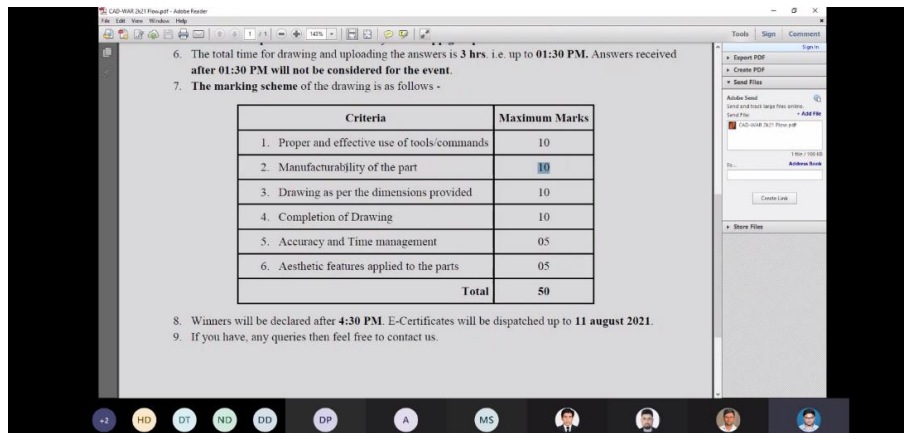
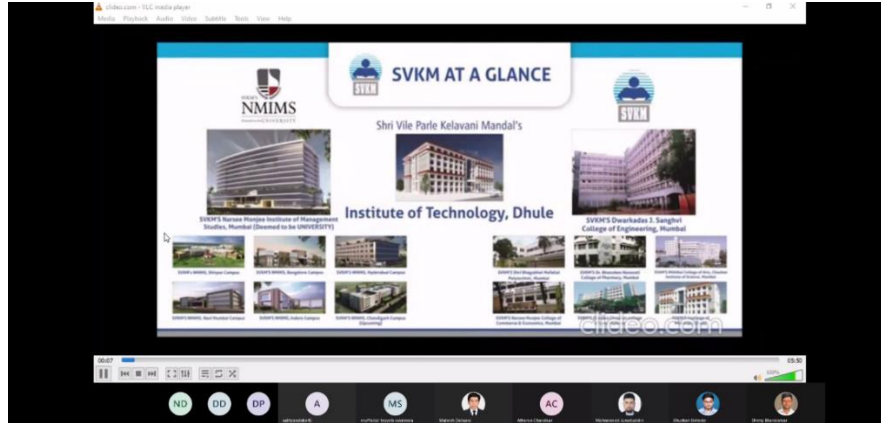
#### 7.1.1 Link of the Inauguration ceremony:

[https://teams.microsoft.com/l/meetup-join/19%3ameeting\\_YmYyNjI4M2YtOTVvMi00OTgxLWFiNzItYzA5NDVzMzRlZjI0%40thre%20ad.v2/0?context=%7b%22Tid%22%3a%22d1f14348-f1b5-4a09-ac99-7ebf213cbc81%22%2c%22Oid%22%3a%2263f1503d-f852-431b-88dc-d358ba371975%22%7d](https://teams.microsoft.com/l/meetup-join/19%3ameeting_YmYyNjI4M2YtOTVvMi00OTgxLWFiNzItYzA5NDVzMzRlZjI0%40thre%20ad.v2/0?context=%7b%22Tid%22%3a%22d1f14348-f1b5-4a09-ac99-7ebf213cbc81%22%2c%22Oid%22%3a%2263f1503d-f852-431b-88dc-d358ba371975%22%7d)

#### 7.1.2 Recording of the Inauguration ceremony:

[https://svkmmumbai-my.sharepoint.com/:v/g/personal/mohammed\\_juneduddin\\_svkm\\_ac\\_in/EfZyiFzQdEIEqni8HZ3BulsByHGGTaZy2nZn2pqQITcqOA?e=XyMeie](https://svkmmumbai-my.sharepoint.com/:v/g/personal/mohammed_juneduddin_svkm_ac_in/EfZyiFzQdEIEqni8HZ3BulsByHGGTaZy2nZn2pqQITcqOA?e=XyMeie)

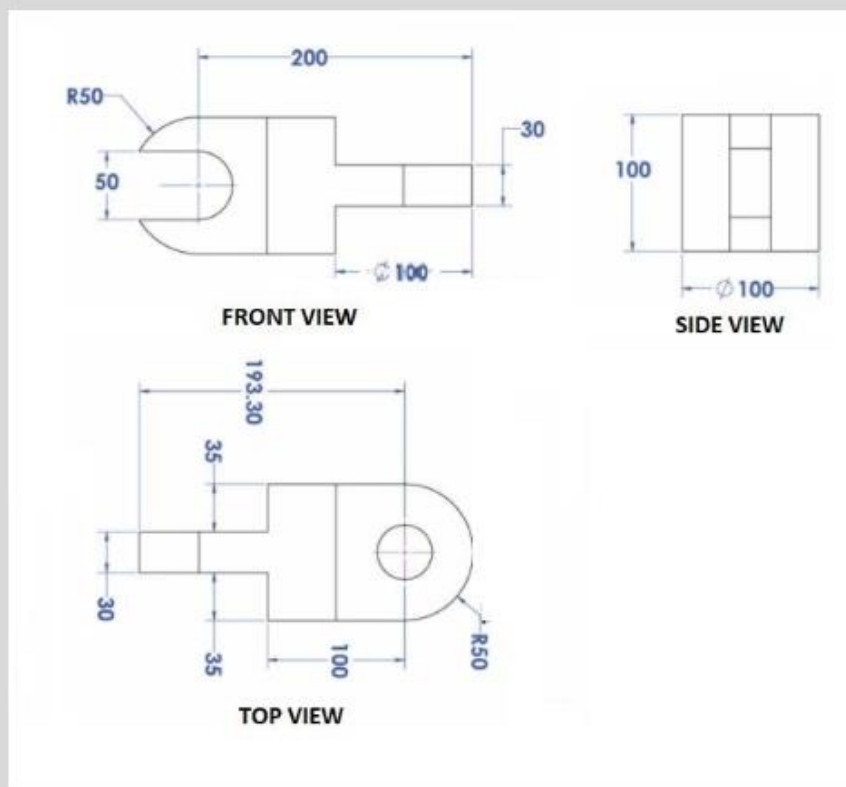
### 7.1.3 Screenshots during the Inauguration Ceremony:



## 7.2 Problems given to the participants:

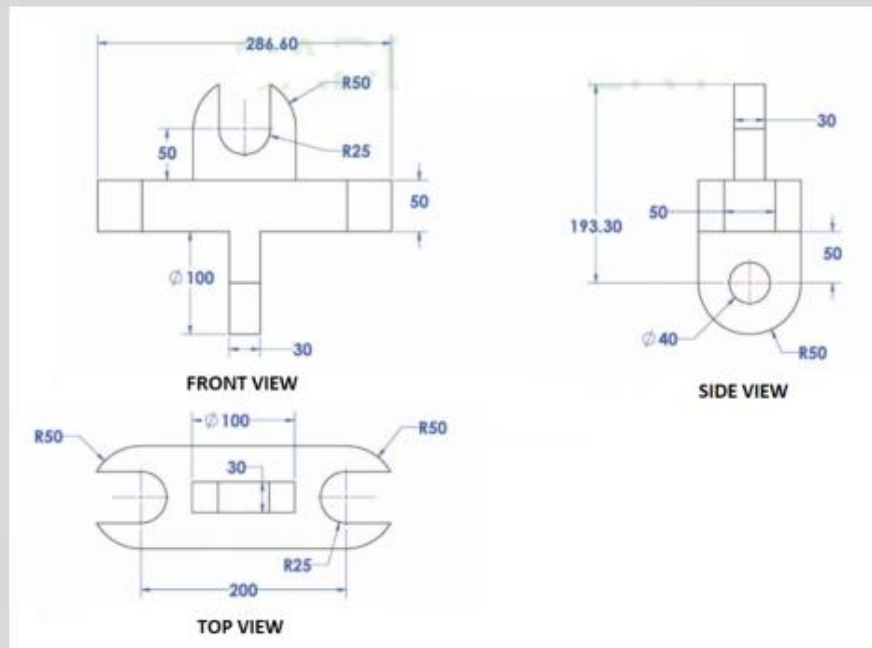


### Problem No. 1





## Problem No. 2

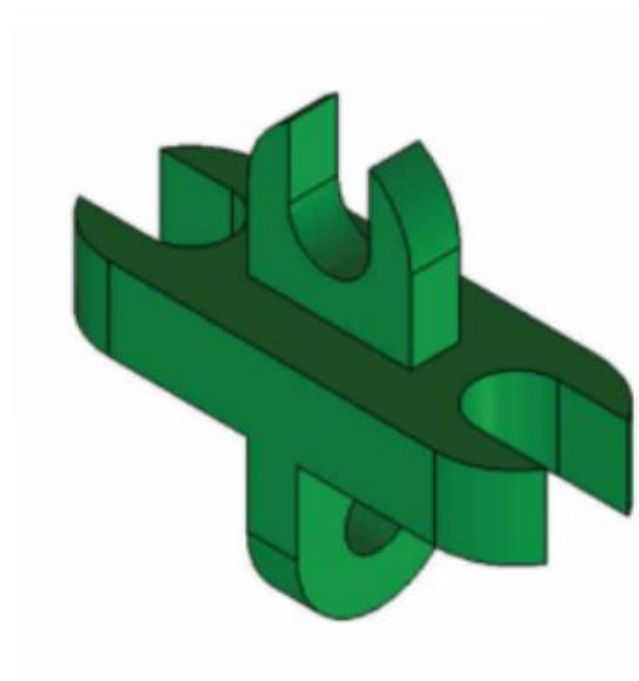


### 7.3 Standard Solution to the Problems given to the participants:

#### 7.3.1 Solution of the Problem No. 1:



#### 7.3.2 Solution of the Problem No. 2:



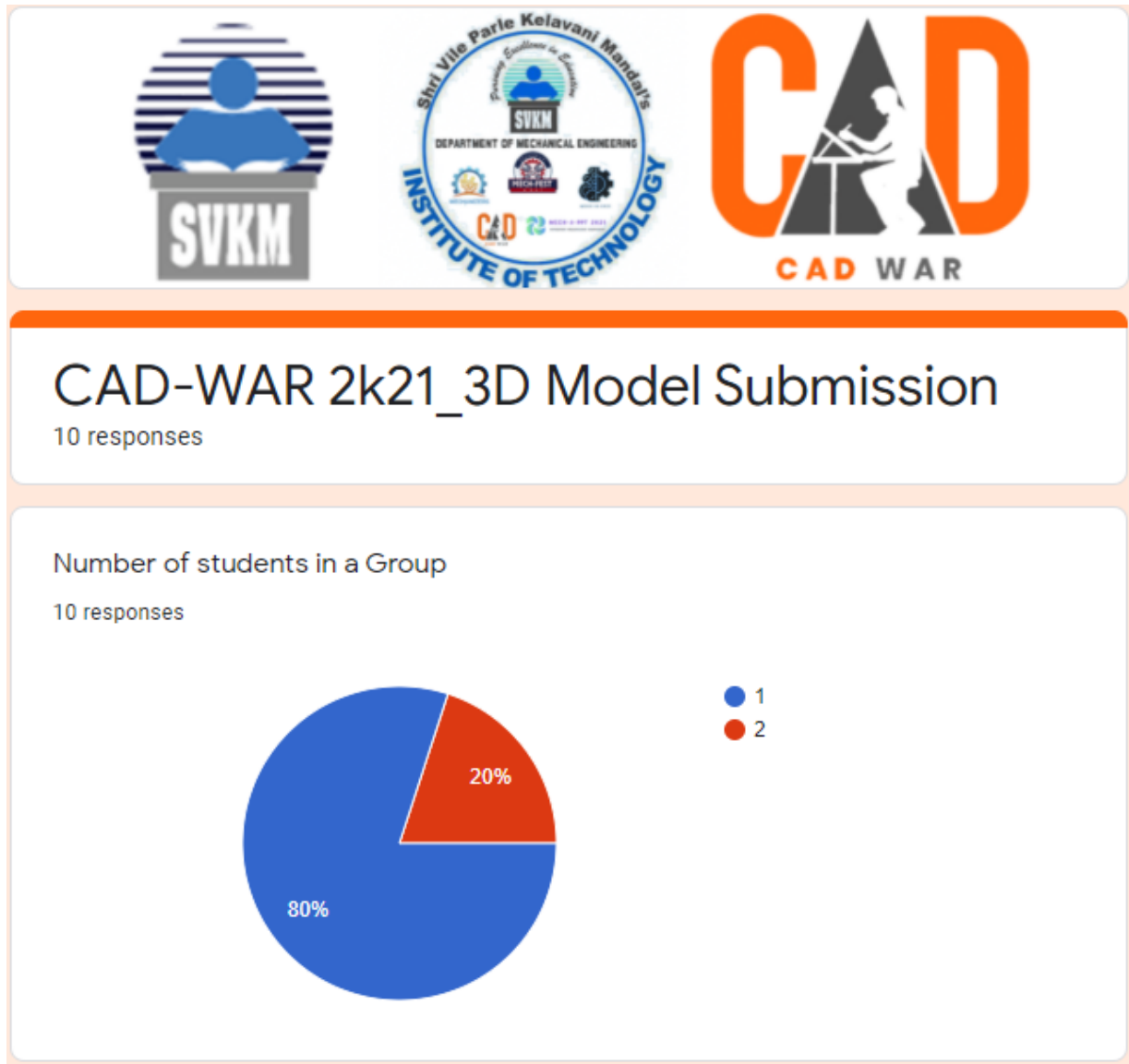
## 7.4 Submission of the 3D Model files

To take the submission from the participants, Google form is used. Participants submission is recorded and saved in Google drive as follows

### 7.4.1 Link of the Submission:

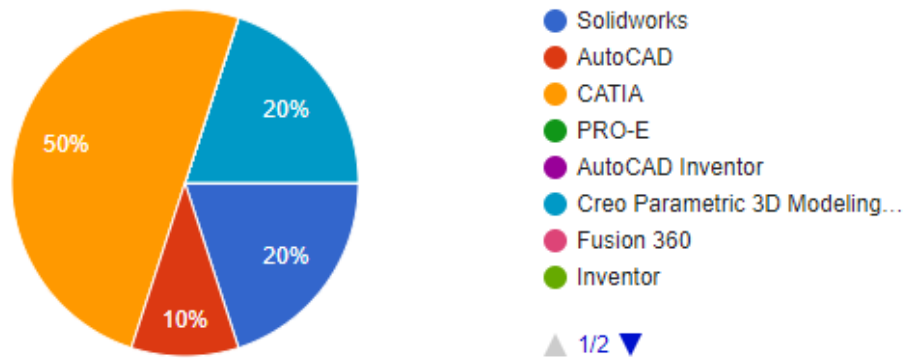
<https://forms.gle/7wRcXQKzH8YZHtpY7>

### 7.4.2 Summary of all submissions:



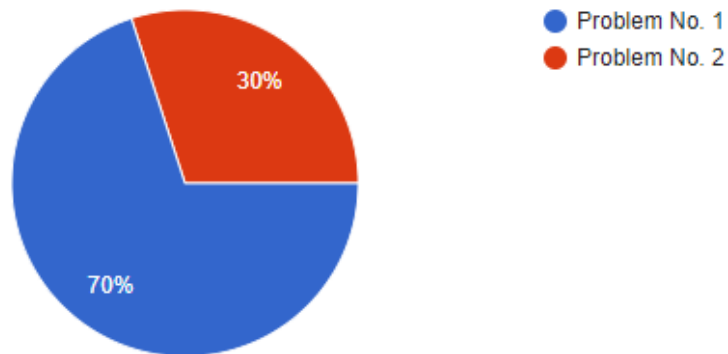
### Software of your choice

10 responses



### Which Problem you have selected?

10 responses



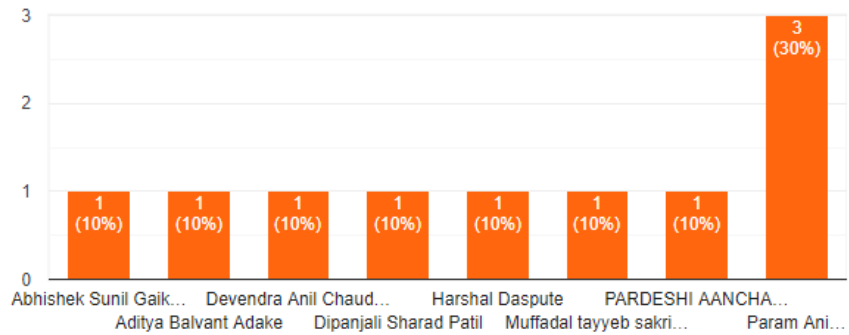


Upload your Drawing file/files (You can upload up to 5 files)

10 responses

Name of Participant No. 1

10 responses



Name of Participant No. 2 (If you are single participant then leave it blank)

3 responses

-

Atharva Ramesh Chandkar

Neha Uday Deshpande

Upload I-Card photo of Participant no. 1 (issued by your Diploma college)

10 responses

Upload I-Card photo of Participant no. 2 (issued by your Diploma college)

2 responses

### 7.4.3 Link of Excel Spreadsheet of the final submissions received from the Participants:

[https://svkmmumbai-my.sharepoint.com/:x/g/person/mohammed\\_juneduddin\\_svkm\\_ac\\_in/ER4X486ypN9KhpdyWsG2yr4BmmTJeLWAQtvPvwqICq4B7Q?e=E2LDQ7](https://svkmmumbai-my.sharepoint.com/:x/g/person/mohammed_juneduddin_svkm_ac_in/ER4X486ypN9KhpdyWsG2yr4BmmTJeLWAQtvPvwqICq4B7Q?e=E2LDQ7)

## 8. Feedback of the Participants

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Feedback received from the participants via Google forms. Feedback link is shared with the participants before dispatching the E-Certificates.

### 8.1 Feedback form Link:

<https://forms.gle/Tp4TdLXhsMsJXexRA>

### 8.2 Feedback Questions:

#### CAD-WAR Event feedback

Thank you for participating in our event. We hope you had as much fun attending as we did organizing it.

We want to hear your feedback so we can keep improving our Event in the future. Please fill this quick survey and let us know your thoughts (your answers will be anonymous).

\*Required

1. Email \*

\_\_\_\_\_

2. Full name (as needed to be print on Certificate) \*

\_\_\_\_\_

3. State your Email-ID (Registered E-mail ID only) \*

\_\_\_\_\_

4. Name of college (as needed on certificate) \*

\_\_\_\_\_

5. State your mobile number (Prefer WhatsApp) \*

\_\_\_\_\_

6. State mobile number of your parents (Prefer WhatsApp) \*

\_\_\_\_\_

11. How satisfied were you with the event? \*

Mark only one oval.

	1	2	3	4	5	
Not very	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very much

12. What were your key take away from this event?

---

13. Any Suggestions for the further improvement of the event?

---

---

This content is neither created nor endorsed by Google.

Google Forms

### 8.3 Feedback received from the Participants:

#### CAD-WAR Event feedback

11 responses

Full name (as needed to be print on Certificate)

11 responses

Bhushan Chandrakant Behede

DHIRAJ KESHAVRAO BHANDARKAR

Neha Uday Deshpande

Abhishek Sunil Gaikwad

PARDESHI AANCHAL SATISH

Muffadal tayyeb sakriwala

Param Anil Varade

Patil Dipanjali Sharad

Atharva Ramesh Chandkar



State your mobile number (Prefer WhatsApp)

11 responses

8237235899

8275519734

7385802460

9665898952

8530490320

9421038692

9834441842

8007475674

8625951975



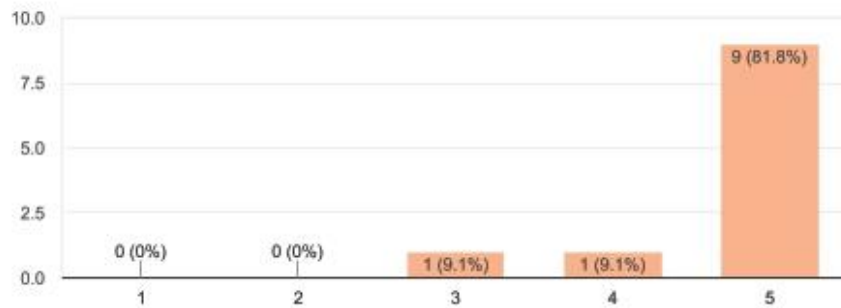
State mobile number of your parents (Prefer WhatsApp)

11 responses

9604266546  
9561199220  
9422230320  
9423494774  
9834441842  
8007475674  
9595280059  
9657273173  
9673598651

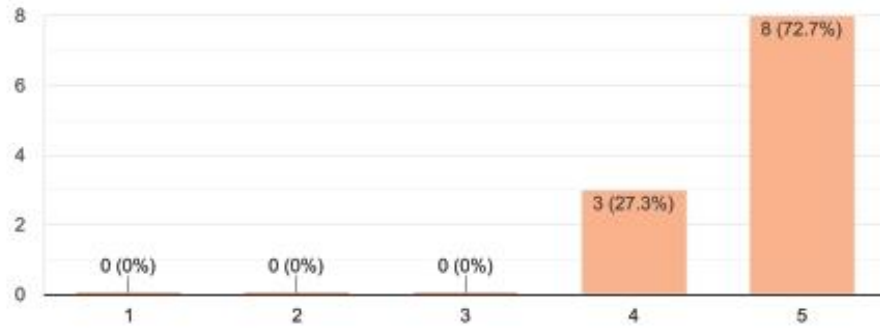
Did the event meet your expectations?

11 responses



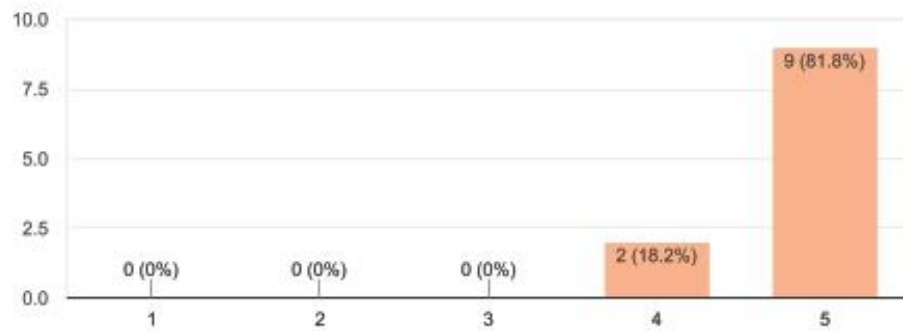
Would you like to attend such event in the future?

11 responses



How satisfied were you with the event?

11 responses



What were your key take away from this event?

4 responses

BEST

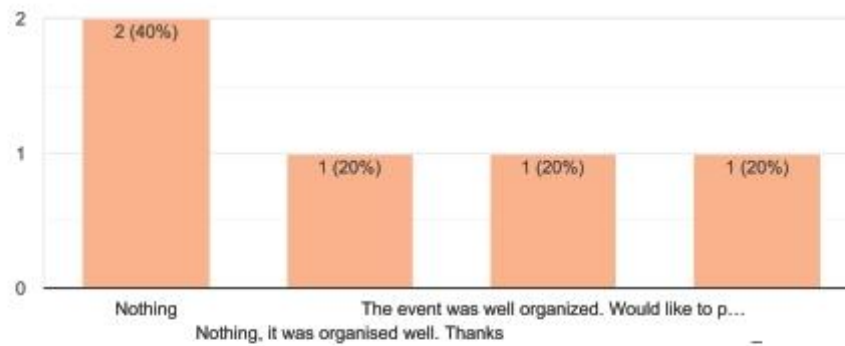
Nice session

Skills

Got to explore a lot. Competitions are always fun for me. It was great experience in applying my design skills.

Any Suggestions for the further improvement of the event?

5 responses



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Google Forms





## 8.4 Link of the detail feedback response file:

[https://svkmmumbai-my.sharepoint.com/:x/g/personal/mohammed\\_juneduddin\\_svkm\\_ac\\_in/ETb8uUYfwspIoVMfXAZroXQBBFtGpKEzV3JY70DrcBWC6g?e=I0Eqwl](https://svkmmumbai-my.sharepoint.com/:x/g/personal/mohammed_juneduddin_svkm_ac_in/ETb8uUYfwspIoVMfXAZroXQBBFtGpKEzV3JY70DrcBWC6g?e=I0Eqwl)

## 9. Evaluation of the Submissions received from the participants

### 9.1 Details of the Marking scheme:

Criteria	Maximum Marks
1. Proper and effective use of tools/commands	10
2. Manufacturability of the part	10
3. Drawing as per the dimensions provided	10
4. Completion of Drawing	10
5. Accuracy and Time management	05
6. Aesthetic features applied to the parts	05
<b>Total</b>	<b>50</b>

### 9.2 Details of the Marks received by the participants who have submitted files:

Name of Participant No. 1	Name of Participant No. 2 (If you are single participant then leave it blank)	1. Proper and effective use of tools/commands (10)	2. Manufacturability of the part (10)	3. Drawing as per the dimensions provided (10)	4. Completion of Drawing (10)	5. Accuracy and Time management (5)	6. Aesthetic features applied to the parts (5)	TOTAL	Remark	Rank
Harshal Dasputre	-	8	5	8	10	5	0	36	No aesthetic applied & Manufacturability is missing	4

Devendra Anil Chaudhari		8	8	8	10	5	0	<b>39</b>	No aesthetic applied	<b>2</b>
Abhishek Sunil Gaikwad	Atharva Ramesh Chhandkar	5	7	5	10	5	5	<b>37</b>	Dimensions are not as per given	<b>3</b>
Muffadal tayyeb sakriwala		9	8	9	10	5	4	<b>45</b>	Overall good	<b>1</b>
Aditya Balvant Adake	Neha Uday Deshpande	5	7	4	10	5	5	<b>36</b>	File is imported from somewhere else	<b>4</b>
Param Anil Varade		3	0	5	5	4	4	<b>21</b>	Not as per drawing	<b>6</b>
PARDESHI AANCHAL SATISH		5	2	3	5	5	0	<b>20</b>	Partially completed	<b>7</b>
Dipanjali Sharad Patil		7	4	5	10	4	0	<b>30</b>	Poor Manufacturability & dimensions, also no aesthetic applied	<b>5</b>

The panel of judges have verified all the Marks given to the participants as follows

1. Prof. Dhiraj Bhandarkar:



2. Prof. Bhushan Behede:



## 10. Winners and Runner ups:



**CAD-WAR-2k21**  
Congratulations to Winners and Runner Ups



**1st**



**Muffadal Tayyeb Sakriwala**  
SSVPS Polytechnic, Dhule  
**Trophy & Cash Prize of Rs. 1,500/-**



**2nd**



**Devendra Anil Chaudhari**  
G H Raisonni Polytechnic, Jalgaon  
**Trophy & Cash Prize of Rs. 1,000/-**

**3rd**



**Abhishek Gaikwad and Atharva Chandkar**  
K K Wagh Polytechnic, Nashik  
**Trophy & Cash Prize of Rs. 500/-**

**Department of Mechanical Engineering, SVKM's IOT, Dhule**

## 11. E-Certificate and distribution

All E-certificates were sent to the winners and participants on their registered Email-Id. One copy of All the E-certificates is available in Pdf format at the department level.

### 11.1 Sample E-Certificate given to the winner:



### 11.2 Sample E-Certificate given to the participants:

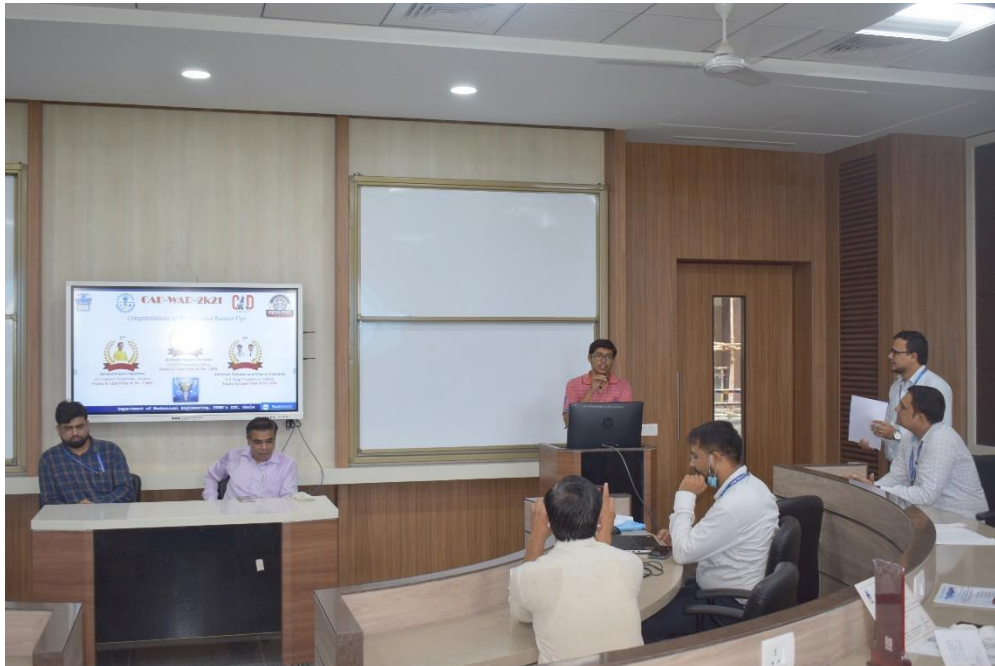


## 12. Valedictory and Prize distribution

### 12.1 Photograph of prize distribution ceremony



### 12.2 Participant has given a verbal feedback during the Valedictory function





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**Institute of Technology, Dhule**

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# Event Report

## MECH-A-PPT



MECH-A-PPT 2k21 is an event which was organized on 11th August 2021 by the Department of Mechanical Engineering, Shri Vile Parle Kelavani Mandal's (SVKM's) Institute of Technology, Dhule under the umbrella of MechFest 2k21.

### Event Coordinators

1. Prof. Dattatray Doifode
2. Prof. Mahesh Dalwani

## 1. Event Description

MECH-A-PPT 2k21 organized by the Department of Mechanical Engineering, SVKM Institute of Technology, Dhule under the umbrella of MechFest 2k21.

MECH-A-PPT is an online technical power point presentation competition on any one topic related to mechanical engineering. The basic purpose of organizing this competition is to inculcate and boost the confidence, communication skill, develop the public speaking, collection of technical data skills and encourage the self-learning amongst the students. Event was started with introduction of all the campus of SVKM. Later, brief information of Dhule campus was given with special focus on Mechanical Department. The event was coordinated by Prof. Dattatray Doifode and Prof. Mahesh Dalwani. All the faculties of the Mechanical department were the judges of this event.

## 2. Event Flyer



The flyer features a green background with several logos and text elements. On the left is the 'MECH-FEST 2 K 2 1' logo. In the center is the SVKM logo with the text 'SHRI VILE PARLE KELAVANI MANDAL'S Institute of Technology, Dhule' and 'Approved by AICTE New Delhi | Affiliated to DBATU, Lonere'. Below this is the 'Department of Mechanical Engineering' and the 'MECH-A-PPT 2K21 POWERPOINT PRESENTATION COMPETITION' logo. On the right is the 'SVKM's IOT' logo. The main text reads 'An Online PPT Competition for Diploma Final Year /Passed Mechanical, Automobile and Production Students'. A list of rules and conditions is provided, including 'No Registration/ Participation fees', 'Restrict the presentation upto 10 slides', and 'Duration for the presentation is 10 minutes'. A registration link is given as <https://myurl.com/bsz147m>. The schedule is '11th August 2021, 10 AM to 3 PM' and registration closes on '10th August at 11 PM'. At the bottom, four faculty members are listed as event coordinators: Prof. Mahesh Dalwani, Prof. Dattatray Doifode, Prof. Mohammed Juneduddin, and Prof. Dr. Nilesh Salunke.

**MECH-FEST 2 K 2 1**

**SHRI VILE PARLE KELAVANI MANDAL'S**  
**Institute of Technology, Dhule**  
Approved by AICTE New Delhi | Affiliated to DBATU, Lonere

**SVKM**

**Department of Mechanical Engineering**

**MECH-A-PPT 2K21**  
POWERPOINT PRESENTATION COMPETITION

**SVKM's IOT**

**An Online PPT Competition for Diploma Final Year /Passed  
Mechanical, Automobile and Production Students**

- No Registration/ Participation fees.
- Restrict the presentation upto 10 slides.
- Duration for the presentation is 10 minutes.
- All the participants will get the certificate of participation.
- Exciting cash prizes and Trophies for winners and Runner ups.
- Select any one topic for the presentation which is mentioned in the registration link.
- Participants need to switch on his /her camera during the presentation.
- At the end of presentation participants will have question /answer interactions with the Judges.
- Participants need to share their presentation on the given link that will be shared later on Whats App group.

**Registration Form link:** <https://myurl.com/bsz147m>

**Schedule:** 11th August 2021, 10 AM to 3 PM

**Registration will close on 10th August at 11 PM**

Prof. Mahesh Dalwani  
Event Coordinator: 7972764535

Prof. Dattatray Doifode  
Event Coordinator: 9921518508

Prof. Mohammed Juneduddin  
HOD, Mechanical Engineering Department

Prof. Dr. Nilesh Salunke  
Principal

### **3. Topics/Areas for MECH-A-PPT Competition**

---

- Electric vehicle**
- Hybrid vehicle**
- CAD/CAM, Automation & Robotics**
- Artificial Intelligence and Machine Learning**
- Advances of Aero space Technology**
- Refrigeration and air conditioning Systems**
- Cryogenics**
- Operations Management**
- Logistics and Supply Chain Management**
- Reliability and Maintenance Engineering**
- Total Quality Management and Quality Engineering**
- Non-Traditional Machining processes**
- Machinability of Materials, Composite Materials**
- Tribology and Surface Technology**
- Design Tools, Cutting Tool Material and Coatings**
- Energy Conservation, Renewable Energy Techniques**
- Computational Fluid Dynamics, Bio-fuels, Fuel Cells, Battery**
- Transportation Systems**
- Thermal Engineering**
- Nanotechnology and Micro engineering**
- Manufacturing**
- Digital twins**
- 3D/4D/5D Printing**
- Internet of Things**
- Any other topic related to Mechanical Engineering**



### **3.1 Instructions for the Participants**

- Restrict the presentation upto 10 slides.
- Participants need to share their presentation through the MS Team.
- Participants need to switch on his /her camera during the presentation.
- Duration for the presentation is 10 minutes.
- At the end of presentation participants will have question /answer interactions with the Judges.
- Feedback link will be shared at the end of the event.
- All the participants will get the certificate of participation and winners will get the cash prize and trophy.

### **3.2 Evaluation Criteria Sheet**

<b>Sr. No.</b>	<b>Evaluation Criteria</b>	<b>Score</b>
1	Innovative topic selection	5
2	Presentation skills	5
3	Overall Content and the aesthetics of PPT	5
4	Subject Knowledge	5
5	Question/ Answer	5
	Total	25

## 4. Registration details

---

### 4.1 Link of the registration responses received from the participants

[https://docs.google.com/forms/d/1wQVwIH1ppLWDjvH47q2TBR56hK4L\\_y6Qg2DP3O5i1jE/edit](https://docs.google.com/forms/d/1wQVwIH1ppLWDjvH47q2TBR56hK4L_y6Qg2DP3O5i1jE/edit)

### 4.2 The total number of students registered: 13

### 4.3 List of Students who have registered

Sr No.	Full Name of Participant
1	Vasave Shiva Mohansing
2	Deshpande Neha Uday
3	Roundal Prasad Deepak
4	Patil Yogesh Nimba
5	Puranik Lokesh Rajendra
6	Adake Aditya Balvant
7	Rajput Harshal Ashok
8	PARDESHI AANCHAL Satish
9	Sakriwala Muffadal Tayyab
10	Baisane Rahul Kashinath
11	Patil Akash Maruti
12	Dhole Sandip Gulabrao
13	Sonawane Jitendra Rajendra

### 4.4 The total number of actual participation: 05

### 4.5 The list of actual participation

Sr. No.	Name of Participants
1	Puranik Lokesh Rajendra
2	Sakriwala Muffadal Tayyab
3	Dhole Sandip Gulabrao
4	Pardeshi Aanchal Satish
5	Sonawane Jitendra Rajendra

## 5. Conduction of the event

Event is conducted online on 11th August 2021 from 10:15 AM using Microsoft Teams. All the participants and faculties of Mechanical Engineering were invited to the inauguration ceremony.

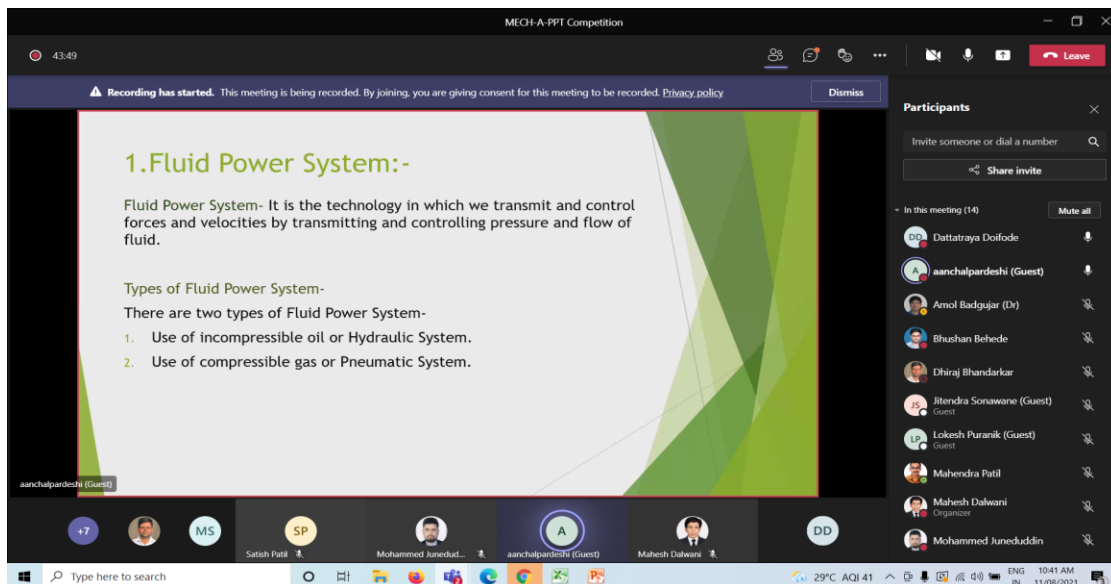
### 5.1 Link of the Inauguration ceremony:

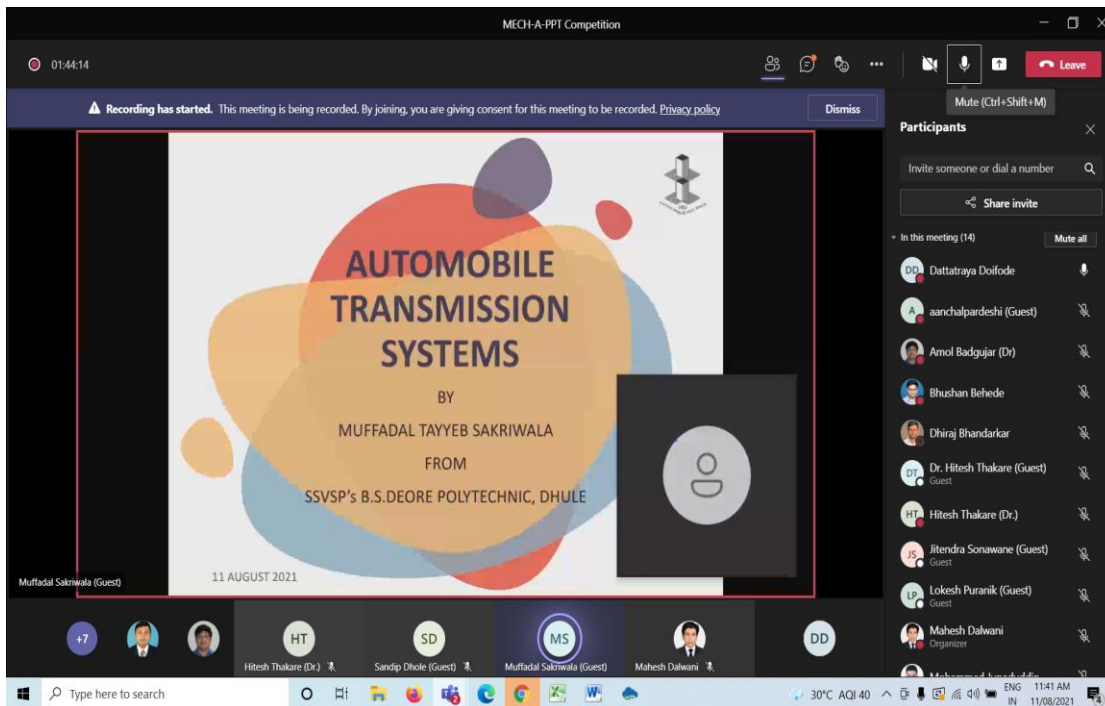
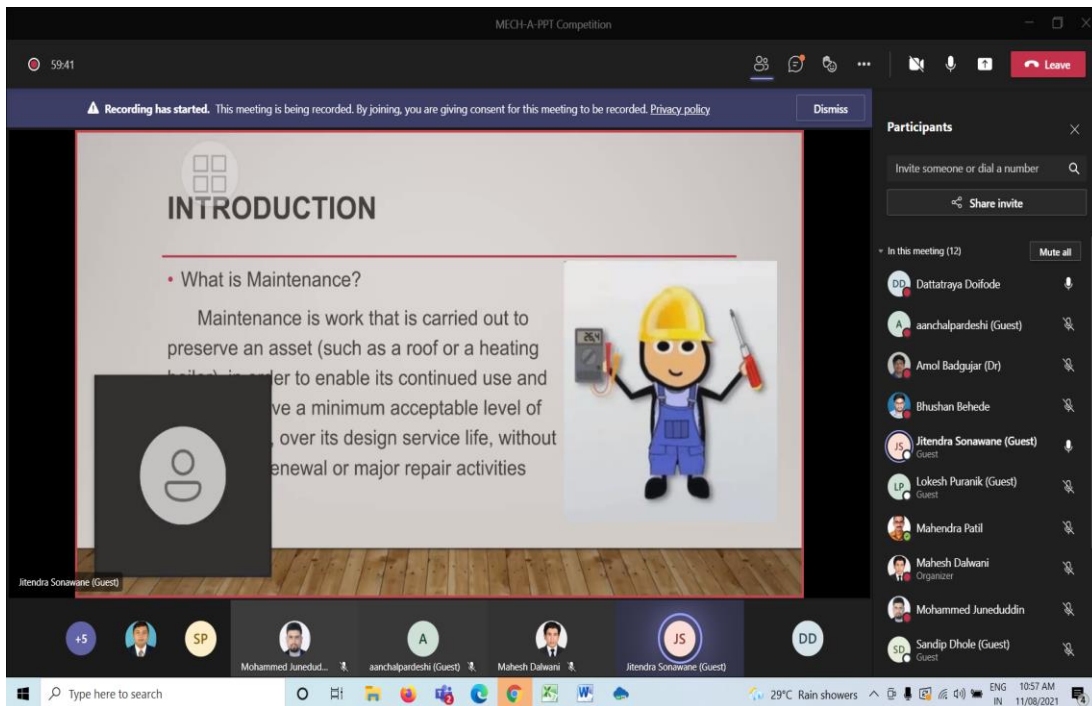
[https://teams.microsoft.com/l/meetup-join/19%3ae\\_x47b3XCEWBVPnYq7EVIU7jhMz3rmwssILtbWDP7Cw1%40thread.tacv2/1628608756809?context=%7b%22Tid%22%3a%22d1f14348-f1b5-4a09-ac99-7ebf213cbc81%22%2c%22Oid%22%3a%22b6e2b8b3-730c-48b4-b087-eb76affd1d88%22%7d](https://teams.microsoft.com/l/meetup-join/19%3ae_x47b3XCEWBVPnYq7EVIU7jhMz3rmwssILtbWDP7Cw1%40thread.tacv2/1628608756809?context=%7b%22Tid%22%3a%22d1f14348-f1b5-4a09-ac99-7ebf213cbc81%22%2c%22Oid%22%3a%22b6e2b8b3-730c-48b4-b087-eb76affd1d88%22%7d)

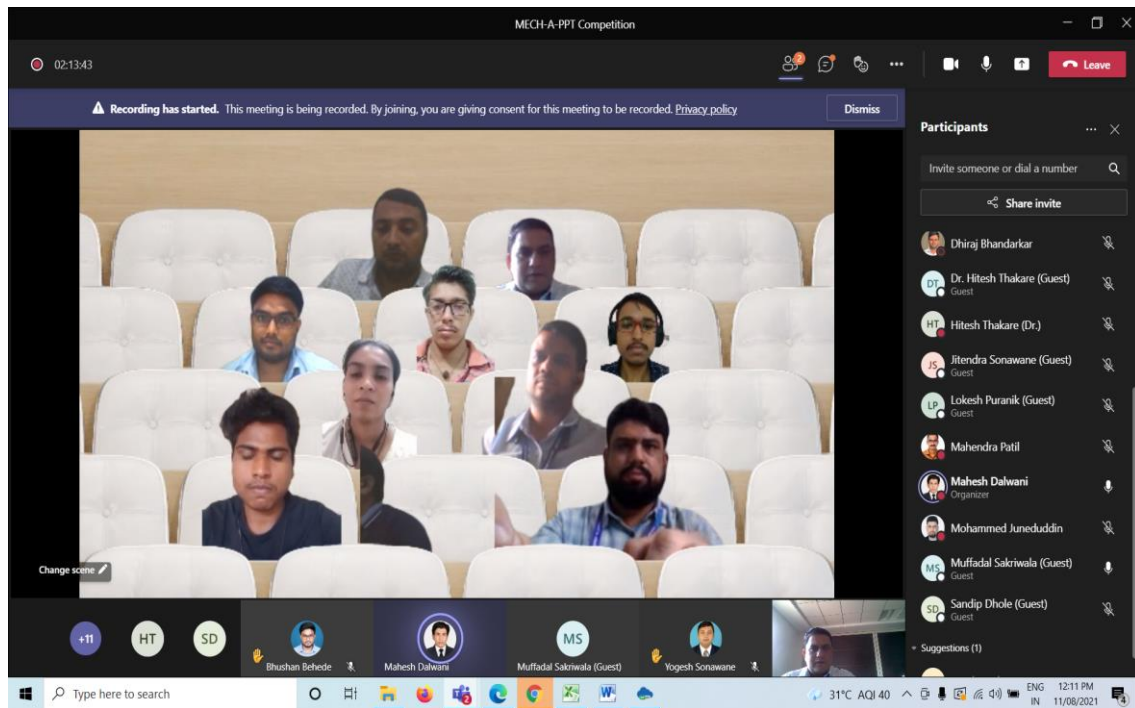
### 5.2 Recording of the Inauguration ceremony:

[https://svkmmumbai-my.sharepoint.com/personal/mohammed\\_juneduddin\\_svkm\\_ac\\_in/\\_layouts/15/onedrive.aspx?originPath=/aHR0cHM6Ly9zdmthbXVtYmFpLW15LnNoYXJlcG9pbmQuY29tLzpmOi9nL3BlcnNvbmsL21vaGFtbWVhX2p1bmVkdWRkaW5fc3ZrbV9hY19pbj9FazRIUFJlZWVhFOU1Zm1uckRVVkdOc0JieV92Rm5wTlJiITZrS01aVl9ocXBBP3J0aW1IPS1tZW8tUjlpMlVn&id=%2Fpersonal%2Fmohammed%5Fjuneduddin%5Fsvkm%5Fac%5Fin%2FDocuments%2FMechFest%2D21%2FMECH%2DA%2DPPT%2FImages%5Frecording%5FDuring%5FExecution](https://svkmmumbai-my.sharepoint.com/personal/mohammed_juneduddin_svkm_ac_in/_layouts/15/onedrive.aspx?originPath=/aHR0cHM6Ly9zdmthbXVtYmFpLW15LnNoYXJlcG9pbmQuY29tLzpmOi9nL3BlcnNvbmsL21vaGFtbWVhX2p1bmVkdWRkaW5fc3ZrbV9hY19pbj9FazRIUFJlZWVhFOU1Zm1uckRVVkdOc0JieV92Rm5wTlJiITZrS01aVl9ocXBBP3J0aW1IPS1tZW8tUjlpMlVn&id=%2Fpersonal%2Fmohammed%5Fjuneduddin%5Fsvkm%5Fac%5Fin%2FDocuments%2FMechFest%2D21%2FMECH%2DA%2DPPT%2FImages%5Frecording%5FDuring%5FExecution)

### 5.3 Screenshots during the Inauguration Ceremony:







## 6. Feedback of the Participants

Feedback received from the participants via Google forms. Feedback link is shared with the participants before dispatching the E-Certificates.

### 6.1 Feedback form Link:

[https://docs.google.com/forms/d/1GzUH0ORr\\_JL-MR2OMnilRZUFoo2YU7j0wLBUEezYoQk/edit](https://docs.google.com/forms/d/1GzUH0ORr_JL-MR2OMnilRZUFoo2YU7j0wLBUEezYoQk/edit)

## 7. Winners and Runner ups:



The banner features logos for SVKM, MECH-A-PPT-2k21, and MECH-FEST 2k21. It congratulates three winners and runner-ups, each with a portrait, rank, name, institution, and prize details. A trophy image is centered below the 1st and 3rd place winners. The footer identifies the Department of Mechanical Engineering, SVKM's IOT, Dhule.

**MECH-A-PPT-2k21**  
Congratulations to Winners and Runner Ups

**2nd**  
  
**Dhole Sandip Gulabrao**  
Government Polytechnic, Dhule  
Trophy & Cash Prize of Rs. 1,000/-

**1st**  
  
**Puranik Lokesh Rajendra**  
Government Polytechnic, Nandurbar  
Trophy & Cash Prize of Rs. 1,500/-

**3rd**  
  
**Pardeshi Aanchal Satish**  
Nikam Polytechnic, Dhule  
Trophy & Cash Prize of Rs. 500/-

Department of Mechanical Engineering, SVKM's IOT, Dhule

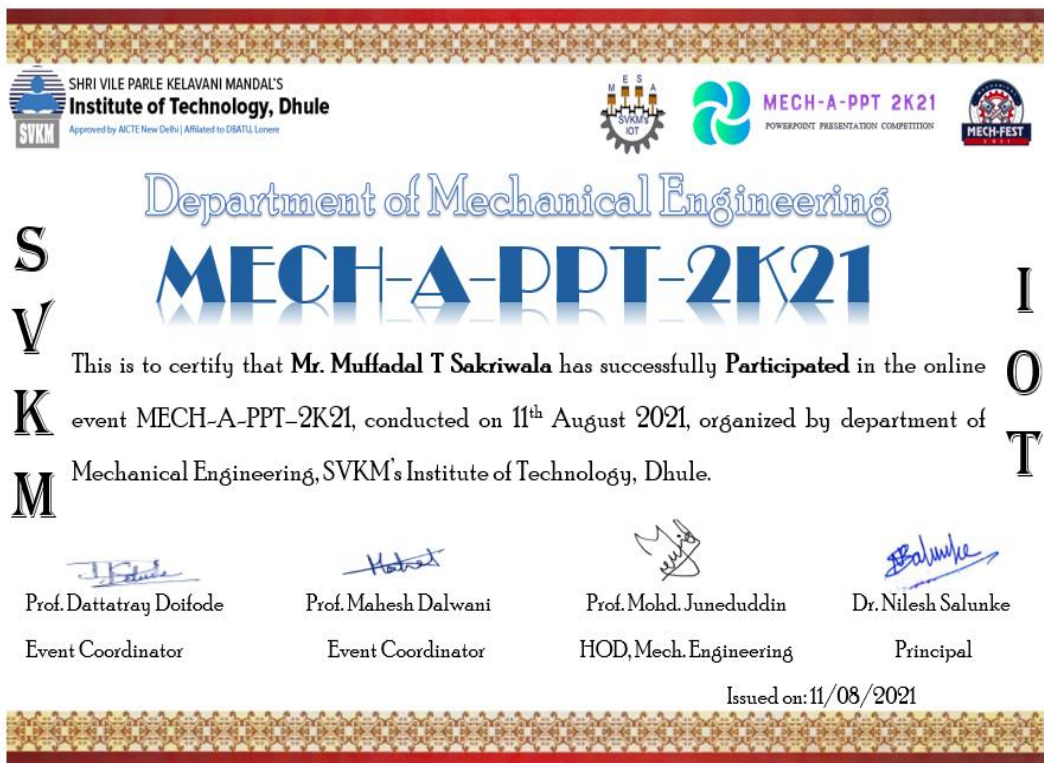
## 8. E-Certificate and distribution

All E-certificates were sent to the winners and participants on their registered Email-Id. One copy of All the E-certificates is available in Pdf format at the department level.

### 8.1 Sample E-Certificate given to the winner:



## 8.2 Sample E-Certificate given to the participants:



SHRI VILE PARLE KELAVANI MANDAL'S  
**Institute of Technology, Dhule**  
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M E S A  
SVKM'S  
I T

**MECH-A-PPT 2K21**  
POWERPOINT PRESENTATION COMPETITION


**MECH-FEST**

Department of Mechanical Engineering  
**MECH-A-PPT-2K21**

**S**  
**V**  
**K**  
**M**

This is to certify that **Mr. Muffadal T Sakriwala** has successfully **Participated** in the online event MECH-A-PPT-2K21, conducted on 11<sup>th</sup> August 2021, organized by department of Mechanical Engineering, SVKM's Institute of Technology, Dhule.

**I**  
**O**  
**T**

  
Prof. Dattatray Doifode  
Event Coordinator

  
Prof. Mahesh Dalwani  
Event Coordinator

  
Prof. Mohd. Juneduddin  
HOD, Mech. Engineering

  
Dr. Nilesh Salunke  
Principal

Issued on: 11/08/2021



SHRI VILE PARLE KELAVANI MANDAL'S  
**Institute of Technology, Dhule**  
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M E S A  
SVKM'S  
I T

**MECH-A-PPT 2K21**  
POWERPOINT PRESENTATION COMPETITION

**MECH-FEST**


Department of Mechanical Engineering  
**MECH-A-PPT-2K21**

**S**  
**V**  
**K**  
**M**

This is to certify that **Mr. Jitendra R Sonawane** has successfully **Participated** in the online event MECH-A-PPT-2K21, conducted on 11<sup>th</sup> August 2021, organized by department of Mechanical Engineering, SVKM's Institute of Technology, Dhule.

**I**  
**O**  
**T**

  
Prof. Dattatray Doifode  
Event Coordinator

  
Prof. Mahesh Dalwani  
Event Coordinator

  
Prof. Mohd. Juneduddin  
HOD, Mech. Engineering

  
Dr. Nilesh Salunke  
Principal

Issued on: 11/08/2021



## 9. Valedictory and Prize distribution

### 9.1 Photograph of prize distribution ceremony





**9.2 Participant has given a verbal feedback during the Valedictory function**



Shri Vile Parle Kelavani Mandal's  
**INSTITUTE OF TECHNOLOGY, DHULE**  
**Department of Mechanical Engineering**

**A Guest Lecture Report on**

**“Energy Conservation – Simplified Technical and Financial Analysis”**

The online session was organized on Energy and Environment Engineering Department, SVKM's IOT, Dhule on 18<sup>th</sup> of August 2021. The experts talk elaborate what are the Scope, Challenges and Skills required in Energy and Environment Industry. The session started with Assistant Professor of Energy and Environment Engineering Department Mr. Satish Patil honoring to expert **Dr. Hitesh Thakare**.

Dr. Hitesh Thakare is BEE Certified Energy Auditor (CEA - 27707). The expert talk was included information about the conservation of energy, how to conserve energy and energy conservation in the India, after that he explained lot of advantages of energy conservation. He also explained uses of CFL bulbs over ordinary bulb, as ordinary bulb conserve more energy than CFL bulbs, what that are in actual manner of energy conservation. He focused majorly on conservation of energy in whole session. He covered points, how to reduce high consumption of energy. The vote of thanks was given by Prof. Satish Patil.

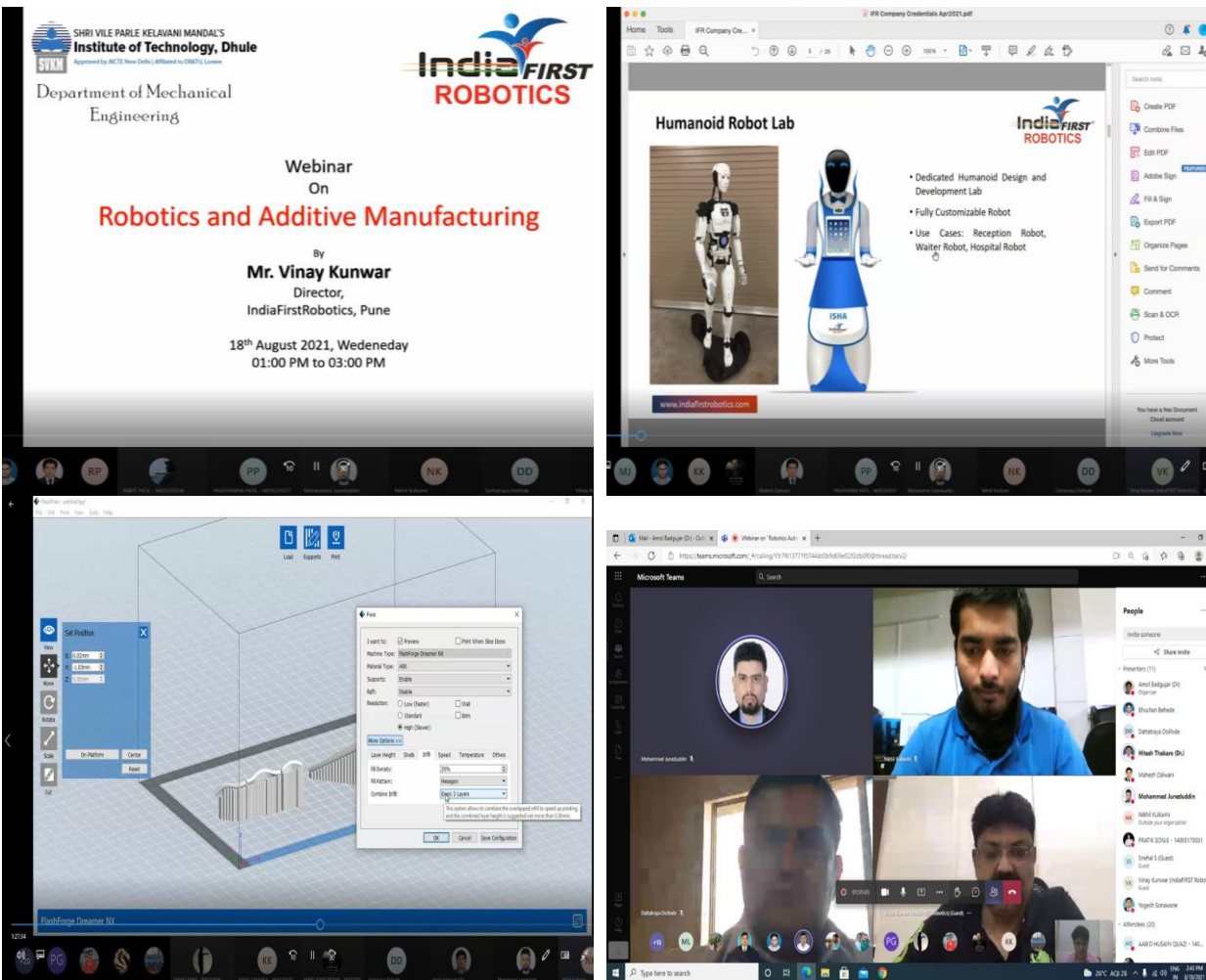
**Photos –**



# Event Report

## Webinar on “Robotics and Additive Manufacturing”

A webinar titled “Robotics and Additive Manufacturing” was organized by department of Mechanical Engineering, SVKM’s Institute of Technology, Dhule on 18-08-2021 (Wednesday) at 01:00 PM to 03:00 PM for undergraduate students of Mechanical Engineering. Mr. Vinay Kunwar and Mr. Nikhil Kulkarni were speakers for event, both from IndiaFIRST® Robotics Innovation and Research LLP, Pune. Dr. Amol Badgujar, Assistant Professor, Department of Mechanical Engineering, welcomed and introduced speakers to webinar attendees. There were about 79 participants comprising of students and faculties from the department of Mechanical Engineering.



Snapshot of Webinar Event

Mr. Vinay Kunwar provided a comprehensive overview of types of robots as well as their possible military and civilian applications, in his talk. He also shared his experiences related to building India's first robotics museum at Ahmadabad. Mr. Nikhil Kulkarni detailed about various techniques for Additive manufacturing as well as provided online demonstrations preparation of object from CAD model using fused deposition modelling. Prof. Mohammed Juneduddin, Head of Mechanical Engineering department thanked speakers for their interaction with students. The event received positive feedback from students and faculties.

Date: 20-08-2021

Place: Dhule

**Dr. Amol Badgujar**  
**Event Coordinator**

**Prof. Mohammed Juneduddin**  
**HOD, Mechanical**

### **Enclosures**

1. Profile of speaker
2. Snapshot of invitation email
3. Flyer of event
4. List of participants
5. Feedback form
6. Link to Video Lecture

## Profile of speaker

### Vinay Kunwar

**Director: INDIAFIRST ROBOTICS INNOVATION & RESEARCH LLP**

15, Sujit Complex, Dhayari,  
Pune - 411041  
Mobile: +91-8446767555



**Education** : B.E. E&TC, MBA (Marketing)

**Total experience** : 29yrs.

- ❖ Received Appreciation Letter from Hon'ble Chief Minister of Gujarat, Shri Narendra Modi (2011)
- ❖ Received Appreciation Letter from Hon'ble Education Minister of Gujarat, Shri Ramanlal Vora (2011)
- ❖ Photo Feature Profiling on Most Innovative Business Idea of 2014 by National Level Magazine "The Franchising World" (2014)
- ❖ Received Maharashtra IT Awards:2008 at the hands of then Chief Minister of Maharashtra Shri Vilasraoji Deshmukh while working with MITCON Ltd. as Vice President
- ❖ Honorary Advisor : Board of Global Advisors of Confederation of International Accreditation Commission
- ❖ Built India's first ever Robot Museum costing Rs. 125 Crs. At Ahmedabad which was inaugurated by Shri Narendra Modi, Prime Minister of India on 17<sup>th</sup> July 2021

#### Current Professional Profile

##### Director at

- M/s. Habib Animatos Pvt. Ltd.
- IndiaFIRST® Robotics Innovation and Research LLP
- National Academy for Advance Computing Training

with interests in various fields such as School Academics, Information Technology, Vocational Education, Soft Skills Training, Technical Education and Entrepreneurship

#### Manufacturer and Exporters of Robotic Kits:

Designed and developed India's first ever modular robots useful for Science, Technology, Engineering and Mathematics (STEM) education for school students in the age group of 6 yrs. to 22 yrs.

Currently, has more than 120+ nos. centres across India, Africa, Middle East, France, Germany, USA

##### President at

- Indus Robotics Society
- Disha Stadiodromia
- Apang Maitri Trust

##### Founder Trustee at

- • "Asian Academy for Education and Research" which has 3 colleges in Pune which includes,
  - ○ Asian Jr. College,
  - ○ Asian college of Science and Commerce,
  - ○ Asian Institute of Management Science

## Snapshot of invitation email

### Invitation for Webinar at SVKM IoT,Dhule



Amol Badgujar (Dr)

Thu 8/12/2021 4:58 PM

To: Vinay Kunwar <vinaykumar@indiafirstrobotics.com>

Cc: Mohammed Juneduddin; Swapnil Dhande <dhandeswapnil90@gmail.com>



Dear Mr. Vinay,

With reference to our earlier conversations, I invite you to deliver a Webinar / Seminar on "Robotics Automation and Additive Manufacturing" for undergraduate students of Mechanical Engineering at SVKM IoT, Dhule. As per discussion with Mr. Swapnil, the date and timings for seminar is **18th August 2021, 01:00 PM to 3:00 PM**.

I request you to send us your Biodata and brief abstract / outline of your talk/ seminar/ workshop for administrative record activities. Please feel free to contact me for any queries or help.

We look forward to interacting with you in a seminar soon.

Thanks & Regards,

**Dr. Amol Badgujar**

Ph.D. (IIT Bombay)

Assistant Professor

Department of Mechanical Engineering

**SVKM's Institute of Technology, Dhule**

Email: amol.badgujar@svkm.ac.in

Phone: +91 9420790961

[Reply](#)

[Reply all](#)

[Forward](#)



Flyer of event



**SVKM Institute of Technology**

&



**IndiaFIRST Robotics Innovation & Research LLP**

**Jointly Organises**

**Online FREE Webinar**

## **Robotics & Additive Manufacturing**

**Understand Career Opportunities**

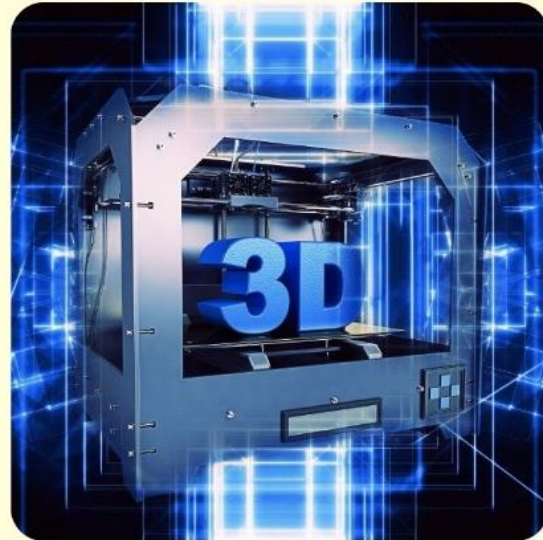
**Wednesday, August 18th 2021**

**1:00pm on-time**

**Free Webinar Link: <https://tinyurl.com/svkmit>**

**Robotics & Automation**

**Additive Manufacturing**



**Don't Miss this Opportunity!**

**Know the future technologies of 21st Century Era & get the right direction for your career!**

## List of participants

Amol Badgujar (Dr)	amol.badgujar@svkm.ac.in
Dhiraj Bhandarkar	Dhiraj.Bhandarkar@svkm.ac.in
Hitesh Thakare (Dr.)	hitesh.thakare@svkm.ac.in
Dattatraya Doifode	Dattatraya.Doifode@svkm.ac.in
Vinay Kunwar (IndiaFIRST Robotics) (Guest)	
Nikhil Kulkarni	nikhil.kulkarni@pgospune.onmicrosoft.com
Mohammed Juneduddin	Mohammed.Juneduddin@svkm.ac.in
Bhushan Behede	Bhushan.Behede@svkm.ac.in
Mahesh Dalwani	Mahesh.Dalwani@svkm.ac.in
SUMIT PATIL2 - 14005170025	SUMIT.PATIL2@svkmmumbai.onmicrosoft.com
NIKHIL CHAUDHARI4 - 14005170009	NIKHIL.CHAUDHARI4@svkmmumbai.onmicrosoft.com
YASHAVANT LOKAKSHI - 14005200032	YASHAVANT.LOKAKSHI32@svkmmumbai.onmicrosoft.com
KUNAL KARANKAL - 14005200030	KUNAL.KARANKAL30@svkmmumbai.onmicrosoft.com
Dipak Patil (Guest)	
PARTH PUNJABI - 14005180034	PARTH.PUNJABI@svkmmumbai.onmicrosoft.com
AWAISAHMAD ANSARI	AWAISAHMAD.ANSARI@svkmmumbai.onmicrosoft.com
SUMEET PANDEY - 14005190013	SUMEET.PANDEY@svkmmumbai.onmicrosoft.com
AAMIR KHAN PATHAN - 14005200035	AAMIRKHAN.PATHAN35@svkmmumbai.onmicrosoft.com
ANKIT PATIL - 14005200036	ANKIT.PATIL36@svkmmumbai.onmicrosoft.com
MAYUR JADHAV - 14005200029	MAYUR.JADHAV29@svkmmumbai.onmicrosoft.com
DANISH SHAIKH SHAIKH - 14005200041	DANISHSHAIKH.SHAIKH41@svkmmumbai.onmicrosoft.com
NISHANT MAHALE - 14005190009	NISHANT.MAHALE@svkmmumbai.onmicrosoft.com
ROHIT PATIL - 14005200038	ROHIT.PATIL38@svkmmumbai.onmicrosoft.com
MANAS AHIRE - 14005200018	MANAS.AHIRE18@svkmmumbai.onmicrosoft.com
PRADYUMNA PATIL - 14005200037	PRADYUMNA.PATIL37@svkmmumbai.onmicrosoft.com
PRANAV GUJAR - 14005190007	PRANAV.GUJAR@svkmmumbai.onmicrosoft.com
PRATIK MALI2 - 14005180023	PRATIK.MALI2@svkmmumbai.onmicrosoft.com
Snehal S	
ROHIT YEOLE - 14005195031	ROHIT.YEOLE@svkmmumbai.onmicrosoft.com
MUHAMMAD FAISAL KHAN - 14005200031	MUHAMMADFAISAL.KHAN31@svkmmumbai.onmicrosoft.com
NILESH.PATIL5	NILESH.PATIL5@svkmmumbai.onmicrosoft.com
CHINMAY CHITTE - 14005190006	CHINMAY.CHITTE@svkmmumbai.onmicrosoft.com
Yogesh Sonawane	Yogesh.Sonawane@svkm.ac.in
GOVIND BHAKARE - 14003185007	GOVIND.BHAKARE@svkmmumbai.onmicrosoft.com
PRUTHVIRAJ SHINDE - 14005190022	PRUTHVIRAJ.SHINDE@svkmmumbai.onmicrosoft.com
AKASH.GOTE	AKASH.GOTE@svkmmumbai.onmicrosoft.com
TANMAY RAJPUT - 14005190021	TANMAY.RAJPUT@svkmmumbai.onmicrosoft.com
CHIRAG HIRE - 14005180015	CHIRAG.HIRE@svkmmumbai.onmicrosoft.com
PRATIK PATIL - 14005200016	PRATIK.PATIL16@svkmmumbai.onmicrosoft.com
AJIT PATIL - 14005190015	AJIT.PATIL@svkmmumbai.onmicrosoft.com
Basweshwar Jirwankar	Basweshwar.Jirwankar@svkm.ac.in

PRAVIN LONARI - 14003200033  
SACHIN DEVKAR - 14003195006  
RAJASHREE DEORE - 14005185017  
TEJAS WANI - 14005200046  
DIPAK PATIL2 - 14005190025  
MEHUL GUDHE - 14005200027  
BHAVESH DEORE - 14005200026  
ROHAN SONAWANE3 - 14003195023  
HITESH SONAWANE - 14003195024  
JAY CHAUDHARI - 14005200024  
JAGADISH SONAWANE - 14003190025  
Mahendra Lohar  
SHUBHAM DALAVI - 14005185015  
HEMANT PATIL2 - 14005170021  
Akshaykumar Jain  
SUMIT BAGUL2 - 14005190002  
Mahesh Gaikwad  
Narendra Patil (SVKM IOT)  
JAYESH BHAMARE - 14005170002  
KIRAN CHOTMURADA - 14005180009  
MANAS PATIL3 - 14005195017  
TEJRAJ BORSE - 14005170007  
MAYUR KOTHAWADE - 14005195011  
SUSHIL PATIL - 14005195016  
KULDEEP SONAWANE - 14005195026  
AJAY SHELKAR - 14003190018  
TUSHAR DEORE - 14005195005  
POOJA PATIL - 14003200040  
TUSHAR PATIL8 - 14003195018  
SUDEEP BEDMUTHA - 14005180004  
VEDANT JAKATDAR - 14003180007  
NIKHIL CHAUDHARI5 - 14005180007  
AABID HUSAIN QUAZI - 14005200040  
NIRAJ CHAUDHARI  
JUNED BAIG - 14005200019  
RUSHIKESH JAGTAP - 14005180017  
PRATIK SONJE - 14005170031

PRAVIN.LONARI33@svkmmumbai.onmicrosoft.com  
SACHIN.DEVKAR@svkmmumbai.onmicrosoft.com  
RAJASHREE.DEORE@svkmmumbai.onmicrosoft.com  
TEJAS.WANI46@svkmmumbai.onmicrosoft.com  
DIPAK.PATIL2@svkmmumbai.onmicrosoft.com  
MEHUL.GUDHE27@svkmmumbai.onmicrosoft.com  
BHAVESH.DEORE26@svkmmumbai.onmicrosoft.com  
ROHAN.SONAWANE3@svkmmumbai.onmicrosoft.com  
HITESH.SONAWANE@svkmmumbai.onmicrosoft.com  
JAY.CHAUDHARI24@svkmmumbai.onmicrosoft.com  
JAGADISH.SONAWANE@svkmmumbai.onmicrosoft.com  
Mahendra.Lohar@svkm.ac.in  
SHUBHAM.DALAVI@svkmmumbai.onmicrosoft.com  
HEMANT.PATIL2@svkmmumbai.onmicrosoft.com  
Akshaykumar.Jain@svkm.ac.in  
SUMIT.BAGUL2@svkmmumbai.onmicrosoft.com  
Mahesh.Gaikwad@svkm.ac.in  
Narendra.P@svkm.ac.in  
JAYESH.BHAMARE@svkmmumbai.onmicrosoft.com  
KIRAN.CHOTMURADA@svkmmumbai.onmicrosoft.com  
MANAS.PATIL3@svkmmumbai.onmicrosoft.com  
TEJRAJ.BORSE@svkmmumbai.onmicrosoft.com  
MAYUR.KOTHAWADE@svkmmumbai.onmicrosoft.com  
SUSHIL.PATIL@svkmmumbai.onmicrosoft.com  
KULDEEP.SONAWANE@svkmmumbai.onmicrosoft.com  
AJAY.SHELKAR@svkmmumbai.onmicrosoft.com  
TUSHAR.DEORE@svkmmumbai.onmicrosoft.com  
POOJA.PATIL40@svkmmumbai.onmicrosoft.com  
TUSHAR.PATIL8@svkmmumbai.onmicrosoft.com  
SUDEEP.BEDMUTHA@svkmmumbai.onmicrosoft.com  
VEDANT.JAKATDAR@svkmmumbai.onmicrosoft.com  
NIKHIL.CHAUDHARI5@svkmmumbai.onmicrosoft.com  
AABIDHUSAIN.QUAZI40@svkmmumbai.onmicrosoft.com  
NIRAJ.CHAUDHARI@svkmmumbai.onmicrosoft.com  
JUNED.BAIG19@svkmmumbai.onmicrosoft.com  
RUSHIKESH.JAGTAP@svkmmumbai.onmicrosoft.com  
PRATIK.SONJE@svkmmumbai.onmicrosoft.com

## **Feedback form**

## **Link to Video Lecture**

[https://svkmmumbai.sharepoint.com/:v:/s/all\\_staff\\_mech\\_svkm/EQMvaHZRfwNBt61yZM0MzucBCtLEjxtJyk86uKh4KVhsEg?e=4cTLVq](https://svkmmumbai.sharepoint.com/:v:/s/all_staff_mech_svkm/EQMvaHZRfwNBt61yZM0MzucBCtLEjxtJyk86uKh4KVhsEg?e=4cTLVq)

## **Report on Essay Writing Competition**

**Event:** Essay writing competition conducted on the occasion of Engineer's Day.

**Date :** 15<sup>th</sup> September 2021.

The Engineering community across India celebrates **Engineer's Day** on 15<sup>th</sup> of September every year as a tribute to the greatest Indian Engineer Bharat Ratna **Sir Mokshagundam Visvesvaraya**.

On this occasion considering the greatness and vast perspective of an engineer, the **Mechanical Engineering Students Association (MESA)** of 2021-22 conducted an Essay writing competition to showcase various developmental ideas considering technology. The competition was written type where the students showed up their knowledge in the way they see this enthusiastic world and how engineers can contribute it enormously comprising the topics :

- **“Importance of AI in Mechanical Engineering”;**
- **“Importance of Mechanical Engineer in Society”;**
- **“Online Education : Blessing or Curse for engineering education?”**

1 day span was allotted for participants to submit their response along with the essay in the scanned pdf format. Forms were received from students of Mechanical department. Considering the lockdown phase all the council members worked hard to ensure that the competition was a success.

Overall, 8 students from the Institute submitted their essay's. Considering these responses, the student council selected 3 best essays out of 8 by rating them over 6 various parameters - Creativity, Structure, Grammar, Adherence to Topic, Length & Calligraphy. Further these were judged by Dr. Hitesh Thakare (HOD - Mechanical Engineering Department); Prof. Mohammad Juneduddin (Academic Co-ordinator); Prof. Yogesh Sonawane (Faculty Co-ordinator). They selected 3 essays as winners of participants namely:

1. Tejas Wani (TY Mechanical)
2. Akash Gote (LY Mechanical)
3. Pradyumna Patil (TY Mechanical)

It was a great experience of 2021-22 **Mechanical Engineering Students Association (MESA)** as a team and the result of this programme was a success.

Thank you,

**Mechanical Engineering Students Association (MESA),  
SVKM's Institute of Technology,  
Dhule.**

Shri Vile Parle Kelavani Mandals's

# **INSTITUTE OF TECHNOLOGY,**

## **DHULE**

### **Department of Mechanical Engineering**

A Report on

#### **"Demonstration of 3D Printing"**

The session was organized by Mechanical Engineering Students Association (MESA), SVKM's IOT Dhule on 30<sup>th</sup> December to Introduce and Demonstrate the recent trend in Additive Manufacturing which is 3D Printing.

The Session was started by Mr. Sudeep Bedmutha (President, MESA) in which he Welcomed and Introduced the guest , Felicitation was Done by Dr.Hitesh Thakare (Head of Department, Mechanical Branch).

The Session was Conducted by Mr. Swapnil Potdar, In which he Firstly Explained the Theoretical Knowledge Related to the Session which Includes the invention of 3D Printing, The Ongoing Research and Past Successful inventions in the Field of Engineering with the help of Presentation . Secondly He Demonstrated The Actual Model Which was Made by 3D Printing , Simultaneously Previous Models which he made at his Workshop were Shown to all the Students .

Lastly,Mr.Yogesh Sonawane (Faculty Coordinator ,MESA), Expressed the Words of Gratitude and Concluded the Session.







## Activity Report

# Virtual International Conference On FUTURISTIC DEVELOPMENTS IN MECHANICAL SCIENCES AND TECHNOLOGY (ICFDMST-2021)

Technically Sponsored By



Jointly Organized By

Department of Mechanical Engineering



**SVKM's Institute of Technology, Dhule M.S**



# Shri Vile Parle Kelavani Mandal's Institute of Technology, Dhule, Maharashtra, India

**Aim:** To serve as a platform for academicians, researchers and professional practitioners to exchange knowledge, ideas, and debate on emerging trends in Mechanical Sciences, and Technologies.

**Objective:** To provide an opportunity for an interactive discussion with experts on researchers in various specialized areas of Mechanical Sciences and Technologies.

**Name of Program:** Virtual International Conference on Futuristic Developments of Mechanical Sciences and Technologies (ICFDMST-2021).

**Date:** 23rd-24th December 2021

**Time:** 10.00 AM – 5:30 PM

**General Chair:** Dr. Nilesh Salunke

**Convener:** 1) Dr. Hitesh Thakare.

**Conference Organizing Committee:**

- 1) Dr. Amol Badgujar.
- 2) Mr. Mohammed. Juneduddin.
- 3) Mr. Yogesh Sonawane.
- 4) Mr. Mahesh Dalwani.
- 5) Mr. Dhiraj Bhandarkar.
- 6) Mr. Dattatray Doifode.
- 7) Mr. Satish Patil.
- 8) Mr. Bhushan Behede.

**Keynote Experts:**

1) Dr. Rahul Jagtap.

(Assistant Professor, MIT WPU, Pune)

2) Dr. Brijesh Singh Yadav

(Material Technologist, Saule Technologies, SA, Wroclaw, Poland).

**Participants:** Faculty/Research scholar/students/Scientist/Industry Expert from different disciplines all over world.

## Outcomes:

- 1) To facilitate and develop a collaborative & interactive single platform for the international researchers, Engineers, Scientists, Academician and the students.
- 2) To get the knowledge and an idea of various new and emerging topics in the field mechanical sciences and technologies.

The Department of Mechanical Engineering of Shri Vile Parle Kelavani Mandal's Institute of Technology, Dhule, Maharashtra, India, has organized a Virtual International Conference on FUTURISTIC DEVELOPMENTS IN MECHANICAL SCIENCES AND TECHNOLOGY (ICFDMST-2021) during 23<sup>rd</sup> - 24th December 2021. ICFDMST-2021 provided an opportunity for meeting of International Researchers, Engineers, Scientists and specialists in various research and development fields of Engineering, Sciences and Technology. The conference offered a virtual platform for experts to gather and interact intensively on various new and emerging topics including Applications of AI, ML & IoT in Mechanical Engineering, Automotive Technology, Robotics, Automation and Industry 4.0, MEMS, Theoretical and experimental Fluid Mechanics, Thermodynamics, Heat and Mass Transfer, Materials Science and Metallurgical Engineering, HVAC and many more.

In ICFDMST-2021, total 37 papers were received out of which 26 papers got shortlisted by the expert reviewer committee.

## Glimpse of ICFDMST-2021-Conference:



Figure 4: Participants Attending the ICFDMST-2021

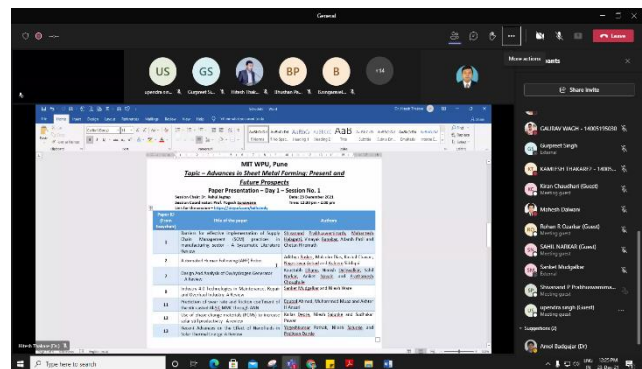


Figure 4: ICFDMST-2021-Schedule being shared.

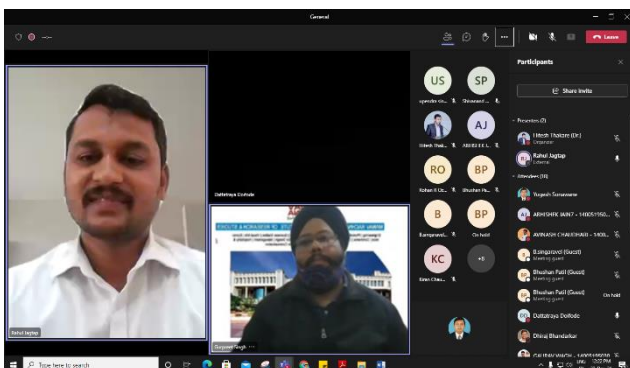


Figure 4: Key note speaker delivering the expert talk

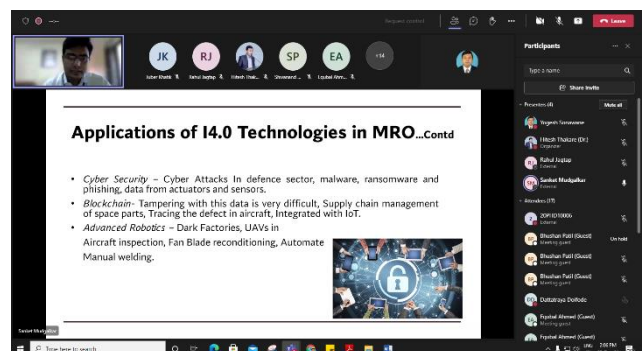


Figure 4: Paper being presented by the participant.

# Sample Certificate



SHRI VILE PARLE KELAVANI MANDAL'S  
**Institute of Technology, Dhule**  
Approved by AICTE New Delhi | Affiliated to DBATU, Lonere

International Conference On  
**Futuristic Developments**



**In**  
**Mechanical Sciences And Technology (ICFDMST 2021)**

23<sup>rd</sup> – 24<sup>th</sup> December, 2021

**Certificate of Participation**

This is to certify that **Kaustubh Vineet Dhanu** has participated and presented a paper entitled **"DESIGN AND ANALYSIS OF OXYHYDROGEN GENERATOR - A REVIEW"** in ICFDMST – 2021, organized by the Department of Mechanical Engineering, Shri Vile Parle Kelavani Mandal's Institute of Technology (SVKM's IOT), Dhule.

Dr. Hitesh Thakare  
Convener

Reference Number: ICFDMST2021\_1

Dr. Nilesh Salunke  
Organizing Chair

**Proceedings of International Conference**



**On**

**FUTURISTIC DEVELOPMENTS**

**IN**

**MECHANICAL SCIENCES AND TECHNOLOGY**

**(ICFDMST-2021)**

**23<sup>rd</sup> – 24<sup>th</sup> December 2021**





**PROCEEDINGS OF INTERNATIONAL CONFERENCE ON  
FUTURISTIC DEVELOPMENTS IN  
MECHANICAL SCIENCES AND TECHNOLOGY (ICFDMST-2021)**



**INTERNATIONAL CONFERENCE ON  
FUTURISTIC DEVELOPMENTS IN  
MECHANICAL SCIENCES AND  
TECHNOLOGY (ICFDMST 2021)**



23rd and 24th December 2021

Organized by,

**DEPARTMENT OF MECHANICAL ENGINEERING**

**Technically Supported By**



**SHRI VILE PARLE KELAVANI MANDAL**  
Pursuing excellence in education



**SVKM's INSTITUTE OF TECHNOLOGY  
DHULE**



**PROCEEDINGS OF INTERNATIONAL CONFERENCE ON  
FUTURISTIC DEVELOPMENTS IN  
MECHANICAL SCIENCES AND TECHNOLOGY (ICFDMST-2021)**



**International Conference On  
FUTURISTIC DEVELOPMENTS IN MECHANICAL  
SCIENCES AND TECHNOLOGY (ICFDMST-2021)**

**Organized By**

**DEPARTMENT OF MECHANICAL ENGINEERING**



**SHRI VILE PARLE KELAVANI MANDAL**  
Pursuing excellence in education

**Shri Vile Parle Kelavani Mandal's**

**Institute of Technology, Dhule, Maharashtra, India**

**Coordinators**

**Dr. Amol Badgujar**

**Prof. Mohammed. Juneduddin**

**Convener**

**Dr. Hitesh Thakare**

**General Chair**

**Dr. Nilesh Salunke**

**Principal, SVKM's IoT, Dhule**

**Published By: Shri Vile Parle Kelavani Mandal's Institute of Technology, Dhule, Maharashtra, India**



**PROCEEDINGS OF INTERNATIONAL CONFERENCE ON  
FUTURISTIC DEVELOPMENTS IN  
MECHANICAL SCIENCES AND TECHNOLOGY (ICFDMST-2021)**



**Proceedings of Virtual International Conference on  
FUTURISTIC DEVELOPMENTS IN MECHANICAL SCIENCES AND  
TECHNOLOGY (ICFDMST-2021)**

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**PROCEEDINGS OF INTERNATIONAL CONFERENCE ON  
FUTURISTIC DEVELOPMENTS IN  
MECHANICAL SCIENCES AND TECHNOLOGY (ICFDMST-2021)**



## General Chair

**Dr. Nilesh P. Salunke**  
**Principal, SVKM's IOT**  
**Dhule.**



### MESSAGE

It gives me an immense pleasure that Department of Mechanical Engineering of Shri Vile Parle Kelavani Mandal's Institute of Technology, Dhule, Maharashtra, India, is organizing a Virtual International Conference on *FUTURISTIC DEVELOPMENTS IN MECHANICAL SCIENCES AND TECHNOLOGY (ICFDMST-2021)* from 23<sup>rd</sup> – 24<sup>th</sup> December 2021. ICFDMST-2021 provides an opportunity for meeting of International Researchers, Engineers, Scientists and specialists in various research and development fields of Engineering and Technology. The conference offers a virtual platform for experts to gather and interact intensively on various topics including Applications of AI, ML & IoT in Mechanical Engineering, Automotive Technology, Robotics, Automation and Industry 4.0, MEMS, Theoretical and experimental Fluid Mechanics, Thermodynamics, Heat and Mass Transfer, Materials Science and Metallurgical Engineering, HVAC and many more. The success of this Conference is solely on the dedication and efforts of innumerable people who started working on the preparations for almost a year in many ways to make this Conference become a reality. Eventually I express my special thanks and appreciation to all the organizers & volunteers who made this conference possible. I am also grateful to all the authors, reviewers and keynote speakers for their participations and contributions towards the development of research acumen.

I wish ICFDMST-2021 all the best for its success.



**PROCEEDINGS OF INTERNATIONAL CONFERENCE ON  
FUTURISTIC DEVELOPMENTS IN  
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**Keynote Expert**  
**Conference Day- 1**

**Title: Advances in Sheet Metal Forming: Present and Future Prospects**

**Speaker: Dr. Rahul K. Jagtap (Brief Biography)**



He had completed B. Tech (Production Engineering) from Shri Guru Gobind Singhji Institute of Engineering and Technology, Nanded, M. Tech (CAD/CAM) and Ph.D. (Mechanical Engineering) from Sardar Vallabhbhai National Institute of Technology, Surat. He worked as a Programmer Analyst Trainee at Cognizant Technology. He has the experience of working as an Assistant Professor at Thakur College of Engineering and Technology, Mumbai and JSPM Narhe Technical Campus. He also worked as a Research Fellow on a SERB-DST Funder Research Project at S V National Institute of Technology, Surat. Currently he is working as an Assistant Professor at MIT World Peace University, Pune.

**Keynote Expert**  
**Conference Day- 2**

**Title: Printable Thin Film Solar Cell Technology**

**Speaker: Dr. Brijesh Singh Yadav (Brief Biography)**



He has completed Ph.D. (Material Science and Metallurgical Engineering) from Indian Institute of Technology Hyderabad, India and B. Tech. (Mechanical Engineering) from Lovely Professional University, Punjab, India. He has an experience of working as a Senior Research Fellow at Centre for Solar Energy Material, ARCI, Hyderabad. He worked as a Quality Engineer at Omega Industrial Corporation, New Delhi, India. He worked as a Junior Research Fellowship (JRF) at Department of Science and Technology (DST), Govt. of India. He has received Research Excellence Award, Indian Institute of Technology Hyderabad. He was selected for the Augmenting Writing Skills for Articulating Research (AWSAR)-Award and cash prize by the Department of Science and Technology, Government of India. He is also the recipient of Academic Excellence Award by Lovely Professional University, Jalandhar, India. Currently he is working as a Material Science Specialist/Technologist, Saule Technologies, S.A., Wroclaw, Poland.



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## **Conference Themes (not limited to)**

- Applications of AI, ML & IoT in Mechanical Engineering
- Automotive Technology
- Design of Mechanical Systems
- Aerospace Engineering
- Nanotechnology and Microengineering
- Robotics, Automation and Industry 4.0
- Additive Manufacturing
- Theoretical, Numerical and Experimental Fluid Mechanics,
- Thermodynamics, Heat and Mass Transfer
- Materials Science and Metallurgical Engineering
- Energy Conservation & Management
- Renewable Energy Technologies,
- MEMS
- HVAC



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## List of Session Chairs

Name	Affiliation
Dr. Rahul Jagtap	MIT World Peace University, Pune, India
Dr. Dhiraj Deshmukh	MET's Institute of Engineering, Nashik
Mr. Ganesh Wani	Hitachi Astemo Ltd., Pune

## List of Reviewers

Name	Affiliation
Dr. Rahul Jagtap	MIT World Peace University, Pune, India
Mr. Avinash Chavan	SJCEM, Palghar
Mr. Ambeprasad Kushwaha	SJCEM, Palghar.
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## Conference Schedule

<p><b>Day 1: 23<sup>rd</sup> December-2021</b></p> <p><b>Inaugural Function</b></p> <p><b>10.00 AM - 11:00 AM</b></p> <p><b>Dr. Niles P. Salunke</b> (Principal, SVKM's Institute of Technology, Dhule) General Chair-ICFDMST-2021</p>	<p><b>Day 2: 24th December 2021</b></p>
<p><b>Key note Speaker-1</b></p> <p><b>Time: 11:00 am – 12.00 pm</b></p> <p><b>Keynote Speaker:</b> - Dr. Rahul Jagtap (MIT WPU, Pune)</p> <p><i>Topic: Advances in Sheet Metal Forming: Present and Future Prospects.</i></p>	<p><b>Key note Speaker-2</b></p> <p><b>Time: 11:00 am – 12.00 pm:</b></p> <p><b>Keynote Speaker:</b> Dr. Brijesh Singh Yadav Ph.D. (IIT Hyderabad).</p> <p><i>Topic – Printable Thin Film Solar Cell Technology</i></p>
<p><b>Tea Break 12:00 PM -12.30 PM</b></p>	<p><b>Tea Break 12:00 PM -12.30 PM</b></p>
<p><b>Paper presentation - Sessions #1</b></p> <p><b>Time: 12:30 pm - 2.00 pm</b></p> <p><b>Session Chair:</b> Dr. Rahul Jagtap, <b>Session Coordinator:</b> Prof. Yogesh Sonawane</p>	<p><b>Paper presentation - Sessions #3</b></p> <p><b>Time: 12:30 pm - 2.00 pm</b></p> <p><b>Session Chair:</b> Mr. Ganesh Wani, <b>Session Coordinator:</b> Prof. Mahesh Dalwani</p>
<p><b>Lunch Break: 2:00 PM -2.30 PM</b></p>	<p><b>Lunch Break: 2:00 PM -2.30 PM</b></p>
<p><b>Paper presentation - Sessions #2</b></p> <p><b>Time: 2:30 pm – 4.00 pm</b></p> <p><b>Session Chair:</b> Dr. Dhiraj Deshmukh, <b>Session Coordinator:</b> Prof. Mahesh Dalwani</p>	<p><b>Validatory Function</b></p> <p><b>2.30 PM – 3.00 PM</b></p>





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**Conference Schedule: Day:1: Session:1**

**Date: 23<sup>rd</sup> December 2021**

**Time: 11:00 am – 12.00 pm**

**Keynote Speaker:** - Dr. Rahul Jagtap (MIT WPU, Pune)

*Topic: Advances in Sheet Metal Forming: Present and Future Prospects.*

**Time: 12:30 pm - 2.00 pm**

**Paper Presentations**

**Session Chair:** Dr. Rahul Jagtap, **Session Coordinator:** Prof. Yogesh Sonawane

Paper ID	Title of the paper	Authors
1	Barriers for effective implementation of Supply Chain Management (SCM) practices in manufacturing sector – A Systematic Literature Review	Shivanand Prabhuswamimath, Mahantesh Halagatti, Vinayak Banakar, Adarsh Patil and Chetan Hiremath
2	Automated Human Following (AHF) Robot	Adithya Basker, Malcolm Dias, Kushal Chavan, Nageshwar Avhad and Aqleem Siddiqui
7	Design And Analysis of Oxyhydrogen Generator– A Review	Kaustubh Dhanu, Nimish Dichwalkar, Sahil Narkar, Aniket Navale and Prathamesh Choughule
9	Industry 4.0 Technologies in Maintenance, Repair and Overhaul Industry: A Review	Sanket Mudgalkar and Nilesh Ware
11	Prediction of wear rate and friction coefficient of the stir casted Al-SiC MMC through ANN	Equbal Ahmed, Muhammed Muaz and Akhter H Ansari
12	Use of phase change materials (PCMs) to increase solar still productivity - A review	Kailas Deore, Nilesh Salunke and Sudhakar Pawar
13	Recent Advances on the Effect of Nanofluids in Solar Thermal Energy: Review	Yogeshkumar Pathak, Nilesh Salunke and Prajitsen Damle



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**Conference Schedule: Day:1, Session:2**

**Date: 23<sup>rd</sup> December 2021**

**Time: 2:30 pm – 4.00 pm**

**Paper Presentation**

**Session Chair: Dr. Dhiraj Deshmukh, Session Coordinator: Prof. Mahesh Dalwani**

<b>Paper ID</b>	<b>Title of the paper</b>	<b>Authors</b>
14	A Study of Advancement of Phase Change Materials for Solar Absorption Refrigeration System	Bhushan Patil, Nilesh Salunke and Vijay Diware
15	A Review on Effects of Nanoparticles in Solar Energy Systems	Juber Ahamad and Dr. Nilesh Salunke
17	Prospects for Biodiesel Production in India	Kiran Chaudhari, Dr. Nilesh Salunke and Dr. Vijay Diware
18	A Review on Displacement Amplification Mechanism in Micro-Electro- Mechanical System	Rohan Ozarkar, Nilesh Salunke and Prajitsen Damle
19	Electricity Generation by Two-wheeler suspension systems	Gurpreet Singh Matharou, Rishabh Dhawan, Sagar Bansal and Sachin Singh
20	Ultrasonic Welding of Composites: A Review	Md. Yusuf Rahmani and Surendra Kumar Saini
22	Delamination error analysis in drilling of CFRP composite using different drill tools	Venkatram Reddy A, Bhargavi M, Niranjan T and Singaravel B
27	Thermal Analysis Of Vertical Heated Cylinder By Using V – Shape Fins	Vipul Bhamare, Avinash Chaudhari, Mayuresh Patil and Amrut Patil
30	Prediction of flow particle behavior in Cyclone separator using Computational Flow Dynamics	Upendra Singh and Bhupendra Singh More



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**Conference Schedule: Day 2: Session:3**

**Date: 24<sup>th</sup> December 2021**

**Time: 11:00 am – 12.00 pm:**

**Keynote Speaker:** Dr. Brijesh Singh Yadav Ph.D. (IIT Hyderabad)

(Technology Specialist in Materials Engineering Saule Technology Inc., Poland).

*Topic – Printable Thin Film Solar Cell Technology*

**Time: 12:30 am – 2.00 pm:**

**Paper Presentation:**

**Session Chair:** Mr. Ganesh Wani, Hitachi Astemo Ltd., Pune

**Session Coordinator:** Prof. Mahesh Dalwani

Paper ID	Title of the paper	Authors
21	Review on Development of Aluminosilicate ZeoliteBased Desiccants for Rotary Dehumidifier	Khushal Chaudhari, Kamlesh Thakare, Mayur Shinde and Gaurav Patil
24	Review On Various Anticorrosive Coatings for IceCan	Ruchita Ahire, Harshada Jagtap, Dipali Varade and Om Ahirrao
26	Low-Cost Cleaning Techniques	Abhishek Jain and Ganesh Dhaybar
28	Review on Agricultural Drone and its Application	Kuldeep Sonawane, Mayur Kothawade, Pratik Deore, Rohit Mahajan
31	Design And Analysis of Chassis Frame of LMV:Review	Anish Fulzade, Samyak Mudawadkar and Rohit Pawar More, Ninad
32	Design, Construction and Testing of fully automated Speed Breaker: Review	Yogesh More, Pankaj Sonawane and Girish Marathe
34	Review on Multiple Injections in Single CylinderDiesel Engine	Tejas Shinde, Yadnesh Gujar, Mayur Sawant and Shubham Suryawanshi



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<b>36</b>	Performance evaluation of PCM based Solar Water Heater using Machine Learning: Comprehensive Review	Nilesh Patil, Shubham Sharma, Dhiraj Gharate and Chirag Hire
<b>37</b>	Evaluation of the solar panel performance using machine learning	Parth Punjabi, Rushikesh Jagtap and Niraj Chaudhari
<b>35</b>	Systematic Review on Uses of NLP	Shaikh Sohail Ahmed Kaleem Ahmed Shaikh, Awias Sarosh Ansari Ansari, Gaurav Bharat Wagh and Kaushal Jayant Lohar Lohar



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**ABSTRACTS FROM  
PRESENTED PAPERS**



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## **Barriers for effective implementation of Supply Chain Management (SCM) practices in manufacturing sector –A Systematic Literature Review**

**Paper ID:** ICFDMST2021\_1

### **Authors:**

Shivanand Prabhuswamimath, Mahantesh Halagatti,  
Vinayak Banakar, Adarsh Patil<sup>4</sup>, Chetan Hiremath.

### **Abstract**

The main motive behind this work is to analyze the potential barriers and their relevance for supply chain management (SCM) activities which in turn has great impact on organizational performance in manufacturing sector through literature survey of last 20 years. SCM is important for organizations achieve their mission and vision and organization top management are faced with many complex situations in implementing SCM practices. These barriers/factors play a very predominant role in the analysis of performance of supply chain activities for an organization as the competition is no longer between companies and it is truly among different supply chains in today's era of globalization and competition. Effective supply chain management is the need of the hour for survival of an organization in multifaceted complex environment and to attain it, organizations need to keep an eye on all the barriers which are hindering supply chain activities. SME (Small and Medium enterprises which are a backbone for developing countries in terms of contributing to GDP and creating job opportunities in local regions, are lagging behind large enterprises in effective management of supply chain activities.

**Keywords:** supply chain management, barriers, manufacturing, small and medium enterprises, and organizational performance.





## **Automated Human Following (AHF) Robot**

**Paper ID:** ICFDMST2021\_2

**Authors:** Aqleem Siddiqui, Adithya Basker, Malcolm Dias, Kushal Chavan and Nageshwar Avhad

### **Abstract**

The Automated human following (AHF) robot is a simplified form of Automated Guided Vehicle (AGV) which predominantly used in industries and warehouses for the purpose of transfer of goods from one point to another. The AHF is will also be used for the same purpose of goods transfer but the goods would be lighter and the environment would not be limited only to industrial usage but also serve a good purpose as a domestic and personalized carrier. The AHF is a robot which would be following its master/user on the basis of the user's smart phone location. This would be done by means of GPS modules and the Bluetooth module would help the robot to detect its master's smartphone from multiple smartphones present in the radius. This paper is about the attempt to provide a low cost and efficient automation solution for all the environment possible for transfer of light weight goods, files & other stuffs across dynamic environments. This automation technique would allow the transportation and carrying of goods in a more efficient and contact-less manner. The paper also includes detailed information about the body, sensors and actuators of the AHF.

**Keywords:** AGV, AHF, Arduino IDE, Arduino MEGA, Autodesk Inventor.



## **DESIGN AND ANALYSIS OF OXYHYDROGEN GENERATOR – A REVIEW**

**Paper ID:** ICFDMST2021\_7

**Authors:** Kaustubh Dhanu M, Nimish R. Dichwalkar, Sahil S. Narkar V K,  
Aniket S. Navale, Prathamesh Chougule

### **Abstract**

Greenhouse gases are the major cause behind the present global climate change and heating issue. The transportation sector generates the most important share of the greenhouse emission. To solve this issue, an alternate renewable fuel used for internal combustion engine is one of the best ways through which we can get solution about fuel shortage and carbon emission of the engine. The unique combustion characteristics of hydrogen helps to scale back the carbon emission of the engine. The oxy-hydrogen generator has been used to increase the fuel efficiency without major changes within the existing internal combustion engine. The production rate of HHO gas depend upon the various elements, i.e., input voltage, quality of water, temperature of water. An efficient HHO generator is meant to supply an outsized amount of HHO gas by employing a less amount of power. This HHO gas can be use as a secondary fuel on demand, in internal combustion engine (petrol and diesel) with no need of storage. Characteristics of HHO gas helps to enhance the combustion which ultimately reduces the engine emission. In this paper, we have study and reviewed some research done by people over a recent time on the use of HHO gas and its generation for IC engines to increase the efficiency and reduce the overall use of conventional fuels.

**Keywords:** Greenhouse gas, HHO Generator, Electrolysis process, Enhanced Combustion, Efficient HHO Generator etc.



## **Industry 4.0 Technologies in Maintenance, Repair and Overhaul**

### **Industry: A Review**

**Paper ID:** ICFDMST2021\_9

**Authors:** Sanket Ashok Mudgalkar, Nilesh Ware

#### **Abstract**

Companies are extensively implementing Industry 4.0 technologies to achieve competitive advantage. Industry 4.0 enables transformation from machine dominant manufacturing to digital-based manufacturing. However, the research is still in its infancy in the MRO (Maintenance, Repair, and overhaul) sector. MRO refers to a set of activities required to keep the machinery in working conditions, including inventory management, repairing in case of damage, inspection, and replacing damaged parts by entirely disassembling the machine and then reassembling it. MRO companies have started implementing Industry 4.0 technologies to improve the operational efficiency of maintenance activities. The study shows that there is an increasing trend in applications of Big data, AI and IoT. However, applications of Blockchain, cybersecurity, and Additive manufacturing have received less attention from researchers in the MRO Industry domain. This study aims to study the application of all technologies under Industry 4.0 in the MRO Industry and the challenges associated with implementing these technologies. We have identified and studied eleven significant Industry 4.0 Technologies and their applications in the context of MRO. This study shall help both the academicians and industry practitioners as it will give directions for further research and an overview of existing implementation practices in the domain.

**Keywords:** Industry 4.0, Maintenance Repair and Overhaul, Big data and analytics, Artificial Intelligence (AI), Internet of things (IoT) and Digital twin.



## **Prediction of wear rate and friction coefficient of stir casted Al-SiC MMC through ANN**

**Paper ID:** ICFDMST2021\_11

**Authors:** Equbal Ahmed, Muhammed Muaz, Akhter Husain Ansari

### **Abstract**

Purpose of this work is to apply ANN technique to predict the mechanical properties of a metal matrix composite. Improvements in the properties and performance of materials have always been a great concern for researchers. These improvements can be achieved by developing metal matrix composites. Several additives can be added to tailor the characteristics of the material. In this paper, experimental data is taken from a published paper. Then ANN is applied to predict the output values. In the ANN model, there are five inputs and two outputs, while ten hidden layers and two output layers. The model is so efficient that it is able to predict the data with a very small prediction error of the order of 0.001.

**Keywords:** Neural network; stir casting, wear rate; friction coefficient; metal matrix composite



## **Use of phase change materials (PCMs) to increase solar still productivity: - A review**

**Paper ID:** ICFDMST2021\_12

**Authors:** Kailas D. Deore, Dr. Nilesh P. Salunke, Dr. Sudhakar B. Pawar

### **Abstract**

This review study examines the use of phase change materials (PCMs) as latent heat storage devices to improve the productivity of solar stills. According to these findings, a passive solar still with PCM can increase productivity by up to 120 percent when compared to a solar still without PCM. Meanwhile, the productivity boost from a PCM-equipped active solar still might be as high as 700 percent. These findings show that as the PCM mass increases and the salty water mass decreases, productivity rises. The PCM is also found to be less effective during the day than at night. Organic PCMs (like paraffin) were also discovered to be the most frequently used in productivity improvement studies, with inorganic and eutectic PCMs receiving very little attention.

**Keywords:** Phase change material, solar still, paraffin wax, etc.



## **Recent Advances on the Effect of Nanofluids in Solar Thermal Energy: A Review**

**Paper ID:** ICFDMST2021\_13

**Authors:** Yogeshkumar R. Pathak, Dr. Nilesh P. Salunke, Dr. Prajitsen G. Damle

### **Abstract**

Sun is the prime source of energy in the universe. Solar energy is available freely and has no adverse effect on the environment like greenhouse gases, CO<sub>2</sub> emission etc. The main hurdle for the researchers is the storage and proper utilization of this available solar energy. The conversion of solar energy into the thermal energy can be done through the flat plate solar collector. In solar collectors, the temperature of the fluid flowing through the solar collector can be increases by absorbing the heat form the solar energy. The major challenge in the use of solar collector is its low efficiency. In last decade, the research is being done on the performance improvement of solar collector. One of the methods to improve the performance of solar collector is improvement in the thermal properties of the working fluid. It can be done by suspending the nanoparticles in the working fluid. This article highlights the use of nanofluids in performance improvement of solar flat plate collector.

**Keywords:** Solar Energy, Greenhouse gases, Nanofluids.



## **A Study of Advancement of Phase Change Materials for Solar Absorption Refrigeration System**

**Paper ID:** ICFDMST2021\_14

**Authors:** Bhushan Patil, Dr. Nilesh Salunke, Dr. Vijay Diware

### **Abstract**

In today's environment, solar energy is a renewable energy source that may be used for a variety of purposes. The efficient utilization of solar energy necessitates the development of a storage media that can store extra energy and then provide it when it is needed. The use of phase transition materials is an effective approach of storing solar thermal energy (PCMs). Because PCMs are isothermal in nature, they have a higher energy storage density and can work in a wide variety of temperatures. The phase change enthalpy, thermal conductivity, heat capacity, and density are the most significant parameter in the characterization of phase change materials (PCM). The most extensively used technique for assessing thermophysical characteristics is differential scanning calorimetry (DSC). However, various novel approaches have been presented in the literature, mostly to overcome DSC's limitations, particularly the small sample size required, which is insufficient for researching inhomogeneous materials. In a system-level strategy, the thermal stableness of PCM, medium of confinement and heat transfer fluid, as well as their congenial combination, as shown. Energy and exergy efficiency are used to evaluate the system's thermal performance during phase transition. The use of nanoparticles has considerably improved the performance of a vapour absorption refrigeration system. The numerous characteristics of PCMs would affect the operation of the LHS integrated solar absorption refrigeration system. PCMs have to cope with various phase transitions in order to preserve material stability in appropriate property descriptions such as thermal, physical, chemical characteristics, high-energy storage density, shape-stabilized PCMs, high latent heats and excellent capabilities of maintaining almost constant temperature.

**Keywords:** Phase change materials (PCMs), Differential scanning calorimetry (DSC), Thermal energy storage (THS), Heat transfer fluid (HTF), Sensible heat storage (SHS), Latent heat storage (LHS).



## **Effects of Nanoparticles on the Thermal Performance of Solar Energy Applications -A Review**

**Paper ID:** ICFDMST2021\_15

**Authors:** Juber Ahamad Mo. Salim Khatik, Dr. Nilesh P. Salunke

### **Abstract**

The potential of solar energy around the world has been estimated to be many times greater than the current overall primary energy demand. Now a day a number of solar energy applications, like solar collector, solar cooker, solar still, solar cell etc are most widely used. The impacts of nanoparticles on the thermal performance of solar energy systems are discussed in this paper. Nanoparticles are commonly employed in solar energy applications as coatings, nanofluids, and phase change materials.

**Keywords:** Solar energy, nanoparticles, coatings, nanofluids, PCM





## **Prospects for Biodiesel Production in India**

**Paper ID:** ICFDMST2021\_17

**Authors:** Kiran Dinkar Chaudhari, Dr. Nilesh P. Salunke, Dr. Vijay R. Diware

### **Abstract**

Global awareness of the effects of automobile emission and its effects such as climate change has been on the rise for the last few decades. Bioenergy and Biofuel are some of the accepted solutions towards reducing dependency on conventional fossil fuels. Being one of the largest populated countries on the planet, India has also defined and implemented its Biofuels policy timely. This paper discusses various approaches to biodiesel production and critical input parameter variability that influence biodiesel production.

**Keywords:** Bioenergy Policy, Biodiesel production, variability.



## **A Review on Displacement Amplification Mechanism in Micro-Electro-Mechanical System**

**Paper ID:** ICFDMST2021\_18

**Authors:** Rohan R. Ozarkar, Dr. Nilesh P. Salunke, Dr. Prajitsen G. Damle

### **Abstract**

Micro-electro mechanical systems (MEMS) have applications as micro-actuator, micro-sensor, RF MEMS, optical MEMS, bio-MEMS in the areas like micro-robotics, automobile, biomedical, space and electronic industry. In MEMS there are various types of micro-actuator like piezoelectric, thermal, electrostatic, magnetic actuator which are used to produce displacement in range of few microns. Micro-actuators are used in opening and closing of the valves of micro-pumps, micro-stages, DVD player, micro-gripper and resonator. In today's scenario there is a need of the compact devices which can be fabricated to produce large displacement in small built-up area. The displacement amplification mechanisms can be used with micro-actuators to increased displacement range. Different displacement amplification mechanisms (DAMs) from literature are studied and classified on the basis of parameters like geometric advantage (GA), actuating principle, fabrication technique and micro-actuator used for actuation.

**Keywords:** Displacement Amplification Mechanism, Microactuators, MEMS, Compliant Mechanism.



## **Electricity Generation by Two-wheeler suspension systems**

**Paper ID:** ICFDMST2021\_19

**Authors:** Gurpreet Singh Matharou, Rishabh Dhawan, Sagar Bansal, Sachin Singh

### **Abstract**

The primary goal of developing a controller for a car suspension system is to ease passengers' discomfort caused by road roughness and improve ride handling related to pitching and rolling motions. We employed a spring, rack, and pinion setup, and a double-fed induction generator in our project. As a result of the shock absorber effect, the spring is compressed, and the rack's linear movement is transformed to circular motion as the pinion travels owing to the rack's meshing with the pinion. Additionally, the pinion is positioned on the shaft that connects to the doubly-fed induction generator's shaft. Due to this configuration, the generator is rotated by the rotating motion of the pinion. As a result of generator spinning, energy is generated. And this energy is utilized to charge the battery, which is then used to power various car features such as power windows, lighting, and the air conditioner. The paper also addresses the related calculation of power generation and optimization of suspension dampers for the best electricity output.

**Keywords:** Shock absorber, Regenerative suspension, Rack and pinion.



## **Ultrasonic Welding of Composites: A Review**

**Paper ID:** ICFDMST2021\_20

**Authors:** Md. Yusuf Rahmani, Surendra Kumar Saini

### **Abstract**

Ultrasonic welding is one type of advanced welding process in which ultrasonic energy is used to join the different materials. This process is energy efficient and pollution free. This paper presents a short review of ultrasonic and hybrid ultrasonic welding of different soft engineering materials like polymers and polymer-based composites. Ultrasonic welded components are mainly used for plastic, automotive, medical and electronic industries

**Keywords:** Ultrasonic welding, hybrid welding and polymers



## **Review on Development of Aluminosilicate Zeolite Based Desiccants for Rotary Dehumidifier**

**Paper ID:** ICFDMST2021\_21

**Authors:** Mr. Khushal C. Chaudhari, Mr. Kamlesh P. Thakare,  
Mr. Mayur J. Shinde, Mr. Gaurav R. Patil,

### **Abstract**

A rotary desiccant-based air-conditioning system is a heat-driven hybrid system that combines different technologies such as desiccant dehumidification, refrigeration, and regeneration. This system has an opportunity to utilize low grade thermal energy obtained from the sun or other sources. In this paper, for new desiccant materials, there is great potential for improving the performance and consistency of rotary desiccant systems; at the same time, the use of solar energy for regeneration purposes can minimize the operating cost to a great extent. Some examples are presented to demonstrate how rotary desiccant air conditioning can be a promising solution for replacing traditional vapor-compression air-conditioning systems. Recent advances and ongoing research related to solar-powered hybrid rotary desiccant cooling systems are also summarized

**Keywords:** solar-powered hybrid rotary desiccant cooling systems.



## **Delamination error analysis in drilling of CFRP composite using different drill tools**

**Paper ID:** ICFDMST2021\_22

**Authors:** A. Venkatram Reddy, M. Bhargavi, T. Niranjana, B. Singaravel,

### **Abstract**

Carbon Fiber Reinforced Polymer (CFRP) composite is preferred widely in the area of aerospace and automotive industries due to its lightweight and high strength. Drilling of FRP composite and its related issues are important. The selection of appropriate drill tools is one of the methods to control the errors during drilling. In this work, an experimental investigation is carried out on minimization of delamination effect by the selection of appropriate drill tool and process parameters level. Various drill tools are attempted by researchers for controlling delamination errors during drilling of CFRP. The important drill types are twist drill, core saw drill, and brad drill. The result is noticed that a lower value of delamination factor is noticed with a higher level of spindle speed (1250 rpm) and lower level of federate (0.10 mm/rev) with a core saw drill. Core saw drill and brad spur drill are provided a lower value of delamination factor than a conventional twist drill. This study is focused on cutting performance with the effect of a special drill than conventional one for the effect of delamination error reduction and accuracy. It is noticed that delamination error could be controlled by an appropriate drill tool combined with optimum process parameters.

**Keywords:** Drilling; Delamination, Drill types, CFRP.



## **Review On Various Anticorrosive Coatings for Ice Can**

**Paper ID:** ICFDMST2021\_24

**Authors:** Ms. Ruchita Satish Ahire , Ms. Harshada Shamkant Jagtap,  
Mr. Om Machindra Ahirrao, Ms. Dipali Bharatarinath Varade

### **Abstract**

Refrigeration is the act of lowering and maintaining a temperature below that of the surrounding air, with the goal of freezing ice, cooling a product, or cooling a place to the appropriate temperature. The capacity of liquids to absorb tremendous amounts of heat when they boil and evaporate is the foundation of contemporary refrigeration. The ice plant is one of the most essential refrigeration applications, which worked on the VCRS (Vapour Compression Refrigeration System). The ice plant is used to provide a cooling effect in order to freeze potable water in standard cans that are put in a rectangular tank that is filled with brine. Our paper is to prevent those cans from corrosion due to the Brine Solution (NaCl) by using the coatings.

**Keywords:** Ice plant, VCRs, Ice can, Coating, Corrosion prevention, Zinc.



## **Low-Cost Cleaning Techniques**

**Paper ID:** ICFDMST2021\_26

**Authors:** Abhishek Pramod Jain, Ganesh Anant Dhaybar

### **Abstract**

Cleaning plays a vital role in day-to-day life. Cleaning helps improve the living standards of people and reduces the disease rate in human beings. Many advancements have been brought in in cleaning techniques. In the modern World, Cleaning requires high-end equipment. This paper consists of a review of different waste collecting machines and equipment. The processes involved are timesaving and more hygienic compared to that of the old technique.

**Keywords:** Cleaning techniques, waste management, literature review, Cow dung Collector





## **Thermal Analysis of Vertical Heated Cylinder By Using V –Shape Fins**

**Paper ID:** ICFDMST2021\_27

**Authors:** Vipul Vishwasrao Bhamare, Avinash Anil Chaudhari,  
Mayuresh Yashwant Patil, Amrut Asaram Patil

### **Abstract**

Natural convection is an important mode of heat transfer. It is used in many engineering applications such as cooling of electronic equipment's, cooling of PCB, refrigeration and air conditioning, I.C. engines, radiators of automobiles, etc. Some of these heat sinks are cylindrical in shape. The heat that is generated or developed in such system that conducts through the walls or boundaries is need to be continuously dissipated to the surroundings to keep the system in steady state condition. Large quantities of heat have to be dissipated from small area as heat transfer by convection between a surface and the fluid surroundings. It can be increased by attaching fins or extended surfaces. V shape fins have been selected for cooling such cylindrical surfaces or heat sinks. Initially the dimensions for the vertical cylinder with array of v shape fins have been obtained. Computational analyses of array of v shape fins over vertical heated cylinder have been studied by using Ansys software. The maximum natural convective heat transfer coefficient has been obtained for 60o v shape fins. V shape fins acts as a flow turbulator or flow separator. The computational results are also compared with analytical results for validations.

**Keywords:** Finite element analysis, vertical cylinder, CFD analysis, thermal analysis, V-shape fin, fins.



## **Review on Agricultural Drone and its Application**

**Paper ID:** ICFDMST2021\_28

**Authors:** Kuldeep Sonawane, Mayur Kothawade, Pratik Deore, Rohit Mahajan

### **Abstract**

In order to increase good yield of crops, fertilizations is the basic step. While spraying fertilizer farmer faces various problems like health issues, shortage of labor etc. So, in order to over this problem various techniques are discussed in the paper.

**Keywords:** Drone, Fertilization, Agriculture, Pesticide, Spraying



## **Prediction of flow particle behavior in Cyclone separator using Computational Flow Dynamics**

**Paper ID:** ICFDMST2021\_30

**Authors:** Upendra Singh, Bhupendra Singh More

### **Abstract**

Computational Fluid Dynamics (CFD) is used to forecast and assess the impact of temperature, operating pressure and inlet velocity on the overall performance of gas cyclones. The numerical answers were completed using spreadsheets and the commercial CFD language FLUENT. In addition, two models for predicting cyclone collecting performance are examined in this work. All of the forecasts have shown to be appropriate when compared to subsequent results. The CFD model is the most effective technique of simulating cyclone collecting efficiency, according to the findings of the computer modeling experiment. Cyclones are particularly well adapted to high temperature and pressure conditions because of their strong structure and lightweight component materials. Cyclone collection is effective for particles bigger than  $5\mu\text{m}$ , however we can deal with smaller particles of dust loadings of  $5\mu\text{m}$  here. Refer to our forecast with the aid of 3 and 5 m/s speed. The difference between the results of pollutants removed by cyclones for air quality control and process applications were examined.

**Keywords:** Gas cyclones, CFD, ANSYS Fluent



## **Design And Analysis of Chassis Frame of LMV: Review**

**Paper ID:** ICFDMST2021\_31

**Authors:** Mudawadkar Ninad Ajay, Fulzade Anish Mahesh,  
More Samyak Parshuram, Pawar Rohit Vibhuti.

### **Abstract**

In this paper several Designed and Analysis on the chassis frame is reported. In addition to the strength the chassis should with stand adequate bending and torsional stiffness. The work performed towards analysis of the chassis with constraints of stiffness and strength by using finite element analysis software. The development is to promote the application of advanced High Strength Steel grades for mass saving of chassis parts consisting in replacing current steel grades by thinner gauge ones having higher mechanical properties.

**Keywords:** Finite Element, Stiffness, Chassis Frame, Mechanical Properties



## **Design, Construction and Testing of Fully Automated Speed Breaker: Review**

**Paper ID:** ICFDMST2021\_32

**Authors:** Yogesh M. More<sup>1</sup>, Girish U. Marathe, Mihir M. Lohar<sup>3</sup>, Pankaj B. Sonawane

### **Abstract**

Many techniques and innovations have been made in previous years in the working of speed breakers but still few loopholes need to get fixed. The world is now heading towards automation so, we decided to work on automation and timing. There are various problems caused because of every type of speed breaker. To overcome this issue, we have designed and constructed a speed breaker which is fully automatic and have a background of AI, IoT and ML.

**Keywords:** Fully Automated Speed Breaker, Internet of Things, Machine Learning, Artificial Intelligence, Mobile and adjustable breaker.



## **Review on Multiple Injections in Single Cylinder Diesel Engine**

**Paper ID:** ICFDMST2021\_34

**Authors:** Mr. Tejas Harish Shinde, Mr. Yadnesh Dhanraj Gujar, Mr. Shubham Sunil Suryawanshi,  
Mr. Mayur Dhanraj Sawant, Mr. Mahendra Patil,

### **Abstract**

Improving the efficiency of an engine is of great importance to reduce pollution or greenhouse gas. This paper includes study of single cylinder CI engine by multiple injections using different biodiesel and study shows that optimized multiple injection gives better result than single injection in terms of efficiency and reduction in pollution gases. The main reason of why it gives better result is that centre of cylinder this the heat transfer between the heat produced from the fuel gas mixture and the cylinder liver can be reduced by the isolation.

**Keywords:** HCCI, PCCI, RCCI, Biodiesel, Multiple Injection



## **Systematic Review on Uses of NLP**

**Paper ID:** ICFDMST2021\_35

**Authors:** Awais Sarosh Ansari, Gaurav Bharat Wagh,  
Kaushal Jayant Lohar, Sohail Kaleem Shaikh

### **Abstract.**

Natural Language Processing (NLP) is a subfield of Artificial Intelligence that is receiving a lot of attention in terms of research and development as a result of the growing number of applications. Natural Language Processing (NLP) is a computerised method of analysing texts. NLP entails obtaining information on how humans comprehend and use language. This is being done in order to build tools and approaches that will allow computers to interpret and manipulate natural languages in order to execute various tasks. Natural language processing is being used in a variety of industries, including healthcare, finance, manufacturing, and education, retail, and customer service.

This paper examines the literature on the uses of Natural Language Processing (NLP) in machine translation, text analysis, and conversational & question answering systems. It also includes a brief history of NLP as well as earlier NLP research. It is based on the examination of documents. This research article may be useful to anyone interested in studying and learning about natural language processing (NLP) and its uses.

**Keywords:** Natural Language Processing, Question Answering Systems, Machine Translation, Text Analysis,  
Syntactic and semantic analysis



## **Performance evaluation of PCM based Solar Water Heater using Machine Learning: Comprehensive Review**

**Paper ID:** ICFDMST2021\_36

**Authors:** Nilesh Gokul Patil, Shubham Gopal Sharma,  
Dhiraj Dipak Gharate, Chirag Mahendra Hire

### **Abstract**

The consumption of energy by cooling and heating devices is significant. Also, the refrigerant used in these devices is harmful for environment and causes global warming. Use of solar energy for this purpose is ideal as it saves the energy consumption and does not produce any harmful effect on the environment. Conventional solar water heating/cooling devices have lesser working efficiency that can be increased with the use of thermal energy storage, one of the most efficient methods of storing solar energy. This paper summarizes the investigation and methodology for performance prediction of solar heating/cooling devices incorporated with or without pcm using Machine learning as predicting the same with the help of analytical method will be difficult due to the non-linear behavior of PCM. Machine Learning models such as ANN and SVM have been the most often employed.

**Keywords:** Solar heater, PCM, Machine learning, ANN, SVM.





## **Evaluation of the solar PV panel performance using machine learning: Literature Review**

**Paper ID:** ICFDMST2021\_37

**Authors:** Parth Kailash Punjabi, Niraj Vijay Chaudhari, Rushikesh Ravindra Jagtap

### **Abstract**

Photovoltaic (PV) systems have emerged as one of the most promising alternative energy sources, converting the sun's energy into electricity. This is typically possible without causing major environmental damage. Despite their increasing use in residential areas and the construction sector, PV systems are still seen as unreliable, changeable, and irregular power sources. This is because the power output is controlled to some extent by the environment conditions, which can alter substantially depending on the system's geographic region. As a result, machine learning based approaches are increasingly being utilized to explore the effects of climate change on solar power generation. After that, the most effective machine learning model is used to forecast the generated power

**Keywords:** Photovoltaic Systems; Machine Learning; Supervised Learning; Artificial Neural Networks; K-Nearest Neighbors; Linear Regression; Support Vector Machine.



**PROCEEDINGS OF INTERNATIONAL CONFERENCE ON  
FUTURISTIC DEVELOPMENTS IN  
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**INTERNATIONAL CONFERENCE ON  
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