



Shri Shamrao Patil (Yadravkar) Educational & Charitable Trust's

## SHARAD INSTITUTE OF TECHNOLOGY, COLLEGE OF ENGINEERING

Yadrav (Ichalkaranji), Dist.-Kolhapur (Maharashtra)

▪ NBA Accredited Programmes ▪ NAAC 'A' Grade Institution  
▪ An ISO 9001 : 2015 Certified Institute



AUTODESK.

Design & Innovation Center  
Autodesk, USA



# APEX

...A Newsletter

## Department of Mechanical Engineering 2019-20

Vol: 01 ISSUE: 02

### Themes Inside :

- Department Vision, Mission and Quality Policy
- Department PEO's and PSO's
- MESA Activities:
  - Expert Lectures Conducted
- Autodesk Activities
- Value Addition Programs
  - Python Programming
- Expert Guest Lectures Conducted
- Start-up Activities
- ISHRAE
- ACREX India 2020
- REFCO-2020
- Mitsubishi Electric Cup 2020
- IMPETUS 2K20
- DIPEX20
- Industrial Visits
- Consultancy



**Hon. Dr. Rajendra Patil (Yadravkar)**

Chairman

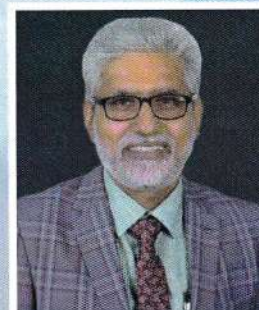
Shamrao Patil (Yadravkar)  
Education & Charitable Trust



**Hon. Mr. Anil Bagane**

Executive Director

Shamrao Patil (Yadravkar)  
Education & Charitable Trust



**Dr. S. A. Khot**  
Principal



**Dr. V. S. Hajare**  
HoD, Mechanical Engineering



## MESSAGES

### **From Executive Director Desk :**

I am happy and glad that Department of Mechanical Engineering is releasing out Newsletter "APEX" Volume 1 Issue-2 This Newsletter will showcase the various activities that are happening in Mechanical Department. It will also build up a spirit of team work which has become essential thing in competitive world. It will show the department achievements, merits and awards received. This will not only inculcate the documentation culture, also it will create an impact on the readers' mind providing broad visibility and dimensions to the campus. I believe this culture of releasing newsletter will continue forever and introduce the team work and social behavior culture in students.

I am happy that Department of Mechanical Engineer in is bringing out "APEX" Volume-1 Issue-2 Newsletter. This Newsletter will definitely help to showcase the activities that are happening in Mechanical department. It also helps in building up teamwork which is very much needed today in world of competition. It provides a platform for exposing the merits and academic achievements of department. This enhances the documentation culture of the institute. This would definitely create an impact in the minds of readers, by way of providing larger visibility and dimension to the campus. I hope that this culture of releasing Newsletter continue forever and become a quoted example for students.

### **From Principal Desk :**

A thought that has been enduring in mind when it becomes real is truly an interesting and exciting experience. This newsletter was one such cherished work that had its roots in the persuasion. It would be a snapshot of the various activities and advancements for all associated with Mechanical Engineering Department. Proper communication plays a vital role in institution's development. This newsletter will serve to reinforce and allow increased awareness, improved interaction and integration among all of us.

Usually we fail to appreciate the good deeds of many people and activities that happen around us as we are engaged in irrelevant talks and assumptions. It could all change if we just pause to think of what is our contribution to the society from which we have been gifted with this blessed life. The progress of the society is mainly depending on many people who are working behind the scenes, overtime round the clock planning things to the smallest. This newsletter will be a medium to provide proper acknowledgement and respect all of these efforts and its results.... Happy Reading!

### **From Head of the Department Desk :**

I am very happy that our Mechanical Engineering department is releasing an academic year 2019-20, volume-1 issue-2 of 'APEX' as a forerunner of department activities, It is a technical platform to bring out the hidden talents of students and faculty.

We entrust that accentuating these areas will make our young students well-qualified to take leadership roles in the future. During this academic year various extracurricular activities were conducted successfully by Mechanical Engineering department. In the view for imparting solid technical and practical knowledge various workshops, guest lectures by prominent personalities and industrial visits have been conducted. Participation by students was the most encouraging feature of the year also various projects by final year students are as per present requirements of industries.



## EDITOR MESSAGE

### From Faculty Editor Desk



**Mr. Utkal S. Patil**  
Assistant Professor  
Dept. of Mechanical Engineering

Dear Readers,

We are presenting you with the Volume 1 Issue 01 of Newsletter of the Mechanical Engineering Department.

Our motto is to put forth two Issues of Newsletter in a year. I am deeply thankful for the efforts taken by department faculty, our students and also for the support and encouragement of our Beloved Hon. Executive Director, The Principal, Head of the Department and Faculty members to put forward this Newsletter. I hope this and upcoming Newsletters "APEX" will be very useful and informative to readers.

### From Student Editor Desk



**Miss. Rutuja D. Sutar**  
B.E.  
Dept. of Mechanical Engineering

Dear Readers,

We are happy to bring out the Volume 1, Issue 1 of our News Letter "APEX". Our Faculty diligently involved in encouraging students and preparing for a bright future.

I am glad that I am part of this News Letter preparation and release. I am very much thankful to our Department Faculty members and my team members for helping me in making this News Letter.

## STUDENT COMMITTEE MEMBERS

**Mr. Aditya P. Magdum**  
Publisher

**Ms. Asiya S. Pendhari**  
News Head

## VISION

To be a center of excellence in Mechanical engineering education to prepare professionally competent engineers with lifelong learning attitude for the accomplishment of ever-growing needs of society.

## MISSION

- To prepare technically and professionally competent engineers by imparting quality education through effective teaching learning Methodologies and providing stimulating environment for research & innovation.
- To develop professional skills and right attitude in students that will help them to succeed and progress in their personal and Professional career.
- To imbibe moral and ethical values in students with concern to Society and environment

## QUALITY POLICY

We at Mechanical Engineering promote capacity building through education and training quality in the field of Mechanical Engineering to comply with the requirement and continually improve the effectiveness of the quality by involving all stakeholders upgrading facilities and faculty through continuous improvement.

## PROGRAM EDUCATION OBJECTIVES

- PEO I: Demonstrate capabilities to develop optimal solution to the real world engineering problems by applying theory based practical approach of engineering and related engineering disciplines.
- POE II: Exhibit professional skills, ethical attitude and sensitivity towards society and environment.
- POE III: Engage in lifelong learning for successful adaptation to technological changes.



## MECHANICAL ENGINEERS STUDENT ASSOCIATION (MESA)

### Activity Report

#### About MESA

Mechanical Engineers Student Association (MESA) of Sharad Institute of Technology College of Engineering, Yadrav plays a pivotal role in the development of students as Engineers with the various activities based on Curriculum and Extra Curricular Activities, It not only helps the members of the association a sense of appreciation and respect among each other also it gives an awareness and sense of appreciation with other disciplines also. MESA being an active association inspires and gives a platform to improve their career interests.

#### MESA Reinstallation Program

The MESA reinstallation program was arranged on 13th January 2020 in presence of MESA Core Committee members to commencement of MESA activities for the Academic year 2019-20.

On the same day guest lecture is arranged on the "Opportunities in Germany" of Mr. Rohish Kalvit who is Director of Das Ziel, Pune. In this lecture Mr. Rohish shared their knowledge related with Opportunities in Germany and also guided for consultancy and procedure for the same.

In this Guest Lecture Mr. Kalvit has also guided to students about Career Opportunities in Mechanical field as well as scope of doing career in Germany. Mr. D. D. Patil had given welcome speech and Mr. M. A. Jadhav had given vote of thanks.



Presentation & Guidance by Mr. Kalvit



The guest lecture "Introduction to C and C++ Programming" on 7th February 2020 to aware the students about the Programming by using C and C++ by the guest Mr.S.Bharadwaj who is Director of Das Ziel, Pune. In this lecture Mr. S. Bharadwaj shared their knowledge related with programming by using C & C++ and also the application of the same.

In this Guest Lecture Mr. S. Bharadwaj has also guided to students about Career Opportunities in Mechanical field by using C & C++ as well as scope of doing career in IT field. Mr. H. S. Nejkar had given welcome speech and Mr. D. D. Patil had given vote of thanks.



**Presentation & Guidance by  
Mr. S. Bhardwaj**

## **VALUE ADDED PROGRAM (VAP)**

### Program Details

Department: Mechanical Engineering Department

Activity Title: Python Programming

Date and Time: 15<sup>th</sup> Feb. to 17<sup>th</sup> Feb. 2020

Resource Person: Mr. Ranjeet Ghorpade

Under PBL Department of Mechanical Engineering conducts so many activities like UG Fellowship Activity slot, VAP, etc. Under VAP activity so many value added software certification program like CATIA CREO, ANSYS WB, CFD, etc. In the current academic year 2019-20 provided "Python Programming" to Mechanical Engineering Students. And Mr. Ranjeet Ghorpade is the trainer for Python Programming.

From Department of Mechanical Engineering 70 Students were part of this VAP activity which is held at SITCOE, in AUTODESK Lab. A mini and Mega Project was given by trainer and after completion of their projects provide certificates to them.



**AUTODESK  
Activity Report 2019-20 (Sem-II)**



# INTERNAL SMART INDIA HACKATHON 2020 PARTICIPATED UNDER THEME OF AUTODESK

Our students participated for Smart Hackthon and submitted two ideas, using Autodesk software

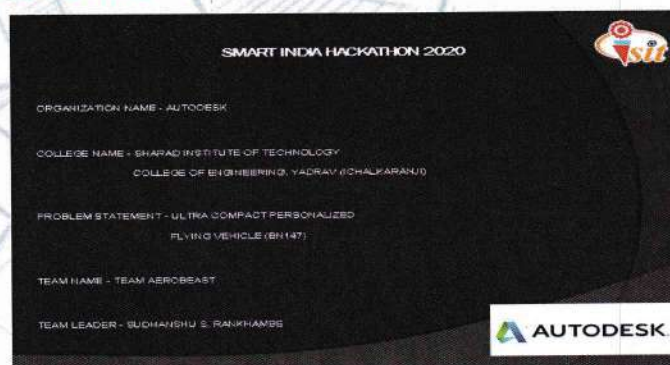


Smart India Hackathon 2020 is a nationwide initiative to provide students a platform to solve some of the pressing problems we face in our daily lives, and thus inculcate a culture of product innovation and a mindset of problem solving. The last edition of the hackathon saw over 5 million+ students from various colleges compete for the top prize at 65+ locations. In SIH 2020, the students would have the opportunity to work on challenges faced within various Ministries, Departments, Industries, PSUs and NGOs to create world class solutions for some of the top organizations including industries in the world, thus helping the Private sector hire the best minds from across the nation.

## 1. Submitted Theme: - Design and Manufacturing of Connecting Rod



## 2. Submitted Theme: - Smart Vehicle

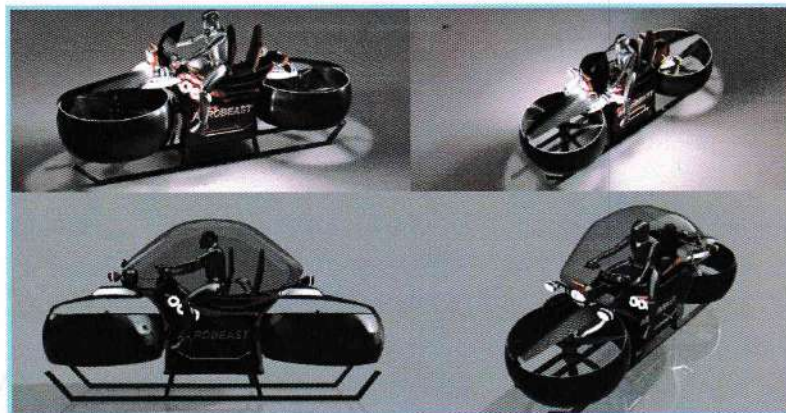




## WINNER OF GRAND FINALE SMART INDIA HACKATHON 2020



### Problem Statement : Ultra Compact Personalized Flying Vehicle



### Objective

To achieve full electric system- Internal combustion engine will be too heavy and bulky, hence we use electric system for operation. This vehicle consists of 4 electric motors with 28 KW power each producing total thrust of 470 Kg. there are 6 battery units and the power is supplied to 4 electric motors, 2 sensors, 2 motors & rest of the accessories.

- To build a good aerodynamic shape- Maximum speed of vehicle is 30 Km/hr. we kept the front end cylindrical and provided a curved surface. We got the drag force of 27.8 lbs by simulation on Autodesk flow design.
- To make the vehicle easy to ride and to handle- Bike-like riding technique is really easy to drive and learn. So that the driver training
- To drive this vehicle will not take much time. It makes the vehicle more 'User-friendly'.
- To increase safety measures- This vehicle consists of lap belts, seat embedded mini-parachute & radio system.
- To make it to take-off and land from the same position without runway.



This is a truly compact and personalized flying machine with the best safety features and modern technologies. A safe and secure flight is really important when come to aircrafts or aviation vehicles and this vehicle is comprised with all of them. The future of personalized aviation is not so far.

“The motive of this project is to design an ultra-compact flying vehicle by using all the modern technologies, 3-D modeling software, analysis techniques, all the necessary parameters, calculations simulation, animation, 3-D printable body along with the best safety features which would make the dream come true of mankind of personalized aviation. The CAD model assembly of our concept is designed and analyzed by various loading conditions for human safety. The obtained results are under the factor of safety.

### Fusion 360 Academy India exhibited Project Exhibition 2020 held in Banglore and Participated two students



**Date & Venue: Feb 22, 2020 | Saturday | 11 AM - 8 PM | Radisson Blu, Outer Ring Road, Bengaluru**

AUTODESK has organized Two day project exhibition event on 22 Feb 2020 in Radisson Blu Outer Ring Road, Bengaluru.. They had represented their innovative ideas through posters and models.

It is a full-day learning and networking event for designers, engineers, and manufacturers. With two keynote sessions, 10+ master classes, and three industry tracks, this event is aimed at providing a profound opportunity to learn, connect, experience, and enjoy Fusion 360.



## EXPERT LECTURES CONDUCTED

### **1. Industry 4.0 and career opportunities in mechanical engineering** **Expert Name: Mr. Nagraj Hamilpure on 29-01-2020 at 2:30pm** **for B.Tech Mechanical Engineering students.**

He discussed about recent trends in mechanical Engineering, in which he emphasized on Industry 4.0 technology. He told about its adaptation into best practices and in its endeavor towards efficiency and sustainability and discussed about confusion around mechanical engineers' role in an industry revolution powered heavily by digitization. Industry 4.0 in its truest sense is a manufacturing revolution and by that very nature, its successful implementation and evolution will hinge greatly on mechanical engineers (their skills, adaptation to digitization and innovative approach.) it is not wholly adequate grasping Industry 4.0 which lies at the intersection of computing, electronics, mechanics and business.

### **2. Career opportunities in Germany** **Expert Name: Mr. Rohish Kalvit on 31-01-2020 at 10:30am** **for B.Tech Mechanical Engineering students.**

He discussed placement scenario of mechanical engineering in recent situation. He told regarding the job opportunity available in Germany. He discussed about requirement from mechanical engineering industry. Also, he discussed about recent trends in mechanical engineering and job opportunities. The lecture gave our students an understanding of the structure of the competitive exams and skills required to crack it. The seminar was divided into two parts, viz., a presentation on higher education and career opportunities available abroad for students and guidance about the education loan. Mr. Kalvit guided students about the benefits of completing higher education in foreign universities. He provided detailed information about the options available in Germany. His presentation also included information on academic requirements and process of applying. This lecture provided a rewarding experience for students. It expanded their horizon and have given them confidence in exploring new avenues.

### **3. Career opportunities in competitive exam** **Expert Name: Mr. Satish Patil on 04-02-2020 at 10:30am** **for SY and TY Mechanical Engineering students.**

During the speech, he explained the basics of the competitive exams like various posts for which exams are conducted, their method of conduction and finally duties and perks of these posts. Further, he interacted with the students as to how to prepare and study for such exams, what memory techniques can be used to remember the huge data, method of study, use of various website which provide assistance to competitive exam aspirants. He gave the tips for the preparation of interview and dos & don'ts of an interview.

In question session, the students asked various doubts related to subject selection, salary offered, reservation limit, reservations, duration for preparation and exact time to start for preparation.



#### **4. Introduction to C Programming**

**Expert Name: Mr. Satish Bhardwaj on 07-02-2020 at 2:10pm**  
**for TY Mechanical Engineering students.**

The speaker explained about Basic functions in c programming. Also, Polygon filling by mouse click. The speaker focused on application of c programming. He discussed basic structure of c programming. He also discussed career opportunities available for students in machine languages, in which c programming is basic language.

Overall, the session was proven to be very inspiring and informative for students.

#### **5. GATE exam study techniques and its opportunities**

**Expert Name: Mr. Mandar Deshpande on 13-02-2020 at 12:10pm**  
**for SY Mechanical Engineering students.**

Discussed about what is a gate exam, when it is scheduled, eligibility criteria for GATE exam. Discussed career opportunities available through GATE exam. Many public sector industries now a day consider GATE exam score for preparing merit list in recruitment process. He also discussed questions asked in the exam, along with this he explain exam preparation strategy. He also suggested books required for GATE exam study.

The lecture concluded with question and answering session.

#### **6. Personality development and moral value**

**Expert Name: Mr. Arjun DashrathKoli on 15-02-2020 at 3:15pm for TY and B,Tech Mechanical Engineering students.**

He explained about moral values that we learn from our family. He discussed about mind concentration technics that can be used by student to improve their concentration and excel in their exams. Through his lecture he motivated the total gathering to cover and focus on the other aspects of life which also includes service of others and to live positively.

He discussed different problem situations happen in life and how people overcome through this with their moral values.

The change is possible only if the young generations not only understand but also actively participate in this. He said one has to replace the word self with us.

#### **7. Roll of CAD/CAM in foundry technology**

**Expert Name: Mr. Rushikesh Patange Mr. Vijay Lohar on 09-03-2020 at 10:30am for TY and B,Tech Mechanical Engineering students.**

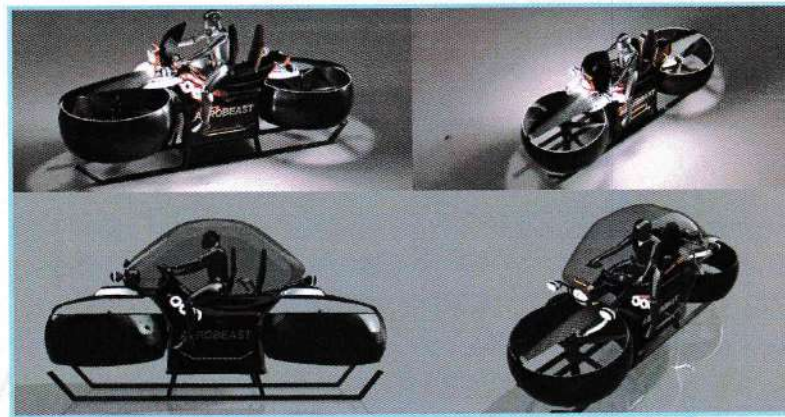
Discussed different processes carried out in foundry. He explained different problems regarding casting process. He also discussed effects of problems due to improper casting process. To overcome these problems CAD/CAM software are used. He explained roll of CAD/CAM software to improve design of runners and gating system. He also discussed about how to improve solidification process by improving their design through CAD/CAM software. This guest lecture concluded with question and answering session.



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## **8. Geometric and Tolerance**

**Expert Name Mr. Niranjan Shinde on 11-03-2020 at 11:00am  
For SY,TY and B,Tech Mechanical Engineering students.**

He explained entire process involved in additive manufacturing technology, its application and its future. Additive manufacturing is also known as 3D printing, rapid prototyping or freeform fabrication. It is a process of joining materials to make objects from 3D model data, usually layer upon layer, as opposed to subtractive manufacturing methodologies' such as machining. Additive manufacturing now enable both a design and in various industrial sectors such as aerospace, energy, automotive, medical, tooling and consumer goods, he explained. The impact of the Additive manufacturing on the regular manufacturing process has been discussed taking several applications of AM as examples. The Advantages of 3D printing such as, Creativity, Compression of Time, and Confidentiality he stated.

## **9. Alumni Talk-Young Entrepreneur**

**Expert Name: Mr. Shubham Mali on 14-05-2020 at 5:00pm  
For SY,TY and B,Tech Mechanical Engineering students.**

He improves moral of students by suggesting them to move forward instead of looking in the past such as previous marks, etc.

He told about his journey towards entrepreneur from graduate level. He motivated student to become entrepreneur and start his own career in their comfortable subject area.

He explained entire process involved in additive manufacturing technology, its application and its future. Additive manufacturing is also known as 3D printing, rapid prototyping or freeform fabrication. It is a process of joining materials to make objects from 3D model data, usually layer upon layer, as opposed to subtractive manufacturing methodologies' such as machining. Additive manufacturing now enable both a design and in various industrial sectors such as aerospace, energy, automotive, medical, tooling and consumer goods, he explained. The impact of the Additive manufacturing on the regular manufacturing process has been discussed taking several applications of AM as examples. The Advantages of 3D printing such as Creativity, Compression of Time, and Confidentiality he stated.

## **10. Alumni Talk-Alumni Talk-Project Based Learning**

**Expert Name Mr. Rohan Ravasaheb Magdum on 17-05-2020 at 5:00pm  
For SY,TY and B,Tech Mechanical Engineering students.**

He discussed about project-based learning concept to the students. He also explained structure of project-based learning which is implemented in SIT. He discussed importance of PBL activity learning in development of student. He also shared his experience regarding PBL and how it helpful in his career. Further, he focused on mini project activities and how it improves their understanding about real world problem. He also discussed about activity slot; exam preparation activities carried out in SIT campus. The session ends with placement related queries of student.



**11. Alumni Talk- Job Opportunity in supply chain Management**  
**Expert Name Mr.Sagar Shinde on 26-05-2020 at 5:00pm**  
**For SY,TY and B,Tech Mechanical Engineering students.**

He talked about their experience about facing the interviews. They also share requirements of company with students of Yazaki India and Asahi India glass LTD. They talk about their personal experiences with their seniors and during training period.

They also discussed general mistakes done by students in interview. They suggest to show your decreasing marks as a positive way, as he/she engaging in extracurricular activity. They talk about punctuality, hard work, enthusiasm required in corporate working environment.

He shared his working experience about supply chain management and challenges in this area. He discussed about job opportunities in this area for undergraduates.

**12. Alumni Talk-Opportunity in robotic BIW Fixture**  
**Expert Name: Mr. Swapnil Sampat Chvan on 26-05-2020 at 5:00pm**  
**For SY,TY and B,Tech Mechanical Engineering students.**

Mr. Swapnil Chavan has 4-year experience in design department. He shared his experience about industry expectation from graduates.

He discussed about different industrial problems that can be designed by using different software like CREO, CATIA. He explained need of simulation software based on computational fluid dynamics for design modification.

Further he discussed about BIW fixtures used in Automobile industry. He shared his experience about Fixture design. He also suggested for students to learn CAD software and its application for field problems.



## START-UP



# SHARAD STARTUP CENTRE

## Entrepreneurship Opportunities Post Covid19 Pandemic-Webinar Report

Date & Time of Webinar	: 25 <sup>th</sup> May 2020
Number of Beneficiaries	: 93
Name of Expert	: Mr. Suresh B. Umap
Designation	: Regional Officer Maharashtra Centre for Entrepreneurship Development (MCED), Navi Mumbai

### Summary

- Loan Scheme for first generation Entrepreneur
- CGEMP, Seed Money Scheme
- Opportunities in Current Scenerio
- Sector wise opportunities
- MCED training and role



Shri Shamrao Patil (Yadavkar) Educational & Charitable Trust's

### SHARAD INSTITUTE OF TECHNOLOGY COLLEGE OF ENGINEERING

Yadav (Bhalkaranji), Dist.-Kolhapur (Maharashtra)

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### LIVE WEBINAR

## ENTREPRENEURSHIP OPPORTUNITIES POST COVID-19 PANDEMIC

An interactive webinar session for  
young entrepreneurs and startups on

- The available schemes & grants unveiled by Govt. of India to support startups in this global crisis
- Survival strategies for startups to mitigate the current crisis situation
- Opportunities to look out for by pivoting your business model.



**Mr Suresh B. Umap**

Regional Officer,  
Maharashtra Centre for  
Entrepreneurship Development (MCED),  
Navi Mumbai

25<sup>rd</sup> May 2020, 10 am

For Registration Join Telegram

<https://t.me/joinchat/AAAAAE2vy786ortVKVu-aA>



## ISHRAE

The Indian Society of Heating, Refrigerating and Air Conditioning Engineers (ISHRAE), was founded in 1981 at New Delhi by a group of eminent HVAC&R professionals. ISHRAE today has over 28,780 HVAC&R professionals and Student-members. ISHRAE operates from over 44 Chapters and sub Chapters spread all over India, with HQ in Delhi.

It is led by a team of elected officers, who are members of the Society, working on a voluntary basis, and collectively called the Board of Governors.

### Research Funding Received from Indian Society of Heating and Refrigeration Air-conditioning Engineers (ISHRAE)


Sr.No.	Name of Guide	Proposal Title	Funding Agencies	Name of Students	Amount Sanctioned
1	Mr. Avesahemad S.N.Husainy	Performance improvement of Vapour Compression Refrigeration by electro hydrodynamic effect	Indian Society of Heating and Refrigeration Airconditioning Engineers (ISHRAE)	Jagdish Choudhary, Akash Kamble, Yuvraj Kadage, Juned Pathan, Prashant Jambhale	Rs. 42,500/-




### 1. Celebration of Earth Day:

Earth Day is an annual event celebrated around the world to demonstrate support for environmental protection. First celebrated in 1970, it now includes events coordinated globally by the Earth Day Network in more than 193 countries.


Earth Day 2020 is the 50th Anniversary of Earth Day. Celebrations included activities such as the Great Global CleanUp, Citizen Science, Advocacy, Education, and art. This year's theme for Earth Day 2020 was "climate action". Due to the COVID-19 pandemic, many of the planned activities were moved online.




Kolhapur-Sangli Sub-chapter





**Student Talk on**



Shubham Kulkarni  
Student, SITCOE, Yedruv



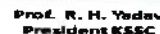
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Student, SITCOE, Yedruv

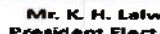
**EARTH DAY CALIBRATION**

1. LOW COST NATURAL COOLING CHAMBER FOR PRESERVATION OF FRUITS AND VEGETABLES
2. IOT BASED MONITORING SYSTEM FOR HOME QUARANTINE PERSON DURING COVID-19 PANDEMIC

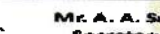
**22nd April 2020**  
**1PM Onwards**  
**Online through Zoom**




Prof. R. H. Yedev  
President KSSC




Mr. K. H. Lalwani  
President Elect KSSC



Mr. A. A. Satavekar  
Secretary KSSC



Mr. Y. D. Gandhi  
Treasurer KSSC



Prof. A. S. N. Husainy  
Student Chair KSSC



## 2. ACREX India 2020



ACREX India is the south Asia's largest exhibition on HVAC Industry (Heating, Refrigeration and Air Conditioning Industry). Every year it is arranged at the different metropolitan cities of India. The exhibition is organized by the Indian Society of Heating, Refrigeration and Air Conditioning Engineers (ISHRAE) and produced by NürnbergMesse India. ACREX India is a key gathering of the national and international market players in the HVAC and Refrigeration and Building Services. Every year more than 400 exhibitors and around 30000 people visit the exhibition. This year more than 50000 visitors have visited the exhibition that set up a new record value. ACREX India creates a valuable platform for those connected to the HVAC & R industry to reach relevant stakeholders and decision makers.

ACREX India 2020 was the 21st edition of the ACREX India. The 3 day Mega event was held from 26th February 2020 to 29th February 2020 at the Indian Expomart, Greater Noida, Delhi, India. It was inaugurated by the officials of the by traditional ribbon cutting ceremony followed by the watering of green plants at the venue. This was to promote the targeted vision of the 'SHUDDH VAAYU DEERGH AAYU' (Clean Air, Long Life) focusing on advanced techniques of designing new homes featuring mechanical systems that support and accentuate natural ventilation were presented during the show. This edition was the pioneer exhibition focused on indoor air quality, sustainable buildings and HVAC technology. The exhibition witnessed worldwide involvement of exhibitors and visitors from over 25 countries including Belgium, Czech Republic, Egypt, France, Germany, Italy, Japan, Korea, Malaysia, Saudi Arabia, Singapore, Spain, Switzerland, Taiwan, The Netherlands, UAE, UK, Ukraine and USA. Around 350+ exhibitors showcased their products to the architects, builders, home owners and policy makers in the government sector. Also it was the best platform for the students in engineering and technology to study the recent trends in HVAC and Refrigeration industry. It reduced the knowledge gap between classroom learning and actual industry programs which will be helpful to clarify their ideas about the innovations in the Heating and Refrigeration industry.

### Key Events of the ACREX2020

#### Curtain Raiser

The exclusive precursor event & networking platform for CEOs, leading developers, architects, consultants & officials from international associations, organized by ISHRAE & Sanhua India.

#### ACREX Awards of Excellence

Panelled by a jury of industry experts to award products and services across categories like innovative green buildings, energy saving, green products, building automation, product with technology developed in India and Indoor Air Quality.

#### ACREX Hall of Fame

The new industry benchmark to honour iconic projects in India, instituted by ISHRAE and Power & Danfoss.

#### a Quest

Unique competition organized by ISHRAE and powered by HITACHI to connect with the Student community.



## Workshops

On subjects like Project Management Tools & BIM HVAC Commissioning - The right practices Seminars  
On subjects like

- Heat Pump Technology - For Commercial & Industrial Applications
- Low Energy Cooling & Occupant Health in Buildings
- Low GWP Refrigerants and adapting of Low Energy Technologies
- High Performance Buildings in India - Case studies of HVAC system efficiency
- Indoor Environmental Quality - Global Scenario & Indian Challenges
- The UNEP-ISHRAE Conference on District Cooling Transitioning to District Cooling by UNEP and ISHRAE supported by Tab reed Glimpses of Visit at ACREX 2020



ACREX 2020 is the South Asia's greatest exhibition of the HVAC (Heating Refrigeration and Air Conditioning) and Refrigeration industry. It was the largest exposure for learning the recent trends in HVAC and Refrigeration industry and knowing the innovative technologies for the same. As a visitor, we tried to visit each and every exhibitor's stall to understand their products in detail. Even they have explained us all the information about their product at our student level which helped us to clarify the basics as well as advanced concepts about the HVAC Refrigeration products. The ACREX 2020 was exhibited with the vision of 'SHUDDH VAAYU DEERGH AAYU' (Clean Air, Long Life). It showed us how the mechanical systems support and accentuate natural ventilation were presented during the show and also how Indoor Air Quality can be improved through mechanical systems by diluting or eliminating the indoor sources.

### 3. REFCO-2020 Event Details:



SHARAD INSTITUTE OF TECHNOLOGY, COLLEGE OF  
ENGINEERING YADRAV - ICHALKARANJI

• NBA Accredited Programme • NAAC 'A' Grade Institution • An ISO 9001 : 2015 Certified Institute



DEPARTMENT OF MECHANICAL ENGINEERING & ISHRAE

REFCO - 2020

10<sup>th</sup> Feb. 2020

Post Expo

**Poster Presentation :**

1. Recent Trends in Refrigeration & Air Conditioning
2. Industry 4.0 and IoT

**Rules :**  
A-3 Size and all types of posters (Digital copy with hard copy only)  
\$0.50 per group Max. 2 Participants

Student Co-ordinator

Ms. Anvesh Patil  
9402104171  
anvesh@sharadit.edu.in

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9402104171  
anvesh@sharadit.edu.in

Q-Quest

**Quiz Competition :**

1. Aptitude Round
2. Rapid Fire
3. Surprise Round

\$0.50 per participant

Student Co-ordinator

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anvesh@sharadit.edu.in

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## Mitsubishi Electric Cup 2020



Today, strengthening the cultivation on student's innovative consciousness, cooperative spirit and engineering practice abilities is a vital reform of higher education. Competitions play a positive role in further developing higher education reform, consolidating basic knowledge education, cultivating comprehensive abilities, integrating theories and practices, etc. for University students through promoting extracurricular scientific and technological activities. Consequently, Mitsubishi Electric India has launched a science and technology competition, "Mitsubishi Electric Cup", the National level competition for factory automation skill for engineering students (including undergraduates and postgraduates) on a yearly basis, offering opportunities for outstanding talents. The competition includes innovative design and application which will be held every year. After successful completion of the previous edition in Feb 2019 at Manav Rachna International Institute of Research And Studies (MRIIR) Faridabad, they are geared up for fifth edition of Mitsubishi Electric Cup at B.M.S College of Engineering, Bengaluru.

Mitsubishi Electric has grown to become one of the most respected organizations of the world with a promise to provide a better life for the generations to come. Its vision is to shape the future through technology that ensures the *Visualizing IoT Solutions For Smart Automation*.

### Project Title: Process Control and Tool Life Monitoring by using ML and IoT Got 7th Rank in National Level Mitsubishi Electric Cup 2020



#### Name of students :

- Mr. Adesh Karande
- Mr. Sourabh Chavan
- Mr. Darshan Patil
- Mr. Jayvardhan Bhosale

#### Name of Guide :

- Dr. A. M. Takale



## IMPETUS 2K20



Shri. Shamrao Patil (Yadavkar) Educational & Charitable Trust's  
**SHARAD INSTITUTE OF TECHNOLOGY COLLEGE OF  
ENGINEERING, YADRAV**  
Yadav (Ichalkaranji) Tal - Shirol, Dist : Kolhapur, Ph. 02322-252796

# IMPETUS

2 K 2 0



Department of Mechanical Engineering	Department of Civil Engineering	Department of Electrical Engineering	Department of Computer Science & Engineering
CAD war Technical Quiz	Technical Quiz Contest	'C' My Skill CAMPUS NINJA Personal Interview (Online)	Python Programming
<b>Student Co-ordinator</b> Aniket Bandgar, Shubham Kulkarni 9960401072 9657036451	<b>Student Co-ordinator</b> Asif Makhmalla, Somling Pujari 8605712955 9960271711	<b>Student Co-ordinator</b> Snehal Hulikare, Dhananjay Katageri 9579158287 9096219609	<b>Student Co-ordinator</b> Kiran Savekar 9503318555
<b>Event Co-ordinator</b> Mr. S M Ghanvat	<b>Event Co-ordinator</b> Mr. Tejas Patil	<b>Event Co-ordinator</b> Mr. M A Mulla	<b>Event Co-ordinator</b> Shashidhar Gurav

Asst. Prof. M. B. Mulik    Dr. Sanjay A. Khot    Hon. Shri. Anil Bagane    Hon. Dr. Rajendra S. Patil-Yadavkar  
Event Co-ordinator    Principal    Exe. Director    Chairman

Rules details are on college website [www.sitcoe.ac.in](http://www.sitcoe.ac.in)

### 1. CAD war

**2D/3D-Design a component which adhere to mechanical constraints Instructions:**

There will be two rounds where participant's graphics knowledge and skills in AUTO CAD will be tested

#### Round 1: Elimination Round

A 2D sketch will be given to each participant. All the participants which complete the orthographic view by using given 2D drawing in given time will be selected for final round.

#### Round 2: Final round

Any machine part will be given to the finalist. They will have to draw 3D.

**Round 1 and 2: scoring pattern is as follows:**

Design: 10 points

Dimensioning: 10 points

Line types: 10 points

Symbols: 10 points

Time: 10 points

#### Rules

- The CAD war shall be conducted through Online Mode only.
- The participants are instructed to submit the screenshot of their drawings to student Coordinators.
- No team formation is allowed thus an only entry is allowed.
- SITCOE, Yadrav shall not be liable for the any problem on the account of poor Internet connection on your Part.

#### Student Coordinators

▪ Aniket Bandgar : 9960401072

▪ Shubham Bhole : 8087801881

▪ Shantanu Nandre : 8806959081

▪ Bharatesh Ambade : 9665275406

▪ Nilprabha Yadav : 8788600422

▪ Kajal Phalake : 9922824062



## 2. Technical Quiz

### Rules

- This Online Quiz The competition will contain 20 questions under which all will be multiple-choice questions each carrying one marks each.
- The time limit will be 20 minutes.
- Students have to get registered through Google form.
- After fee payment and Google form submission, the participant will be link and timing of the examination on their register email id. The quiz shall be conducted Online Mode only.
- The quiz will cover a different aspect of the Mechanical Engineering.
- No team formation is allowed thus an only entry is allowed.
- No Negative Marking.
- SITCOE, Yadrav shall not be liable for the any problem on the account of poor Internet connection on your Part.

### Student Coordinators

- Shubham Kulkarni : 9657036451
- Abhishek Maske : 8411980677
- Rohan Swami : 9130926423
- Prajwal Chougule : 9172572108
- Asiya Pendhari
- Shraddha Mahadik

### Note:

The Entry fees - Rs.50/- per Participant.

Prizes for Events

1st Prize- Rs.1500/-

2nd Prize- Rs.1000/-

### Prize Distribution

#### CAD war

1st Prize (Rs. 1500\ -)

Name: Neeraj Nandkumar Vaswade

Account No.: 091510110013552

IFSC code: BKID0000915

MICR code: 416013201

2nd Prize (Rs. 1000\ -)

Name: Sudhanshu Suhas Rankhambe

Account No.:091918210006248

IFSC code: BKID0000919

#### Technical Quiz

1st Prize (Rs. 1500\ -)

Name: Monika Netaji Dongale

Account No.: 36248415940

IFSC code: SBIN0016348

2nd Prize (Rs. 1000\ -)

Name: Kiran Kantinath Karande

Account No.: 091518210006269

IFSC code: BKID0000915



## INDUSTRIAL VISIT

Sr.No.	Class	Name of Subject	Specification of Visit	Incharge faculty	Visit Place
1	SE-A	Manufacturing Processes-I (Beyond Syllabus)	Manufacturing Processes	Mr. V. B. Nalawade	Sound Casting
2	SE-B	Manufacturing Processes-I (Beyond Syllabus)	Manufacturing Processes	Mr. S. P. Udagave	Sound Casting
3	TE-A	Manufacturing Processes-II (Beyond Syllabus)	Manufacturing Processes	Mr. S. B. Kamble	Parvati Ind. Estate
4	TE-B	Manufacturing Processes-II (Beyond Syllabus)	Manufacturing Processes	Dr. P. M. Bhagwat	Parvati Ind. Estate
5	TE-C	Manufacturing Processes-II (Beyond Syllabus)	Manufacturing Processes	Mr. S. K. Kokate	Parvati Ind. Estate
6	TE-A	Machine Design II (Beyond Syllabus)	Gear Manufacturing	Mr. Suyog S. Patil	Kavitsu, Satara
7	TE-B	Machine Design II (Beyond Syllabus)	Gear Manufacturing	Ms. V. S. Patil	Kavitsu, Satara
8	TE-C	Machine Design II (Beyond Syllabus)	Gear Manufacturing	Mr. Suyog S. Patil	Kavitsu, Satara
9	TE-A	Refrigeration and Air conditioning	Cold Storage	Dr. B.S.N. Reddy	Miraj MIDC
10	TE-B	Refrigeration and Air conditioning	Cold Storage	Mr. A.S.N. Husainy	Miraj MIDC
11	TE-C	Refrigeration and Air conditioning	Cold Storage	Dr. V. V. Patil	Miraj MIDC
12	TE-A	IC Engines	IC Engines Details	Mr. M. A. Jadhav	KOEL
13	TE-B	IC Engines	IC Engines Details	Mr. S. V. Kumbhar	KOEL
14	TE-C	IC Engines	IC Engines Details	Mr. S. V. Kumbhar	KOEL
15	BE-A	Mechatronics	Automation	Mr. A. A. Desai	Pragati Automation, Tardal
16	BE-B	Mechatronics	Automation	Dr. A. M. Takale	Pragati Automation, Tardal
17	BE-C	Mechatronics	Automation	Mr. M. A. Jadhav	Pragati Automation, Tardal
18	BE-A	Energy Power Engineering	Any power plant	Dr. B.S.N. Reddy	Solar Plant
19	BE-B	Energy Power Engineering	Any power plant	Dr. V. S. Hajare	Solar plant
20	BE-C	Energy Power Engineering	Any power plant	Dr. V. V. Patil	SIT COE Solar Plant
21	BE-A	Industrial Automation and Robotics	Robots and automation	Mr. S. M. Ghanvat	GEM Engg.
22	BE-B	Industrial Automation and Robotics	Robots and automation	Mr. S. M. Ghanvat	GEM Engg.
23	BE-C	Industrial Automation and Robotics	Robots and automation	Mr. D. D. Patil	GEM Engg.







## CONSULTANCY

SUMMARY OF CONSULTANCY				
Sr.No.	Name of Company	Type of Work	Month-Year	Amount in Rs.
1	M/S Vidhe Polymers Pvt Ltd. Yadrav	Energy Audit	Mar-20	3000
2	M/S S.S.Colour Tech, Yadrav	Energy Audit	Mar-20	3000
3	M/S General Machune Tools, Yadrav.	Energy Audit	Mar-20	3000
4	M/S Laxmi Narayan Doubling Yarn Works Yardav.	Energy Audit	Mar-20	3000
5	M/S Arundhati Colour Cartons Yadrav.	Energy Audit	Mar-20	3000
6	M/S Madhusudan D/B Mills Weaving unit, Yadrav.	Energy Audit	Mar-20	3000
7	M/S Sunflex Pipes Pvt. Ltd. Yadrav.	Energy Audit	Mar-20	3000
8	M/S Jain Paper Cone Pvt. Ltd. Yadrav	Energy Audit	Mar-20	3000
9	M/S Govardhan Industries, Yadrav.	Energy Audit	Mar-20	3000
10	M/S Shweta textiles . Yadrav.	Energy Audit	Mar-20	3000
11	Government Polytechnic, Malvan	Energy Audit	Feb-20	60000
12	Tej Shirodkar Udyog, Kudal	Energy Audit	Feb-20	3000
13	Mandar Plastic Industries, Kudal	Energy Audit	Feb-20	3000
14	Raj Pipe Industries, Kudal	Energy Audit	Feb-20	3000
15	Sai Shakti Auto Engineering, Kudal	Energy Audit	Feb-20	3000
16	Somdatta Plastic Industries, Kudal	Energy Audit	Feb-20	3000
17	Sharad SSK Ltd, Narande	Energy Audit	Feb-20	220000
18	Mohanrav Shinde SSK.Ltd,Arag	Energy Audit	Jan-20	50000
19	Shri Dudhaganga Vedganga S. S. K. Ltd., Bidri	Energy Audit	Jan-20	140000
<b>Total Rs.: 5,15,000/-</b>				





Shri Shamrao Patil (Yadravkar) Educational & Charitable Trust's

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Yadrav (Ichalkaranji), Dist.-Kolhapur (Maharashtra)

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