



Shri Vile Parle Kelvani Mandal's
**Dwarkadas J. Sanghvi
College of Engineering**



Approved by AICTE, New Delhi and Affiliated to the University of Mumbai

ACADEMIC REPORT

Academic Report of the Department of Mechanical Engineering
(2018 - 2019)



Editors:

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Prof. P. Frank Crasta
Prof. Bronin Cyriac

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DEPARTMENT OF MECHANICAL ENGINEERING

Vision:

To create academic excellence by developing competent mechanical engineers, capable of facing global challenges, with human values and skills for research and sustainable development.

Mission:

1. To impart fundamental concepts of basic sciences and allied areas of engineering and technology.
2. To enable students, to develop into competent engineering professionals.
3. To promote research activities.
4. To promote interaction and involvement with professional bodies and industries
5. To inculcate soft skills and professional ethics and mold students as socially responsible citizens.
6. To promote exposure to green technology for sustainable growth and development.

Program Educational Objectives (PEOs):

1. To prepare students with a sound engineering knowledge and a multi-disciplinary approach.
2. To enable students, to innovate, design and develop engineering systems using modern engineering practices and tools.
3. To motivate students, to interact with industry and professional bodies and participate in various professional activities.
4. To develop logical approach, analytical thinking and problem solving capabilities in students & facilitate them to undertake research/project work.
5. To impart training in soft skills and value education.

Program Specific Outcomes (PSOs):

1. Students will acquire analytical and application skills, specifically in areas of mechanical design, thermal engineering and manufacturing systems.
2. Students will be able to explore various methodologies & software and select appropriate process to bring about improvements.
3. Students will acquire soft skills, value education and competency in pursuing higher studies and finally lead a professional career while working in a global environment.
4. Students will be exposed to green technology and develop inter-disciplinary skills in mechanical systems.

About the Department:

- Department of Mechanical Engineering instituted in the year 2011 with undergraduate (BE) and post graduate (ME) programmes affiliated to the University of Mumbai.
- The department has Ph.D (Technology) programme since 2013, which is affiliated to the University of Mumbai.
- Intake; BE : 120, ME : 18, Ph.D : 10
- The department runs four professional student chapters viz. SAE, ISME, ISHRAE and RAS which help to enhance the skills of the student and also to add value in the process of acquiring knowledge.

ADMINISTRATION

Dr. K. N. Vijaya Kumar
Professor & Head

Teaching Staff

Dr. Satish Takalikar
Professor

Dr Vinayak Khatawate
Associate Professor

Prof. Prasad Shirodkar
Assistant Professor

Prof. Vyankatesh Bagal
Assistant Professor

Prof. Rajnarayan Yadav
Assistant Professor

Prof. P Frank Crasta
Assistant Professor

Prof. Prashant R Patankar
Assistant Professor

Prof. Dhaval Birajdar
Assistant Professor

Prof. Vinit Katira
Assistant Professor

Prof. Rohit Chaurasia
Assistant Professor

Prof. Ramesh R Rajguru
Assistant Professor

Prof. Bronin Cyriac
Assistant Professor

Prof. Greegory Mathew
Assistant Professor

Prof. Dhananjay Shukla
Assistant Professor

Prof. Karthik Ajugia
Assistant Professor

Prof. Shashikant Auti
Assistant Professor

Prof. Sachin Kamble
Assistant Professor

Prof. Dhiraj Nigade
Assistant Professor

Prof. Avadhut Samant
Assistant Professor

Prof. N. C. Deshpande
Assistant Professor

Non-Teaching Staff

Mrs. Vaishali Joshi
Lab. Assistant

Mr Suresh Mohite
Lab. Attendant

Committees

SAE

Prof. Rajnarayan Yadav
Prof. Ramesh Rajguru
Prof. Bronin Cyriac
Prof. Dharam Ranka

Prof. Vinit Katira
Prof. Shashikant Auti
Prof. Gregory Mathew

ISME

Prof. P Frank Crasta

Prof. Ramesh Rajguru

ISHRAE

Prof. Dhaval Birajdar

Prof. Karthik Ajugia

RAS

Prof. Pavan Rayar

Prof. Shashikant Auti

Project Committee

Prof. Vinit Katira

Prof. Ramesh Rajguru

NBA/NAAC/Autonomy Coordinator

Prof. Prashant Patankar

Time-Table Committee

Prof. Vyankatesh Bagal

Prof. Rohit Chaurasia

Placement Coordinator

Prof. Gregory Mathew

Exam Coordinator

Prof. Dhaval Birajdar

Prof. Karthik Ajugia

U. G. Coordinator

P. G. Coordinator

Prof. Bronin Cyriac

Prof. Greegory Mathew

Ph. D Coordinator

Prof. P. Frank Crasta

F. E. Coordinator

Prof. Prasad Shirodkar

Cultural Committee

Prof. Greegory Mathew

Sports Committee

Prof. Ramesh Rajguru

Alumni Coordinator:

Prof. Shashikant Auti

Class Teachers:

SE A Division: Prof. Dhiraj Nigade

SE B Division: Prof. Kartik Ajugia

TE A Division: Prof. Avadhut Samant

TE B Division: Prof. N. C. Deshpande

BE A Division: Prof. Ramesh Rajguru

BE B Division: Prof. Dhananjay Shukla

4. International Conference on Intelligent Manufacturing and Automation (ICIMA 2018) – A brief report

International Conference on Intelligent Manufacturing and Automation was held on 20th and 21st July 2018. About 109 research articles were submitted for the conference. After a thorough review process comprising of 23 eminent academicians and industrialists, 66 papers were finally accepted to be presented at the conference.

Day 1 of conference

- Shri Anilkumar Modi (Vice-President, HTE-BU, Larson & Turbo Ltd.) was the chief guest
- Dr. Suresh K Ukrande (Dean, Faculty of Science and Technology, University of Mumbai) was the guest of honour
- Shri Guruprasad Rao, Director, Imaginarium was the speaker for the plenary session
- Eight technical sessions were arranged for presenting articles. These sessions were chaired by Dr. S M Khot, Dr. Arun Kumar, Dr. N. Raykar, Dr. S. Umale, Dr. V. Sunuapawar, Dr. V. Phalle
- 40 articles were presented on Day I

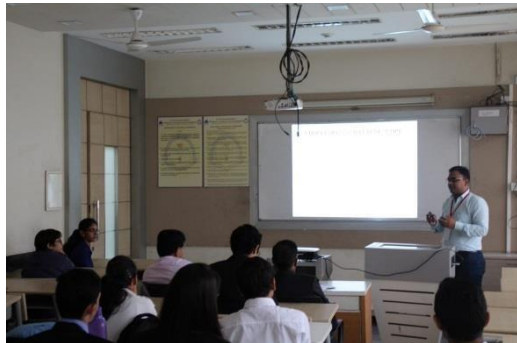
Day 2 of conference

- Shri Vilas Tawde (Managing Director & CEO at Essar Oil and Gas, Exploration and Production Ltd), was the speaker for the plenary session
- Six technical sessions were arranged for presenting articles. These sessions were chaired by Dr. L Ganapathy, Dr. A Pundir and Dr. Sanjay Kumar
- 20 articles were presented at the conference. An additional 6 articles were presented through Skype
- Dr. D J Shah, former Principal, DJSCE graced the occasion as Chief Guest for the valedictory function and presented certificates to the presenting authors

Springer, a leading international publisher in this field will publish the Conference Proceedings digitally under the series Lecture Notes in Mechanical Engineering. Additional details of the book such as ISBN, etc. is available <https://www.springer.com/in/book/9789811324895>

Photo Gallery :





5. STUDENT CHAPTERS

Department of Mechanical Engineering organizes various co-curricular activities in-line with its vision of creating competent Mechanical Engineers capable of facing global challenges. The Department motivates students to participate in various national and international competitions and exhibit proficiency. By creating a competitive ambience exclusively suited for their development, the department inspires students to push their limits. This year too, students brought accolades to the department by winning awards in competitions of International and National repute. Under the guidance of the Head of Department Dr. K N Vijaya Kumar and faculty members, the future engineers of DJSCE are set to make a difference to the society.

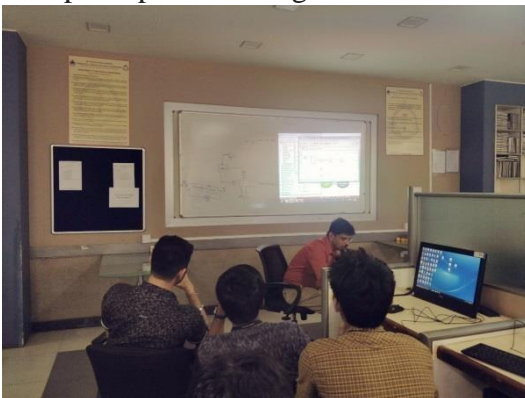
The various student chapters of SAE, ISME, ISHRAE and RAS regularly organizes Seminars, Workshops and Guest Lectures to motivate students to go beyond the university curriculum and to create awareness about the trending developments in the Mechanical field. Following is a brief description of activities conducted by various Student Chapters.

S.A.E. stands for Society of Automotive Engineers. Automotive Engineering being an allied branch of Mechanical Engineering, this student chapter was one of the very first and the largest student chapter in Dwarkadas J. Sanghvi College of Engineering comprising of over 300 members of Mechanical and Production Engineering. Considering that S.A.E. student chapter is among the youngest in Dwarkadas J. Sanghvi, the organizing committee managed to put-up many events which include competitions, industrial visits, invited talks, projects and value added programs.

Society of Automotive Engineers (SAE)

Value Added Programs:

1. **MATLAB** (matrix laboratory) is a multi-paradigm numerical computing environment and proprietary programming language developed by MathWorks. The course was helpful to the college as MATLAB is used frequently nowadays for scientific research. Also, the participants were given certificates of participation for taking part in the event.



Dates: 21st & 22nd Sept. 2018
18th & 19th Oct. 2018



Venue: 4th Floor CAMD Lab

Timing: 9:00am to 5:00pm

No. of Participants: 21

1. **CADD Challenge:** CAD is an essential tool required for detailed engineering of 3-D models or 2-D drawings of physical components, and is used throughout the engineering process from conceptual design and layout of products, through strength and dynamic analysis of assemblies to definition of manufacturing methods of components. With an hour given to the participants to make the required CAD, their skills were tested with challenges of making CADs such as apple logo, shape of guitar, basic structure of the car, etc.

Dates: 9th Oct. 2018

Venue: Computer lab, 2nd floor

Timing: 8:00am to 9:30am

No. of Participants: 30

2. **Aeromodelling Workshop, 2018:** Aeronautics is the most widest and adored field of interest involving people from all departments. The basic building of an aircraft involves the aerodynamics, avionics and engineering concepts of all fields. The main agenda of the event was to give the elementary knowledge of an aircraft ranging from its outer structure to its internal electronics. The two important aero-designing software SolidWorks and XFLR was also taught.

The event was conducted for four days scheduled as:

- 1) Date: **29th Sept. 2018** (Saturday) 12:00pm to 6:00pm
Location: Drawing Hall 1 and 2
The students were taught theory on topics such as aerodynamics and avionics followed by the softwares - SolidWorks & XFLR.

- 2) Date: **30th Sept. 2018** (Sunday) 8:00am to 5:00pm
Location: Drawing Hall 1, 2 and
Room No. 42, 43

The day began with each team performing calculations for their own aircraft and then manufacturing it on the basis of the respective calculations. The materials were provided to the team along with the plan. The base material used for the manufacturing was 'chorofoam'.

- 3) Date: **6th Oct. 2018** (Saturday) 2:00pm to 4:00pm
Location: Drawing Hall 2

All the RC Aircrafts were made flight ready.

- 4) Date: **7th Oct. 2018** (Sunday) 8:00am to 5:00pm
Location: Goraswadi ground,
Malad

More than 50 aircrafts were flown. The day concluded with distribution of certificates, electronics goody bag and coupons to all member.



3. **Drone Workshop:** With the advancements in technology, one of the newest technology hypes is about drones. Drones have a large variety of applications in every sector. The students were taught to make a drone without camera and take one away with them. The workshop supplied a deep knowledge about the making, working, functioning and applications of drones and its various parts.

Dates: 20th and 21st Sept. 2018

Venue: Drawing Hall-1



4. **CTC Transformation Workshop:** This workshop was a 6-session certificate course on personality development. A total of 29 students of the different departments of Dwarkadas J. Sanghvi College of Engineering attended the course which was carried out over the span of 6 days. The course was distributed over three main topics i.e, 1. Self- Esteem, 2. Relationship and 3. Leadership & Teamwork. The participants were given certificates after the completion of the course.

Dates: 5th, 7th, 8th and 12th March

2019 1st and 2nd April 2019

Timing: 2:00pm to 5:00pm

Venue: Room No. 44 and SGNP

No. of Participants: 29



Guest Lectures

1. **Drive Through Tesla:** The seminar was about the work culture in Tesla Motors Inc, USA and Mr. Viraj Bakshi shared his personal experience about working in Tesla. A wonderful and inspiring journey of his life made many students to step up on their feet and work towards their goals and achieve them. The seminar was further followed by a questionnaire session.

Topic: Drive through Tesla

Dates: 22nd February, 2019

Timing: 11:30am to 12:30pm

Speaker: Mr. Viraj Bakshi

Venue: Room No. 43

No. of Participants: 50



2. **Patent Filing :** The seminar was delivered to a packed audience of under-graduate students from the mechanical and production departments of our college. This talk was helpful to the students as it provided a new point of view towards the importance of registering the student's

innovations in various fields with the government organization to safeguard the innovation.

Topic: How to File a Patent

Dates: 22nd March, 2019

Timing: 9:30am to 11:00am

Speaker: Dr. S.N. Teli

Venue: Room No.42 and Conference Hall

No. of Participants: 70



Industrial Visit:

1. **Mahindra & Mahindra:** This event accomplished its aim to make the students familiar with the industrial atmosphere and work environment. The visit also helped the students relate their theoretical knowledge with the practical scenario that the company provided seamlessly.

Dates: 20th & 22nd March, 2019

Timing: 2:00pm to 5:00pm

Venue: M&M Pvt. Ltd. Kandivali East

No. of Participants: 31



Teams:

DJS Racing

<p>Combustion Formula student Austria</p> <ul style="list-style-type: none">• 1st in cost event• 1st Indian team to win cost in FSA• Highest ranked Indian team in Austria• 16th in Business Plan Presentation• 17th in Design event• Overall 23rd	<p>Electric Formula student Hungary</p> <ul style="list-style-type: none">• 7th in Business Plan• Only Electric Indian team which qualified for the competition
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<p>Combustion Formula student Bharat</p> <ul style="list-style-type: none">• 2nd in Design• 3rd in Cost• 12th in Business Plan Presentation• Overall 2nd in Statics• 3rd in Endurance• 2nd in Efficiency	<p>Electric Formula student Bharat</p> <ul style="list-style-type: none">• 2nd in Cost• 4th in Design• 8th in Business Plan Presentation
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DJS Karting

<p>Indian karting championship (IKC)</p> <ul style="list-style-type: none"> • 1st in CAE • 2nd in Design • Overall 13th 	<p>Go-kart design challenge (GKDC)</p> <ul style="list-style-type: none"> • 1st in Acceleration • 2nd in Design • 3rd in Cost • 4th in Autocross • Overall 12th 	<p>Others</p> <ul style="list-style-type: none"> • Best cost report • Best acceleration • Runner up business plan • Overall 10th • 2nd at the Innovation panel at MET EXPO organized by Indian government and ACM international student chapter
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DJS Kronos

Kronos' Car was on Display at the DNA auto expo on the 26th and 27th of May!
 Kronos' Car went for BAJA virtuals in the first week of July where the team qualified for SAE BAJA held in Pithampur, Indore.

BAJA SAE India, 2019

- 1st in Maneuverability
- 1st in Innovation
- 1st overall in Mumbai.
- 10th in Sales Event.
- 12th in Design Event.

Enduro Student India, 2019

- 3rd Place Overall.**
- 1st overall in Dynamic Events.
- 1st in Maneuverability
- 1st in Mumbai.
- Runners-up in Sales Presentation.
- 3rd Place in SprintX Event.
- 3rd Overall in Static Events.
- 5th Place in DirtX Event.



DJS Helios

Electric Solar Vehicle Championship ESVC:

- Runner up in Acceleration
- 7th Overall



DJS Skylark

SAE Aero-Design East

- ❑ 4th overall worldwide in Regular Class
- ❑ 8th overall worldwide in Micro Class
- ❑ 2nd and 8th worldwide in Design Report for Micro Class and Regular Class respectively.
- ❑ 6th and 7th worldwide in Technical Presentation for Micro Class and Regular Class respectively.
- ❑ 1st and 2nd amongst all teams participating from India in Regular Class and Micro Class respectively.



DJS Speedsters

Asian E-Bike Challenge 2019

- Best Engineering Award
- Best Logo Award
- Overall 7th



Indian Society of Manufacturing Engineers (ISME)

ISME deals with manufacturing sector which is regarded as most integral part of any industry. ISME aims at advancing knowledge in the field of manufacturing engineering and management and providing means and methods for applying such knowledge in practice. In the very first year of ISME student chapter in DJ Sanghvi, the organizing committee managed to put of more than 10 events which comprises of – Value Added Programs, Industrial Visits, Workshops and Guest Lectures in a short span. And over the period of time, it has imparted knowledge to over more than 200 members comprising of students from both Mechanical & Production Engineering.

Value Added Programmes

EVENT: Two days training on CNC Machining and Machining & Fabrication at M/s Larsen and Toubro, Madh and Mahape

Dates: 22nd & 24th September, 2018

Company: M/s L&T, Madh

The ISME student chapter of our college conducted a two-day workshop on 22nd and 24th September 2018 on CNC Machining and Machining & Fabrication at the L&T Madh training campus. The workshop was conducted by industry experts who shared their knowledge and experience with us. Two batches of 30 students attended this workshop.

The workshop was mainly concentrated on imparting the knowledge about basics of the subject. The first day started with the crafting of a small table. Square sections were given along with the top plate. Using the drawing file, we cut the square section into given lengths and profile was given for welding. Arc welding was done to join the square section and plate. Later that day, the basic working idea of machines like Lathe, Milling, Surface Grinding, etc. was given to the students by experienced industry experts. The highly skilled faculty shared their knowledge and industrial experience to the students in an interactive session about the machines and their respective operations.

The second day was started by the introduction of making a 3D model on the computer and basic working principle of a CNC machine was explained and hand on training was given. CNC operations and their coding were explained in a systematic manner. The sessions were high interactive with several fun exercises to keep us interested and curious about the topic. Along with the interactive theory sessions and exercises, a hands-on practice was given to get familiar with the working of the machines. A hands-on experience on the industrial applications was provided to thoroughly understand the actual reason behind the processes.

In short, the complete workshop was helpful to gain knowledge and understand the current trends in engineering. Besides academics, the workshop gave the students practical exposure to the industrial world.



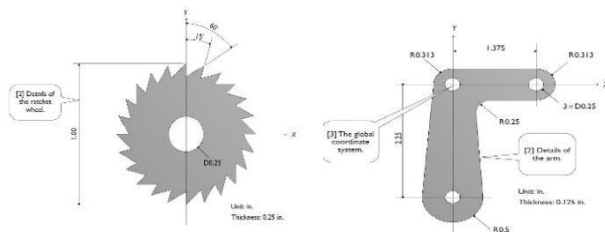
ANSYS training programme at NSTI Chunabhatti

An Ansys training program was held at ATI (Advanced Training Institute) from 10th - 15th September 2018. A batch of 10 students from our college had participated in this program held at ATI in Chunabhatti.

A day-wise description about the program has been given below:

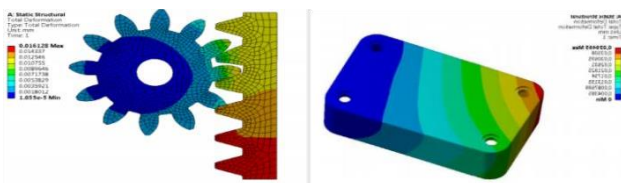
Day 1

- | CAD of different components and structures on Ansys.
- | How to import files from other software for analysis.



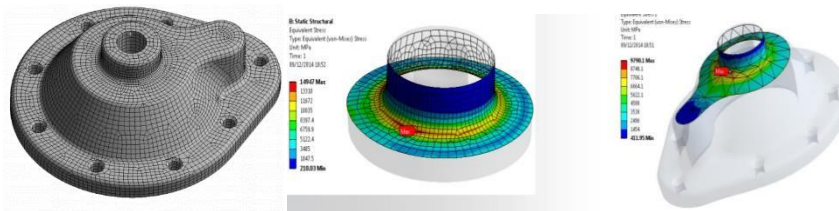
Day 2

- | 2D Analysis of components such as rack & pinion and also applying remote boundary conditions.
- | Different techniques to create named selection.
- | Applying different forces, stresses on the components and evaluating the results.



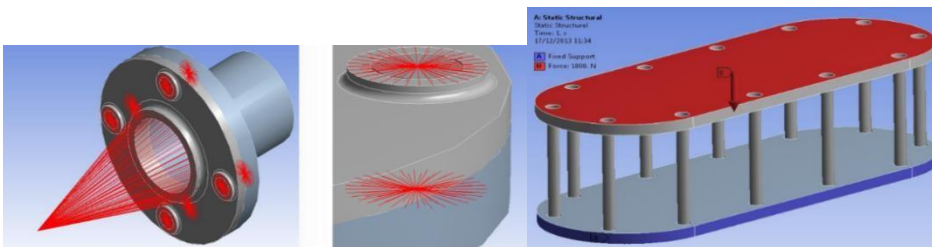
Day 3

- | Solving a full model & sub-model.
- | Basics of meshing which includes creation of meshing, coarse and fine meshing, evaluation of meshing.



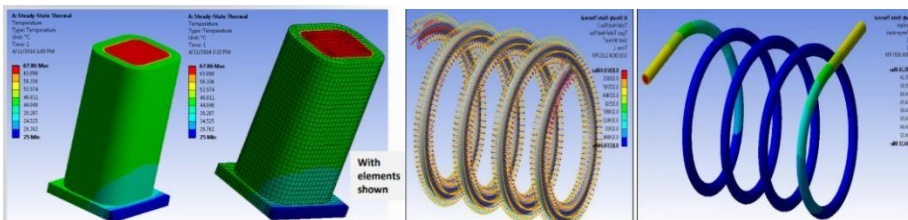
Day 4

- | Use of beam feature, object generator, analyze an assembly.
- | Applying various loads and evaluating the results.



Day 5

- | Thermal problems and its solution.
- | Components such as heating coil, solenoid etc. were studied.
- | Application of thermal stresses on components and evaluating the results.



The course was successfully completed and students learned the basics of ANSYS



Faculty and students at NSTI Chunabhatti

3D Printing and Scanning

Date: 13th February 2019

The workshop organized by ISME to give students a hands-on view and practical exposure on the intrinsic details of the technology behind Rapid Prototyping Tool – 3D Printing. It was conducted on the 13th of February, 2019. Students came to know firstly of new technology, the likes of which we've never seen before and its use in designing and manufacturing impossible products. Students were also educated on the manufacturing process thoroughly which will hold us in good stead going forward. The workshop was conducted in the college premises. A total of 105 students registered for the workshop. Students from Second & Third Year, Production & Mechanical departments as well as ME Mechanical students took part in the workshop.



Mr. Guruprasad Rao, Director, ImaginariumInc introduced his company and shared his experience with the audience. The company has over 30 years of combined rapid prototyping experience. A presentation on “Additive Manufacturing” & “Design Thinking of AM (Additive Manufacturing)” was given by Mr. Guruprasad Rao. Various technologies & engineering applications in AM were discussed by him. A live 3-D Printing demo was shown to the audience. Software used in 3-D Printing such as Rhino3D, zBrush, etc. were shown by engineers & graphic designers of Imaginarium namely MrAmoghPatkar and MrAnikRaut. The first half ended with a Question and Answer session with Mr. Guruprasad Rao.

The second half began with a presentation on “AM Applications in Biomedical Sector” by Mr. Guruprasad Rao. Topics such as Human Organ 3-D Printing, Demerits of 3-D Printing, Future of AM & 3-D Printing, etc. were discussed by Mr. Guruprasad Rao & his assistants. A hands-on session was given to each and every participant on the 3-D printing Machine by Flash Forge, 3-Doodler & 3-D Scanner. Various participants showcased their 3-D CAD models which can be 3-D printed. The workshop ended with a Vote of Thanks to Mr. Guruprasad Rao. The AM workshop was very enlightening and practical. We look forward to many more such workshops.



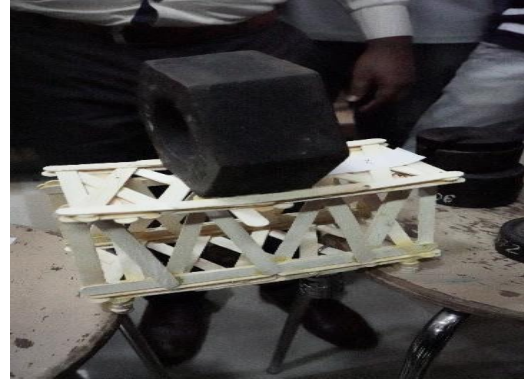
DJ Nirmiti – Project Competition

Dwarkadas J. Sanghvi College of engineering, one of the best colleges in Maharashtra was back with its third edition technical fest D.J.NIRMITI-Igniting Manufacturing Renaissance. It was organized by the ISME (Indian society of manufacturing engineers) committee of the college along with faculty members of Production and Mechanical Engineering Department. DJ Nirmiti, a technical festival is organised every year by ISME Student Chapter, wherein undergraduate students have showcased their project work and other technical skills. Cataapultimate was new inclusion in this years event.D.J.NIRMITI-Igniting Manufacturing Renaissance was held on 18-19 of March 2019. It was the perfect platform for all the technical as well as non-technical lovers in the field. A huge amount of participation wrote great stories of their success. Major 5 events grabbed everyone's eyes were,



BRIDGE THE GAP

Bridge the Gap, semi-fun and semi-technical event tested the ability of a participant to apply principles of structures and physics by asking them to build a bridge using limited number (125) of Popsicle sticks and only 100mL Glue . A total of 42 teams were out there having filled with excitement having their eyes set on building the perfect bridge Bridge that could sustain maximum weights won and at the end of the event, the organisers were surprised to see the creativity and application of young first and second year students as the winning bridge withstood a weight of 12 kgs.



BUSINESS PLAN PRESENTATION

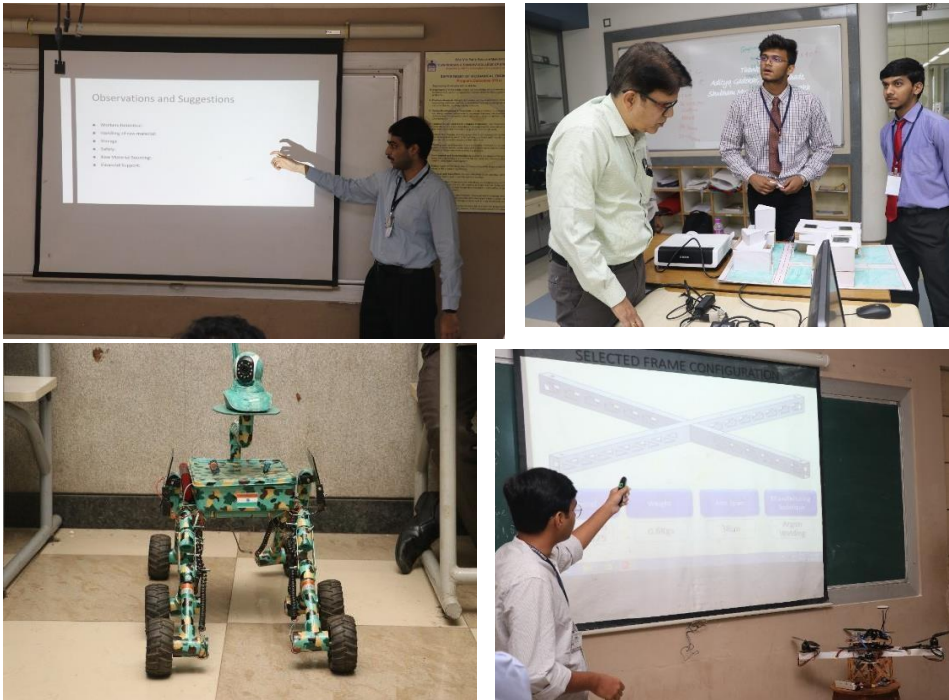
Marketing is an inborn talent is what the participants proved out there. 10 out of the 30 teams were selected for the final round. Amazing advertising skills of the participants helped them cross their first level and then enter into the major part that was the B-plan presentation. Every participant crossed the level of organizer's as well as judges expectations.



PROJECT COMPETITION

Project Competition saw a total of 90 different projects being presented over a span of two days, seeing brilliant ideas like Autonomous ground surveillance rover based on rocker bogie mechanism, Design and Optimization of Aerodynamic Devices of a Racecar and Mechanical analysis of glass fiber and carbon fiber hybrid composites to name a few, out of which 10 qualified for the finals. The final round was judged by Mr. M. J. Paleja, former CEO of L&T, China, and Dr. Atul Dhale from the production engineering department. Projects covered a variety of domains like design and fabrication, production and operation management, automobile, thermal and non-

convectional etc, there were over 92 project with around 15 out house projects.



CADD CHALLENGE

CAD Challenge saw an overwhelming participation head count of 34 budding designers challenged with a task to make a 3-D model of a particular engineering component in a minimum time frame on SOLIDWORKS or AutoDesk INVENTOR software, both of which are widely used in the industry. This event tested participants' speed, software proficiency, logical reasoning and design skills through 2 rigorous rounds. Designing is an art and how we engineers master it is what they saw in the past two days as CADD experts from their respective colleges faced each other off and cleared levels of the competition with ease.

MCQ was their first step towards winning it, and then the actual CADD Challenge organized by officials from CADD centre helped them to pick the best of the lot. Levels of difficulties increased with the passage of time, but the best had it all sort as their calm and confidence helped them secure their places on the podium. It was a tough one but at the same time exciting too.



CATAPULTIMATE

It was a new event where students were asked to make catapults using ice cream sticks and rubber bands and were asked to launch the marble at our score board. The event was totally fun event and saw varying levels of excitement throughout.



Prizes were given to the participants. It was a very well organized and handled they are looking forward to touch new heights in DJ-Nirmiti 2020.



Guest Lectures

Event Title : Guest Lecture on Moulding and Processing of Plastics at M/s Nilkamal Pvt. Ltd.

Event dates : 8th October 2018.

Event location : Seminar hall at D. J. Sanghvi College of Engineering Vile Parle West

Event conducted by : Mr. Sougata Datta, Head, Quality Assurance and Process Engineering, Nilkamal Plastics

An edifying seminar was conducted by Mr. Sougata Datta, Quality Assurance and Process Engineering Head, Nilkamal Pvt. Ltd, for the students of Mechanical and Production departments of DJ Sanghvi College. The seminar highlighted the various aspects of production and processing of the Moulded Plastic Furniture Market giants, Nilkamal Pvt. Ltd.



Processing of plastics at M/s Nilkamal Pvt. Ltd.

Industrial Visits

Company visited : M/s United Rubber Industries, Bhayander

Date of visit: 2nd August 2018

Around 118 students of Second year Mechanical Engineering had visited United Rubber Industries. Their manufacturing unit consists of numerous state of the art of manufacturing machineries and process complete with Semi-Automatic weighing system, Two roll mixing mill with blender, Kneader dispersion mill, Injection, transfer, vacuum and Compression moulding, Shot blasting and Phosphating, Calendaring, Cold and Hot feed extrusion, Braiding, knitting, Steam and hot air cure vulcanization, and the semi-automatic production line for low pressure hoses.

Laboratory equipment which include the Co- ordinate measuring machine(CMM), Universal

Testing Machine(UTM), Dynamic Mechanical Testing Machine, Dampening Coefficient, Complex Storage Modulus, Loss Modulus, Ozone Chamber, Engine Mounting Endurance Test Machine, High Temperature and Cryogenic Temperature Testing machine for Hoses, Auto Control Burst Pressure & Vacuum Pressure Measurement Machine, Rheometer, Mooney Viscometer Hose Leak Test and many other testing equipment are constantly in service for R&D activities, Product development and Product quality assurance.

Company Visited: Hindustan Aeronautics Limited, Nasik

Date of Visit : 17th April 2019.

Hindustan Aeronautics Limited (HAL) is an Indian state- owned aerospace and defence company headquartered in Bangalore, India. It is governed under the management of the Indian Ministry of Defence. The government-owned corporation is primarily involved in the operations of the aerospace and is currently involved in the design, fabrication and assembly of aircraft, jet engines, helicopters and their spare parts. It has several facilities spread across India including Nasik, Korwa, Kanpur, Koraput, Lucknow, Bangalore, Hyderabad and Kasaragod. The HAL HF-24 Marut fighter-bomber was the first fighter aircraft made in India.

HAL is one of the largest aerospace companies in Asia, HAL has annual turnover of over US\$2 billion. More than 40% of HAL's revenues come from international deals to manufacture aircraft engines, spare parts, and other aircraft materials. It will be a great opportunity for students as they will be able to see the full manufacturing process along with flight tests as promised by the aviation manufacturing department, HAL. The visit will be for 60 students on first come first serve basis.



Indian Society of Refrigerating, Heating and Air Conditioning (ISHRAE)

Guest Lectures

- 1) DJSCE ISHRAE held a seminar on "What as an Engineer, I can do ?", by Mr. Rajesh Gangar, Chairman, Allways Creative Pvt. Ltd and witness his journey from being a diploma graduate from Bhagubhai Polytechnic to being an MIT Sloan School of Management graduate, from being an Engineer to being an Entrepreneur and stepping into different businesses. Date: 8th October, Monday 2018
- 2) DJSCE ISHRAE held a seminar on the topic "HVAC technology products and environmental effects" Date: 9th February 2019.
- 3) A practical based seminar on "Solar panels and renewable energy" by Shrinivas Dighe. Date: 8th March 2019.



Inauguration of DJSCE ISHRAE Student Chapter 2018-19

Robotics and Automation Society (RAS)

- A Two day hands on training workshop was organized on STM 32 on 20/10/2018 from 11.00-17.00 hrs and 10/11/2018 - 9.00-17.00 hrs .No of students were 28.
- An INVITED TALK on Data Science and machine learning was organized on 1/2/2019 from 8.00 -12.00 hrs . Nearly 125 participants were present.
- A One day hands on training workshop was organized on Altium -14/3/2019 from 9.00-15.00 hrs .Total 26 students participated.
- A One day hands on training workshop was organized on Augmented Reality on 15/3/2019 from 8.00am-5.00pm .No of students 30
- An Industrial visit was organized to L&T Powai on 12/04/2019 from 12.00-15.00 hrs 30 students were present for the same.



Industrial visit to M/s L & T Powai

6. PERFORMANCE IN UNIVERSITY EXAMINATIONS

Sem V in 2018-19

No. of Students Appeared :- 142

No. of Students Passed (All Clear) 5th sem :- 131

No. of Students Failed :- 11

Sr. No	GPA Range	No of Students
1	O (9-10)	16
2	A (8-9)	37
3	B (7-8)	50
4	C (6-7)	30
5	D (5-6)	3

All Clear Passing Percentage for 5th Sem- 92.25%

1) No. of students failed in 1 Th. Sub - 07	5) No. of students failed in 1 Or/Pr/TT -0
2) No. of students failed in 2 Th. Sub -02	6) No. of students failed in 2 Or/Pr/TT -0
3) No. of students failed in 3 Th. Sub - 02	7) No. of students failed in 3 Or/Pr/TT -0
4) No. of students failed in more than 3 th. Sub-00	8) No. of students failed in more than 3Sub-0

Subject wise Result Analysis for SEM - V (2018-2019)

Sr. No.	Th / Or/ Pr	Name of the Subject Th / Or/ Pr	Name of the Staff Member	No. of Student Appeared	No. of Student Passed	% Passing
1	TH	Internal Combustion Engine	Prof. Vinit Katira	142	141	99.29
	TW					
	OR					
2	TH	Mechanical Measurements and control	Prof. N.C. Deshpande, Prof. Avadhut Samant	142	136	95.10
	TW					
	PR					
3	TH	Heat Transfer	Prof. Kartik Ajugia	142	138	97.18
	OR					
	TW					
4	TH	Dynamics of Machines	Prof. Prashant Patankar	142	137	96.47
	TW					
	OR					
5	TH	Press Tool Design		76	76	100.00

	TW		Prof. Ravikant Hattale			
	OR					
6	TH	Machining Science and Tool Design	Prof. Naresh Deshpande	66	66	100.00
	TW					
	OR					

Top Performers:		GPA
Papal Dinesh		10.00
Ramoliya Rajan		10.00
Mamdapur Ishan		9.85
Sanghavi Neel		9.85
Chindarkar Soham		9.70
Popat Harshal		9.70

Sem VII

No. of Students Appeared	:- 151
Result Reserved	:- 0
No. of Students Passed (All Clear) 7th sem	:- 143
No. of Students Failed	:- 08

Sr. No	GPA	No of Students
1	10	1
2	9	16
3	8	65
4	7	50
5	6	11
6	5	0

All Clear Passing Percentage for 7th Sem- 94.702%

- 1) No. of students failed in 1 Th. Sub - 08
- 2) No. of students failed in 2 Th. Sub - 0
- 3) No. of students failed in 3 Th. Sub - 0
- 4) No. of students failed in more than 3 th. Sub- 0

Subject wise Result Analysis for SEM - VII (2018-2019)

Sr. No.	Th / Or/ Pr	Name of the Subject Th / Or/ Pr	Name of the Staff Member	No. of Student Appeared	No. of Student Passed	% Passing
1	TH			151	151	100.00

	TW OR	MACHINE DESIGN - II	Prof. Gregory Mathew & Prof. Rohit Chaurasia			
2	TH	CAD/CAM/ CAE	Prof. Rajnarayan Yadav & Prof. Pavan Rayar	151	150	99.34
	TW					
	PR					
3	TH	MECHANI CAL UTILITY SYSTEMS	Prof. Vyankatesh Bagal, Prof. Vinit Katira & Prof. Dhananjay Shukla	151	149	98.68
	TW					
4	TH	PRODUCTI ON PLANNING AND CONTROL	Prof. Avadhut Samant & Prof. Frank Crasta	151	149	98.68
	TW					
	OR					
5	TH	COMPUTA TIONAL FLUID DYNAMIC S	Prof. Dhananjay Shukla & Prof. Kartik Ajugia	46	46	100.00
	TW					
6	TH	OPERATIO NS RESEARC H	Dr. Satish Takalikar	105	102	97.14
	TW					

Top Performers:	
1) Kembre Anirudh Chaitanya Keerthan	9.56
2) Jain Shreyans Shekhar Mohini	9.44
3) Bhisti Ishad Abdul Shamimbanu	9.30
4) Menezes Valentino Valerian Agnes	9.26
5) Nautiyal Kartik	9.07

7. Placements

Year	Number of Students placed	Number of Students planning to pursue higher education
B.E	58	90

Name of the student	Placed Company		
	Normal	Dream	Super Dream
Sudeep Bhaskar	Infosys		reliance
Akanksha Ahire	Infosys		
Shlok Bhavsar	Infosys	Techint	
Saurabh Chauhan	Indiamart		
Shreyas Chaware	infosys		
Dharmendra Choudhary			Quantiphi
Vanessa Correia		EnY	
Dhruvin Desai	Infosys		
Parth Gandhi	Infosys		
Shreyans Jain		Jacobs	
Milan Kaklotar		Godrej	
Aniruddh Kembre		Burns And Mcdonell	
Ayushi Kahria	Infosys		
Valentino Menezes		Jacobs	
Abhishek Mishra	ICICI		
Keyur Mistry	infosys	Godrej	
Mitesh Mistry	infosys		
Kartik Nautiyal	Infosys		
Maheshwari Panchal		Jacobs	
Kishan Parmar	ICICI		
Akash Patel	Infosys	Tata Consultancy Engineering	
Anuj Petkar		Godrej	
Devesh Poojari	Infosys		
Prayank Porwal	Infosys	ACG	
Tejas Rajebhosale	infosys		
Kunj Rawani		Tresvista	
Siddhartha Saini	Infosys	Tata Consultancy Engineering	
Rohan Salkar	Indiamart, MT Educare	Bluestar	
Atharva Sankhe	Media.net		
Jay Saple	infosys		Reliance
Janakjit Singh Sethi		EnY	
Drumil Shah		Tresvista	
Harsh Shah	Infosys	Grindwell Norton	
Meet Shah	Infosys	Tata Consultancy Engineering	

Yash Shah	Infosys		
Varun Shetty	Infosys		
Shivani Singh	Infosys	Godrej	
Vibhav Singhal			Reliance
Shubhashchand Yadav		Jacobs	
Nakul Zanzari	Infosys		
Swapnil Bhagat	Indiamart		
Ishad Bishti		Jacobs	
Chirag Chopra		Edelweiss	
Mahendra Choudhary	Indiamart , Periurja		
Digambar Chougale		Sanmar	
Lekh Mehta	Periurja		
Ankit Mistry	Indiamart		
Raj Parekh	Media.net		Jaro
Mitesh Parmar	Indiamart		
Shreya Poojary		Jacobs	
Karan Sawant		Jacobs	
Narendra Bhandawe		Primetals	
Parth Shah	Pinclick		
Manan Shah	Pinclick		
Karan Tatariya	Pinclick		
Chirag Bhadreshwar	Pinclick		
Sagar Jetwa	Pinclick		

8. RESEARCH WORK OF THE FACULTY MEMBERS

(i) Sponsored Projects/Research Work

Name of Principal Investigator	Duration of project	Name of the research project	Amount / Fund received	Name of funding agency	Year of sanction
Dr. K. N. Vijaya Kumar	1 year	Generation of Tyre Pyrolysis Oil (TPO) and performance testing of it on Diesel Engine	50000	University of Mumbai	2018-19
Ramesh Rajguru	1 year	Predictive Modelling of Surface roughness in the Machining of Inconel 625 using Artificial Neural Network	40000	University of Mumbai	2018-19

(ii) Publications :

Dr K. N. Vijayakumar

1. K. N. Vijayakumar, S. N. Teli, Harjyot Singh Nagi, “ Productivity Improvement for Material Handling System”, Lap Lambert Academic Publishing 2018, ISBN : 978-613-9-91558-3

Dr. Vinayak H Khatawate

1. Vinayak H. Khatawate, Komal Kadam, “Performance Analysis of Crash box in Automobiles” IEEE Technically Co-Sponsored International Conference on Nascent Technologies in Engineering (ICNTE-2019) organized by Fr. C. Rodrigues Institute of Technology, Vashi, Navi Mumbai, India, January 04-05, 2019. (Paper is presented in conference and awaited publication in IEEE explorer)
2. Vinayak H. Khatawate, Aditya Shinde, Gopika Vinod, Shishirkumar N. Kadam, “Evaluation Of Site Core Damage Frequency Of Multi-Unit Nuclear Power Plant Using Probabilistic Safety Assessment” IEEE Technically Co-Sponsored International Conference on Nascent Technologies in Engineering (ICNTE-2019) organized by Fr. C. Rodrigues Institute of Technology, Vashi, Navi Mumbai, India, January 04-05, 2019. (Paper is presented in conference and awaited publication in IEEE explorer).

Prof. Vyankatesh U. Bagal

1. Papers Published: International: --- 1. Jay Mehta, Fay Colah, Anurag Rao, Vineeta Pendse, Kevin Ajmera, Vyankatesh Bagal., “Heat Transfer Augmentation from Extended Surfaces Using Dimples” Proceedings of the ASME 2018 International Mechanical Engineering Congress and Exposition, IMECE2018, November 9-15, 2018, Pittsburgh, PA, USA
- 2.

Prof. Rajnarayan Yadav

1. Predictive modelling of delamination factor and cutting forces in the machining of gfrp composite material using ann, Proceedings of International Conference on Intelligent Manufacturing and Automation- ICIMA 2018 (Lecture notes in Mechanical Engineering-Springer), 2018, Ebook ISBN No 978-981-13-2490-1.

Prof. P. Frank Crasta

1. Neel Sanghvi, Frank Crasta and Vijaya Kumar N. Kottur, "Review of Application of Nitinol in the Manufacture of Bone Staples", Proceedings of International Conference on Intelligent Manufacturing and Automation, Lecture Notes in Mechanical Engineering, pp 315-322, Springer Nature Singapore Pte Ltd. 2019, https://doi.org/10.1007/978-981-13-2490-1_28

Prof. Ramesh R. Rajguru

Papers Published in Journal:

1. "A Review and Analysis of the Machining Process involving Nickel Based Super Alloy" in "Lecture Notes in Mechanical Engineering", Published by Springer Singapore, DIO: 10.1007/978-981-13-2490-1 (with Dr. Hari Vasudevan).
2. "Predictive Modelling of Delamination Factor and Cutting Forces in the Machining of GFRP Composite Material using ANN" in "Lecture Notes in Mechanical Engineering", Published by Springer Singapore. DIO: 10.1007/978-981-13-2490-1 (with Dr. Hari Vasudevan and Rajnarayan Yadav).
3. "Multi Characteristics Optimization in the Turning of GFRP Composites based on Grey-Taguchi method" in "Lecture Notes in Mechanical Engineering", Published by Springer Singapore. DIO: 10.1007/978-981-13-2490-1 (with Dr. Hari Vasudevan and Kalpesh Tank).
4. "Experimental Investigation and Optimization of End Milling Parameters in the Machining of Inconel 825 using Carbide Coated Tool" in "Lecture Notes in Mechanical Engineering", Published by Springer Singapore. DIO: 10.1007/978-981-13-2490-1 (with Dr. Hari Vasudevan and Geet Dave).
5. "Optimization of Machining Parameters in the Turning Operation of Inconel 825 using Grey Relation Analysis in "Lecture Notes in Mechanical Engineering", Published by Springer Singapore. DIO: 10.1007/978-981-13-2490-1 (with Dr. Hari Vasudevan, Shreyans Jain, and Jaineel Desai).
6. "*Optimization Of Multi-Performance Characteristics in the Turning Of GFRP(E) Composites using Principle Component Analysis combined with Grey Relational Analysis*" published in Elsevier Materials today Proceedings Volume 5, Issue 2, Part 1, 2018, Pages 5955-5967. DIO.org/10.1016/j.matpr.2017.12.197 (with Dr. Hari Vasudevan, Kalpesh Tank and Nishit Shetty).

Papers Published in conferences:

1. "*Effect of Machining Parameters on Surface Integrity in End Milling of Inconel 625*", accepted for presentation and publication in the 7th International and 28th All India Manufacturing Technology, Design and Research Conference 2018 (AIMTDR 2018), being organised by the college of Engineering Guindy, Anna University from 13th to 15th December, 2018 (with Dr. Hari Vasudevan).
2. "*Effect of Various Cutting and Tool Geometry Parameters on Surface Integrity in the End Milling of Inconel 625*", presented at ICRAMMT 2018 (International Conference on Recent Advances in Materials and Manufacturing Technologies) held on 19th to 20th November 2018 at Marri Laxman Reddy Institute of Technology and Management (MLRITM), Dundigal Qutbullapur (M), Hyderabad-500043, Telangana.
3. "*Optimization of Process Parameters in the Turning Operation of Inconel 625*", presented at ICRAMMT 2018 (International Conference on Recent Advances in Materials and Manufacturing Technologies) held on 19th to 20th November 2018 at Marri Laxman Reddy Institute of Technology and Management (MLRITM), Dundigal Qutbullapur (M), Hyderabad-500043, Telangana.

9. FACULTY AS PARTICIPANTS IN FACULTY DEVELOPMENT/TRAINING ACTIVITIES/STTPS

Sr. No.	Name of the Faculty	Designation	Name of the award/fellowship/certificate received from Govt. or Recognised bodies	Conducted by & Venue	Date
1.	Dr. Satish Taklikar	Professors	Invitation for discussion on NAAC accreditation	Don Bosco Institute of Technology, Kurla	14 th March, 2019
2.	Dr. Satish Taklikar	Professors	Letter of Appreciation for delivering a lecture on Non-linear Programming	Viva Institute of Technology, Virar	22 nd March, 2019
3.	Dr. Satish Taklikar	Professors	Committee member of the meeting to scrutinize the reports of appointments	University of Mumbai, Mumbai	22 nd February, 2019
4.	Dr. Satish Taklikar	Professors	Invitation for the Curriculum Validation Meet	Government Polytechnic, Bandra, Mumbai	02 nd May, 2019
5.	Dr. Vinayak Khatawate	Associate Professor	NPTEL – AICTE Faculty Development Programme	IIT Madras	Feb-Apr 2019

Sr. No.	Name of the Faculty	Designation	Name of the award/fellowship/certificate received from Govt. or Recognised bodies	Conducted by & Venue	Date
6.	Dr. Vinayak Khatawate	Associate Professor	Expert session on “ Reliability Analysis”	ViMEET, Khalapur	08 th May, 2019
7.	Dr. Vinayak Khatawate	Associate Professor	Annual Faculty Convention on “Academia Industry Collaboration: Issues, Challenges and Opportunities”	A.P. Shah Institute of Technology, Thane	05 th January, 2019
8.	Dr. Vinayak Khatawate	Associate Professor	Expert member of faculty interviews conducting committee	Xavier Institute of Engineering , Mahim, Mumbai	21 st July, 2018
9.	Dr. Vinayak Khatawate	Associate Professor	Member of the Vigilance Squad	University of Mumbai, Mumbai	08 th May, 2018
10.	Dr. Vinayak Khatawate	Associate Professor	Member of the Vigilance Squad	University of Mumbai, Mumbai	15 th November, 2018
11.	Dr. Vinayak Khatawate	Associate Professor	Invited to jointly act as referees in the matter of dissertation	University of Mumbai, Mumbai	21 st January, 2019

Sr. No.	Name of the Faculty	Designation	Name of the award/fellowship/certificate received from Govt. or Recognised bodies	Conducted by & Venue	Date
12.	Dr. Vinayak Khatawate	Associate Professor	Invited to attend the meeting to prepare F.E. (Mechanics) syllabus	K.J. Somaiya Institute of Engineering and Information Technology, Sion, Mumbai	08 th May, 2019
13.	Mr. Prasad Shirodkar	Assistant Professor	Annual Faculty Convention on “Academia Industry Collaboration: Issues, Challenges and Opportunities”	A.P. Shah Institute of Technology, Thane	05 th January, 2019
14.	Mr. Vinit Katira	Assistant Professor	Annual Faculty Convention on “Academia Industry Collaboration: Issues, Challenges and Opportunities”	A.P. Shah Institute of Technology, Thane	05 th January, 2019

Sr. No.	Name of the Faculty	Designation	Name of the award/fellowship/ certificate received from Govt. or Recognised bodies	Conducted by & Venue	Date
15.	Mr. Dhananjay Shukla	Assistant Professor	Annual Faculty Convention on “Academia Industry Collaboration: Issues, Challenges and Opportunities”	A.P. Shah Institute of Technology, Thane	05 th January, 2019
16.	Mr. Avadhut Samant	Assistant Professor	Annual Faculty Convention on “Academia Industry Collaboration: Issues, Challenges and Opportunities”	A.P. Shah Institute of Technology, Thane	05 th January, 2019
17.	Mr. Rajnarayan Yadav	Assistant Professor	Annual Faculty Convention on “Academia Industry Collaboration: Issues, Challenges and Opportunities”	A.P. Shah Institute of Technology, Thane	05 th January, 2019

Sr. No.	Name of the Faculty	Designation	Name of the award/fellowship/certificate received from Govt. or Recognised bodies	Conducted by & Venue	Date
18.	Mr. Ramesh Rajguru	Assistant Professor	Annual Faculty Convention on “Academia Industry Collaboration: Issues, Challenges and Opportunities”	A.P. Shah Institute of Technology, Thane	05 th January, 2019
19.	Mr. Sachin Kamble	Assistant Professor	Annual Faculty Convention on “Academia Industry Collaboration: Issues, Challenges and Opportunities”	A.P. Shah Institute of Technology, Thane	05 th January, 2019
20.	Mr. Frank Crasta	Assistant Professor	Life Membership of ISTE	The Indian Society for Technical Education	-
21.	Mr. Frank Crasta	Assistant Professor	Life Membership of ISME	Indian Society of Manufacturing Engineers	-
22.	Mr. Frank Crasta	Assistant Professor	Workshop on 3D Printing and Applications	Mukesh Patel School of Technology Management & Engineering	19 th January 2019
23.	Mr. Frank Crasta	Assistant Professor	Recipient of certificate for AICTE-ISTE approved STTP on Robotics and Industrial Automation	D. J Sanghvi College of Engineering Vile Parle	12/11/2018 to 16/11/2018
24.	Mr. Frank Crasta	Assistant Professor	Recipient of certificate for FDP on Active Teaching	D. J Sanghvi College of	25-26 th February 2019

			Learning Strategies using Innovative Technologies	Engineering Vile Parle	
25.	Mr. Dhananjay Shukla	Assistant Professor	Life Membership of ISTE	The Indian Society for Technical Education	-
26.	Mr. Dhananjay Shukla	Assistant Professor	Life Membership of ISME	Indian Society of Manufacturing Engineers	-
27.	Mr. Rohit Chaurasia	Assistant Professor	Life Membership of ISTE	The Indian Society for Technical Education	-
28.	Mr. Rohit Chaurasia	Assistant Professor	Life Membership of ISME	Indian Society of Manufacturing Engineers	-
29.	Mr. Rajnarayan Yadav	Assistant Professor	Life Membership of ISTE	The Indian Society for Technical Education	-
30.	Mr. Avadhut Samant	Assistant Professor	Life Membership of ISTE	The Indian Society for Technical Education	-
