

MANJARA CHARITABLE TRUST
RAJIV GANDHI INSTITUTE OF TECHNOLOGY, MUMBAI
(Permanently Affiliated to University of Mumbai)
DEPARTMENT OF MECHANICAL ENGINEERING



OLDEST STUDENT BODY OF

RGIT'S MESA

ACTIVITIES REPORT

BOOK

ACADEMIC YEAR JULY 2022 – June 2023

OUR VISION

To be a vibrant student professional body in the Department of Mechanical Engineering, committed to realize holistic development of students through outcome and skill based transformative events.

OUR MISSION

- **To develop practical skills in students by offering internships and providing industrial exposure to the students.**
- **To assist students in connecting with Industry professionals via our seminars and events.**
- **To assist students in exploring and learning various inter- disciplinary technologies.**
- **To assist students in learning event management skills.**
- **To assist students in developing excellent Communication skills.**
- **To make students aware of the latest Industrial technology and trends by conducting industrial visits all over India.**

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OUR CURRENT TEAM

OUR CONVENER

Prof. Rehan Siddiqui

OUR CORE TEAM

NAME	DESIGNATION	NAME	DESIGNATION
Aishwary Kakodkar	President	Tejal Temkar	Vice-President
Loukika Neve	General Secretary	-	Jt. General Secretary
Apurva Vichare	Treasurer	Yash Madkaikar	Jt. Treasurer
Mohammed Asaad Shaikh	Technical Secretary	Akash Gonde	Jt. Technical Secretary
Shubham Dixit	Operations Secretary	Sahil Khatri Rajratna Kuwar	Jt. Operations Secretary
Pranav Hare	Event Management Secretary	Aman Baddela Akbar Sayyad	Jt. Event Management Secretary
Ekta Bhowad	Marketing & Publicity Secretary	Prity Nath, Rohit Yeole	Jt. Marketing & Publicity Secretary
Omkar Keer	Digital Creative Secretary	Manas Darji, Arya Pawar	Jt. Digital Creative Secretary
Abhishek Singh	Editorial Secretary	Saigan Bhagat Tejas Bhagat	Jt. Editorial Secretary
Shams Chougule	Photography Director	Sahil Dhamane	Asst. Director of Photography

- Total Team Strength: 91

OUR ACHIEVEMENTS

➤ **SILVER JUBILEE COMPLETION**

RGIT's MESA, the oldest student body of RGIT was established on 17th March 1997 under the coordinatorship of former principal Dr. B. Kolhe with a goal of providing internships, conducting industrial visits & organising knowledge/skill-based events for its students to provide industrial exposure & develop practical skills in them.

On 27th March 2022, MESA completed its 25 years tenure (silver jubilee) & is the only committee in RGIT to achieve this milestone.

➤ **ONLY COMMITTEE TO ORGANISE OFFICIAL I.V**

MESA conducted an Industrial Visit to KLT Automotives Plant at Palghar, Maharashtra on 19th April 2022 to provide its students' knowledge about Chassis & Tubes Manufacturing Processes.

MESA is the first student body in RGIT to organise an official industrial visit post the COVID period.

➤ **ICEI 4.0 CONFERENCE SPONSORER**

In April 2022, RGIT Organised an International Conference on emerging trends in Industry 4.0 under which various events were conducted.

MESA is one of the very few student bodies of the institute, to provide highest financial sponsorship to the college for organising the conference. Team MESA also received an award & felicitation for their kind gesture.

➤ **BEST COMMITTEE AWARD WINNER**

On 15th September 2021, Team MESA was declared as the Best Committee of the Mechanical Department & was awarded with a Trophy for its work done by the Academic Year 2020-2021 Team.

OUR MEMBER'S ACHIEVEMENT'S

➤ Sahil Rewale

- **ACHIEVEMENT TYPE:** Placement
- **DOMAIN:** Junior Application Engineer
- **COMPANY:** SAHAS Softech LLP



➤ Aakanksha Shirke

- **ACHIEVEMENT TYPE:** Internship
- **DOMAIN:** Business Development
- **COMPANY:** SAHAS Softech LLP

➤ Siddhesh Deshmukh

- **ACHIEVEMENT TYPE:** Internship
- **DOMAIN:** Business Development
- **COMPANY:** SAHAS Softech LLP

➤ Pranav Hare

- **ACHIEVEMENT TYPE:** Internship
- **DOMAIN:** Design Engineering, Softwares
- **COMPANY:** Sepadu Tech Pvt. Ltd.

➤ Apurva Vichare

- **ACHIEVEMENT TYPE:** Internship
- **DOMAIN:** Manufacturing, Designing, Analysis, Maintenance
- **COMPANY:** Central Railways & Western Railways Locomotive Workshop
- **ACHIEVEMENT TYPE:** Research Paper Publication
- **NAME OF JOURNAL:** International Journal of Engineering Research & Technology (IJERT)
- **TITLE OF PAPER:** Design & Fabrication of Aqua Silencer
- **PAPER NO:** ISSN: 2278-0181

➤ Aditya Kurte

- **ACHIEVEMENT TYPE:** Research Paper Publication
- **NAME OF JOURNAL:** International Research Journal of Engineering & Technology (IRJET)
- **TITLE OF PAPER:** Aerodynamics Study of LCV (Light Commercial Vehicle) and Ways to Improve it.
- **PAPER NO:** ISSN (e): 2395-0056 & ISSN (p): 2395-0072

➤ Prity Nath

- **ACHIEVEMENT TYPE:** Promotion – From ‘Cadet’ to ‘Leading Cadet’
- **NAME OF EMPLOYER:** NCC (National Cadet Corps)

➤ Mayur Chawle

- **ACHIEVEMENT TYPE:** Startup
- **COMPANY SERVICES:** Entertainment- Professional OpenMic Events
- **NAME OF THE COMPANY:** StandSkills

➤ Sahil Khatri

- **Reliance Internship**

➤ Shubham Dixit

-

➤ Aishwary Kakodkar

- **Completed 4 weeks Internship on Designing and Manufacturing of electric bike**

➤ Yash Madkaikar

- **Completed L&T Internship**

➤ Aman Badella

- **Dhanu Internship**

➤ Akbar Sayyad

- Internship At Agni Motors Ahmedabad

➤ Central Railway Intership

- Prity Nath
- Shubham Dixit
- Aakash Gonde
- Akbar Sayyad
- Hrishikesh Bandgar

OUR ALUMNI SUCCESS

➤ **Ankeeta Nevrekar**

- **BATCH:** 2020-2021
- **DESIGNATION:** Technical Secretary
- **ACHIEVEMENT:** Cracked GATE 2022 with AIR-7919
Currently pursuing Ms. In Materials Technology from NIT Warangal.

➤ **TRUPTI BOARDE**

- **BATCH:** 2020-2021
- **DESIGNATION:** General Secretary
- **ACHIEVEMENT:** Secured Admission from Top Universities around the Globe like TU Delft, Columbia University, Stanford University, EIT InnoEnergy, University of Maryland, KTH Royal Institute.
Currently pursuing final year in MSc. In Renewable Energy from EIT InnoEnergy.

➤ **SUSHMIT CHAUDHARY**

- **BATCH:** 2017-2018
- **DESIGNATION:** President
- **ACHIEVEMENT:** Assistant Manager of Planning at Audi

➤ **RISHABH RANE**

- **BATCH:** 2017-2018
- **DESIGNATION:** Vice-President
- **ACHIEVEMENT:** Msc. in Sustainable Management from RWTH Aachen, Politecnio di Milano.
Sustainable Finance & ESG Associate in PwC, Germany.

➤ **SOHAM KARKHANIS**

- **BATCH:** 2016-2017
- **DESIGNATION:** General Secretary
- **ACHIEVEMENT:** MA. in Entrepreneurial Studies from SRH Berlin University of Applied Sciences.

➤ **ANUJKUMAR PRAJAPATI**

- **BATCH:** 2015-2016
- **DESIGNATION:** General Secretary (2014-2015)
- **ACHIEVEMENT:** GATE AIR-1
Senior Operations & Maintenance Engineer at IOCL.

➤ **AMIT GHULE**

- **BATCH:** 2014-2015
- **DESIGNATION:** President
- **ACHIEVEMENT:** Founder of India's First Robotic 3D Printing Construction Company- SimpliForge Creations Pvt Ltd.
MSc. in Engineering Management from Northeastern University.

Seminar on International Placements & Opportunities

Date : 28TH JULY 2022

Time : 2:30 PM TO 3:30 PM

Venue : Seminar Hall, 1st Floor, RGIT

Speaker : Mr. Jignesh Doshi and Ms. Hiral



On July 25th, 2022, RGIT'S MESA organised a seminar on "International Placements & Opportunities" in collaboration with Kareer Krafters. The chief guests and speakers of the seminar were Mr. Jignesh Doshi and Ms. Hiral from Kareer Krafters.

As the chief guests arrived at the institute for the event, they were received by the president of MESA, Mr Aishwary Kakodkar. The guests were then taken into the conference room by Mrs. Kiran Choudhari (Head of the Department, Applied Sciences & Humanities) and refreshments were served. The crowd gathered in large numbers in the seminar hall and the stage was all set for the commencement of the event. The hall was prepared well in advance by the volunteers; it was time for the entry of the chief guest. The chief guests then entered the room and were greeted by Dr. Rajesh Kale (Head of the Department of Mechanical Engineering). As a warm welcome gesture, the President of MESA, Mr. Aishwary Kakodkar, handed the bouquet to Mr. Jignesh Doshi.



The guest speaker, Mr. Jignesh, then took over the charge of the stage with some Q&A. The questions like: which country do the attendees desire to study in? Are they willing to migrate abroad after bachelors? served as the scene setter for the rest of the seminar. As the talk progressed further, the volunteers photographed and videographed the seminar hall, covering all the key moments of the talk. Mr. Jignesh then turned towards the crux topic of the discussion and directed the co-speaker, Ms. Hiral, to begin with the work-study programme session.

Ms. Hiral explained the various options to migrate into different nations around the globe for work purposes on a work visa and, at the same time, fulfil one's dream of studying abroad by studying part-time. She then discussed different internship options, practical training programmes in Europe and the USA related to the field of previous study, etc. She also pioneered the weekday job and weekend study pattern in European countries, allowing people to legally study and work in other countries. Later, the rules and regulations, employer/governmental allowances, perks, costs, duration, domains, and eligibility criteria were explained to the participants. This ended the work-study session & then Ms. Hiral passed on the mic to Mr. Jignesh for discussion on the study-work program.



Mr. Jignesh started the talk by explaining the university application procedure, university shortlisting, visa process, personal interview, Statement of Purpose writing, obtaining Letter of Recommendations, etc. indifferent nations in-short. He also spoke about the Ph. D. options, stipend & work allowance in the USA, and research opportunities that allow an individual to gain practical experience along with achieving his/her study abroad goals. The talk was then followed by tuition fees, loan facilities, accommodation and mess options available in that respective country. Later, he also explained the eligibility criteria and the institute's code of conduct/honor with which he concluded the study-work session.



The last few minutes were reserved for doubt clearing, wherein participants asked various questions related to the services offered by the company, the application process, the life of students abroad, etc. As the seminar reached its end, a thank you/closing note was delivered by event anchor and president, Mr. Aishwary Kakodkar, which was followed by the departure of the chief guest and the conclusion of the event.

The seminar went well and was very educational because it revealed the various opportunities that abroad institutions of higher learning have and how interested students can take advantage of those resources for higher education.

TEACHER'S DAY GREETING CARD

DISTRIBUTION DRIVE

Venue: Rajiv Gandhi Institute of Technology

Date: 6th & 7th September 2022

Teacher's play a very important role in shaping a student's career. Right from teaching the smallest things to the very important lessons of life, a teacher shapes the life of a student. Teachers not only teach Students about academics, they encourage us to take part in all the extra co-curricular activities and sports, also they scold whenever they recognize a mistake done and show the way how to overcome the mistake.

This year too Team RGIT'S MESA celebrated the occasion of Teacher's Day by distributing Greeting Cards and seeking blessings of the Principal, the HOD and all the faculties of the Mechanical department.



The event was started by distributing greeting card to the respected Principal, followed by the respected HOD of the Mechanical Department, and all the faculty members of the entire mechanical department. The greeting cards were distributed by each member of team MESA. While distributing the greeting cards our team's photography department clicked pictures with every faculty member to save these happy and sweet memories of the occasion.



“TEACHING IS A ONE PROFFESION WHICH CREATES ALL OTHER PROFFESIONS”



Lastly after distributing the cards and clicking the pictures with all the faculties, the event was successfully conducted and the MESA Team came up with blessings and all the sweet memories.

Silver Jubilee Celebrations

Date : 4th October 2022
Time : 11:00 AM TO 6:00 PM
Venue : Seminar Hall, 1st Floor & RGIT Lawn.
Speaker : Mr. Bhuvan Singh Damahe & Mr. Rahul Chavan



RGIT's Mechanical Engineering Students Association, is the oldest student body of RGIT, that works for holistic & professional development of its student. RGIT's MESA was established on 17th March 1997, under the coordinator ship of our hon. Principal Dr. Sanjay U. Bokade. MESA is committed to providing internships, industrial trainings, industrial visits, skill & knowledge-based workshops & at the same time enhance the soft & hard skills of the students.



On 17th March 2022, MESA completed 25 years since its inception. On, 4th October 2022, MESA organized a Silver Jubilee Celebrations Function for its students, faculties & alumni's. The function was well hosted by MESA member Sahil Khatri & Ekta Bhowad. It began with the welcoming of chief guest Mr. Bhuvan Singh Damahe, the Deputy General Manager of L&T and Mr. Rahul Chavan, the 1st President of RGIT's MESA. Lamp Lightning was done at the hands of the chief guest, alumni Mr. Rahul, Vice Principal Dr. Sanjay Deshmukh, Head of the Department of Engineering Dr. Rajesh Kale & the current President of RGIT's MESA Mr. Aishwary Kakodkar. Later, the dignitaries were felicitated at the hands of HOD, Faculty Convenor Prof. Rehan Siddiqui, Prof. Nilesh Shahapure & Prof. Nitin Deshmukh with bouquet, shawl & shripal. As the function progressed further, the president addressed the audience with his speech describing his journey throughout the time since he joined MESA. The speech was followed by playing a memoir video of the activities done in MESA on the projector & video testimonials sent by MESA alumni's Mr. Amul Ghule, Ms. Snehal Murumkar, Mr. Vamsi Datta & Mr. Hrishik Singh wherein they appreciated & gave the team best wishes.



Then the anchors called Mr. Rahul Chavan on stage for a short speech in which he guided the students with his experiences & industry trends. His speech was followed by the Chief Guest Address wherein experiences, tips were shared on how to succeed in the corporate world. At last, Alumni & Ex-President Mr. Tanmay Bhavsar shared his sweet memories of he made during his engineering tenure. After conclusion, cakes were cut by all the dignitaries & the president and served to the audience wherein everyone congratulated each other for the achievement of silver jubilee & a group photo was taken. At last, the HOD Dr. Rajesh Kale addresses the seminar hall with a vote of thanks expressing his gratitude & concluding the silver jubilee ceremony.



In the 2nd Stage of the function, post lunch organized by MESA for the students, teachers &

guests; various Entertainment Programs like Open Mic, Standup Comedy, Singing & Music Program, Magic Show & Poetry was organized in collaboration with Bombay Bonkerz in the RGIT Lawn wherein the participants laughed & enjoyed the performances of the artists.



SMART MANUFACTURING INDUSTRIAL TRAINING

Date : 7th, 8th, 9th October 2022
Time : 10:00 AM TO 8:00 PM
Venue : SAHAS Softech LLP, SakiNaka, Mumbai.
Trainer : Mr. Tanmay Bhavsar

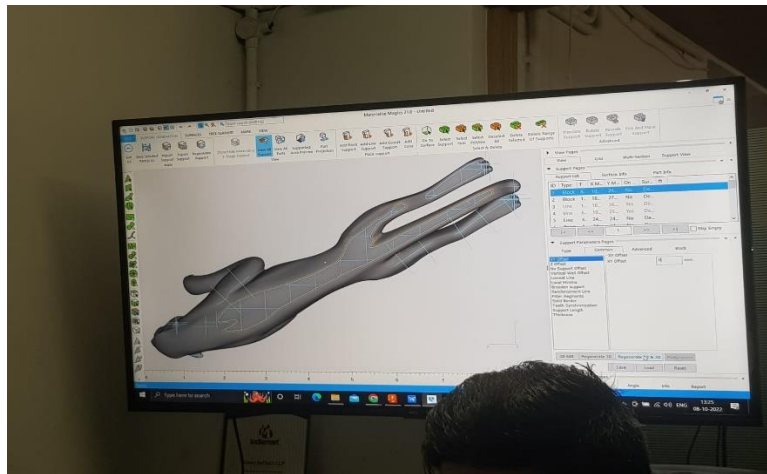


Since the inception, it has always been the aim of RGIT's MESA to provide industrial exposure to the students in the form of internships, industrial visits, training programs & workshops. On 7th, 8th October 2022, MESA in collaboration with 'SAHAS Softech LLP, Mumbai' conducted a '3 Day Smart Manufacturing Industrial Training Program' at the company premises at 'Saki Naka, Mumbai'. The program was conducted by 'Project Coordinator & Support Engineer' & 'Ex-President of RGIT's MESA' Mr. Tanmay Bhavsar.



➤ **During the 3 Day Training, the participants learnt about:**

1. Old Manufacturing Techniques
2. Modern Manufacturing Techniques
3. Additive & Subtractive Manufacturing
4. Working Techniques of FDM, SLA, SLS, DLSM.
5. Thorough Comparison of all the Methodology



➤ **Also got a practical demonstration on:**

6. Chitubox
7. Materialise Magics
8. SLS 3D Printing
9. DLSM 3D Printing
10. Pre-Processing (Geometry Corrections)
11. Post Processing (Washing in Iso-Alcohol, UV Light Treatment, Compressed Air Drying, Sanding, Spray Painting)

12.Additive Manufacturing in Biomedical Field

13.Additive Manufacturing in Architecture



➤ **Also, got a hands-on-experience of:**

14.Extracting 3D Printed Parts from Printer Bed

15.Got to worked on their client's projects

16.Got many Gifts 3D Printed for Free from Company.



SAHAS SOFTECH LLP Internship Drive

Date: 19th May 2023.

To,
The HOD, Department of Mechanical Engineering,
MCT's Rajiv Gandhi Institute of Technology, Mumbai- 400053.

Subject: SAHAS SOFTECH LLP Internship Drive Results.

Respected Sir,

RGIT's MESA, the oldest student's body of RGIT was established by our honourable principal Dr. Sanjay U. Bokade on 17th March 1997 with a view to provide internships & industrial exposure to students. This academic year as well, team RGIT's MESA conducted an internship drive specifically tailored for RGIT students in the month of January 2023. It gives us immense pleasure to inform you about the results of the internship drive:

SR. NO.	STUDENT NAME	BATCH	DESIGNATION
1.	Sahil Rewale	Mechanical 2022	Junior Application Engineer
2.	Aakanksha Shirke	Mechanical 2023	Associate Business Development Executive Intern
3.	Siddhesh Deshmukh	Mechanical 2023	Associate Business Development Intern

The above-mentioned students joined the company starting from February 2023 & are undergoing training. We, team RGIT's MESA & Department of Mechanical Engineering wish them best for their future endeavours.

Aishwary Kakodkar
President, RGIT's MESA.

Prof. Rehan Siddiqui
Faculty Convenor, RGIT's MESA.

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RAJIV GANDHI INSTITUTE OF TECHNOLOGY, MUMBAI



EMPOWER THE NEW

"CONGRATULATION"

BUSINESS DEVELOPMENT EXECUTIVE





SIDDHESH DESHMUKH



Congratulations for securing placement as **Business Development Executive Intern** at **SAHAS SOFTECH LLP** through internship drive conducted by RGIT's MESA.
We hope this position will become a new spirit to provide even better performance at the company.

Mechanical 2023 Batch

MCT
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RAJIV GANDHI INSTITUTE OF TECHNOLOGY, MUMBAI



EMPOWER THE NEW

"CONGRATULATION"

JR. APPLICATION ENGINEER





SAHIL REWALE



Congratulations for securing placement as **Junior Application Engineer** at **SAHAS SOFTECH LLP** through internship drive conducted by RGIT's MESA.
We hope this position will become a new spirit to provide even better performance at the company.

Mechanical 2022 Batch

MCT
MANJARA CHARITABLE TRUST
RAJIV GANDHI INSTITUTE OF TECHNOLOGY, MUMBAI



SAHAS
EMPOWER THE NEW

"CONGRATULATION"

BUSINESS DEVELOPMENT EXECUTIVE



RGIT'S
MESA



AAKANKSHA SHIRKE



Congratulations for securing placement as **Business Development Executive Intern** at **SAHAS SOFTECH LLP** through internship drive conducted by RGIT's MESA.

We hope this position will become a new spirit to provide even better performance at the company.

Mechanical 2023 Batch

Blood Stem Cell Donation Drive

Date : 23rd and 24th January, 2023

Time : 10:30 AM TO 4:30 PM

Venue : RGIT Conference



On 23rd & 24th January, 2023 RGIT's MESA conducted a Blood Stem Cell Donation Drive, chief guest of this event was Dr Praveen Clement, Transplant Centre Coordinator, MDRI (Marrow Donor Registry India). The camp lasted for two days.

On 23rd January 2023 the chief guest Dr P Clement were received by the president of RGIT's MESA, Aishwary Kakodkar .

The chief guest then visited to each and every department's different classroom accompanied by supervising team of MESA and enlightened all the students about stem cells, their donation process, why does it play vital role in the society and how stem cell can treat incurable diseases such as leukaemia, anaemia and other autoimmune diseases with this the first day of camp was successfully completed.



On 24th January 2023, RGIT's MESA team assembled near conference room by 08:30 am and Dr P Clement along with his team arrived at the institute by 09:00 am. The camp started by the ceremonial opening by the chief guest followed by the principal Dr Sanjay Bokade, HOD of the mechanical department, Dr R V Kale and conveyor of RGIT's MESA Prof Rehan Siddiqui. The chief guest and this team were then greeted by the principal of RGIT Dr Sanjay Bokade sir with a bouquet of flowers. All the required setup was prepared well in advance by the volunteering team of all the departments. The teaching faculty encouraged the students to participate in the blood stem cell camp, large number of students were gathered near the conference hall. Two offline and online forms were filled by the donors. The donors were provided with a certificate and an ID card representing them all. Total 228 number of donors participated in the camp.



After the completion of the camp, the principal Dr Sanjay Bokade thanked and appreciated everyone participated in such a noble cause. The chief guest Dr Praveen Clement and his team were honoured with memento and flower at the end. And the event was concluded by a thanking speech by RGIT's MESA president Aishwary Kakodkar.

Workshop on Intellectual Property Rights (IPR)

Date: 10th February, 2023

Venue: RGIT's Seminar Hall

Chief Guest: Mr. Mandar S. Chikhale (Senior Manager, Legasis Pvt Ltd) and Mr. Avinash B. Karande (Senior Associate at Legasis Pvt Ltd)

A helpful and in-depth awareness Workshop on IPR (Intellectual Property Rights) was held on February 10th, 2023, by Team RGIT's MESA, in collaboration with AeroRGIT and IIC. It was a 1-day workshop. These individuals led this seminar: Mr. Mandar S. Chikhale (Senior Manager, Legasis Pvt Ltd) and Mr. Avinash B. Karande (Senior Associate at Legasis Pvt Ltd). Their work primarily entails reviewing patent applications in the mechanical group (metallurgy) to determine whether a patent can be granted for various new inventions. He has more than three years of experience in the patent field.

In this workshop, the attendees got to find out about the Intellectual property privileges (IPR), Patent systems in India, requirements, enrolment course of events, prosecution issues, kinds of IPR, Patent Frameworks in India, patent drafting, and so forth.



The hosts welcomed the chief guest, Mr Mandar S. Chikhale and Mr. Avinash B. Karande, the principal, HOD, faculty convenor, & the faculty members. The felicitation of the chief guest was done by the Principal sir & felicitation of Principal and Vice Principal sir was done by the HOD and Faculty Convenor. A short introduction on the Intellectual property rights was done by the hosts and the stage was handover to the chief guest. The chief guests 'Mr. Mandar Chikhale and Avinash Karande introduced themselves, the organization & then briefed about the topics of introduction to IPR, it is necessity, types of IPR, Patent Systems in India, Role of Government of India in Patent Field, Patent Requirements, etc.



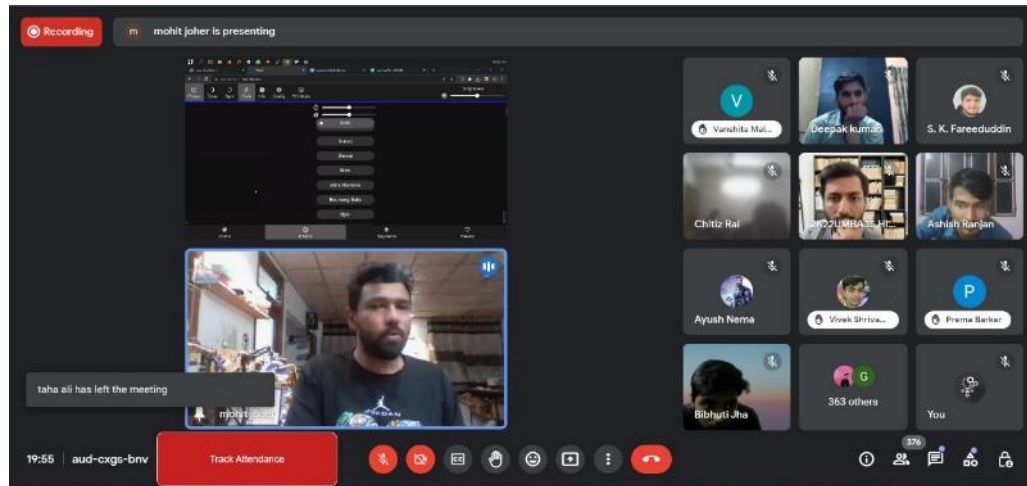
The attendees gained valuable knowledge regarding the IPR, Indian Patent registering Systems, Patent's prosecutions & issues, lab sessions on patentability, search & patent drafting, etc. The Seminar was concluded by the doubt solving sessions for the audience and thanking the Chief Guest. Overall, the IPR Session was an excellent opportunity for all the attendees to learn about the Intellectual Property Rights (IPR). The attendees were very engaged and excited to learn about the IPR throughout the session.

Webinar on ROBOPACK by ROBOTRON

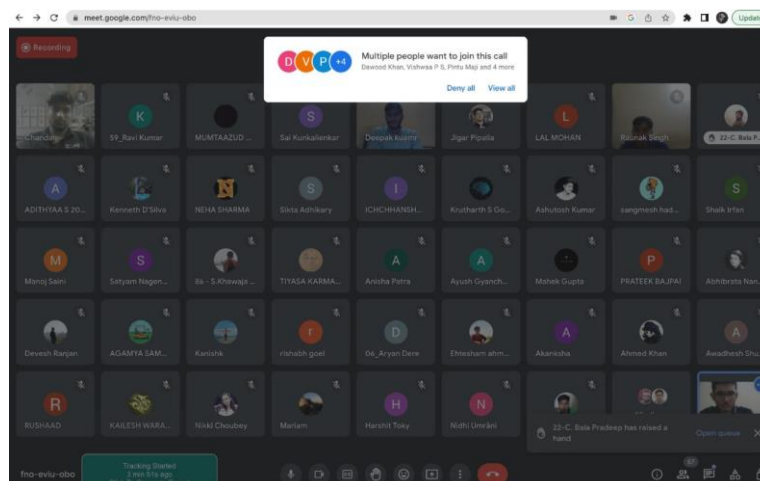
Date : 23rd February 2023

Venue : Google Meet

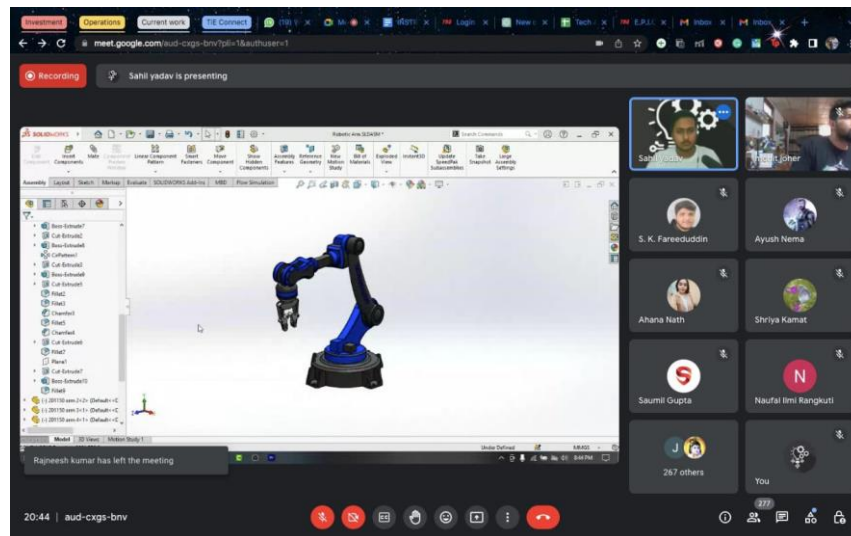
:Time : 07:30 pm



A two-day workshop and training session was organised for interactive and live mentorship to the students in the field of robotics. The session was a webinar organised and managed by team RGIT's MESA in collaboration with team RGIT's Robotics. The webinar took place on Google meet platform. The webinar began at 7:30 with a welcome speech for our chief guests. Mr. Mohit who is a hardware developer and also CEO of JUMakerspace introduced himself and gave a summary of the entire session ahead. He started the session with a brief conceptualization of robotics and its applications in various sectors. The session was taken forward with him explaining the case studies and group activities he performed before handing over the session to Mr. Sahil.



Mr. Sahil is a modelling and simulation expert and also a technical manager at Tech Analogy. He continued the session with an in-depth explanation of the types and methods of simulations and analysis performed in robotics. Later on, next day the session continued with Mr. Sahil demonstrating the software simulation and virtual labs. The webinar was taken forward by Mr. Arko who is a mechanical design expert and Technical head at TA. He provided a glimpse of ROS and Object detection using robotics. Also, a worthy guidance for career building in robotics was given during the session. The webinar came to a conclusion with a Doubt solving session and a thanking speech.



AWARENESS PROGRAM ON INTELLECTUAL PROPERTY RIGHTS (IPR's).

Date: 28th February, 2023

Venue: RGIT's Seminar Hall

Chief Guest: Mr.K. Narayan Murthy [Examiner of Patents & Designs (Grp A Gazetted)]

A helpful and in-depth awareness session on IPR (Intellectual Property Rights) was held on February 28, 2023, by Team RGIT's MESA, in collaboration with ISHRAE and IIC. It was a 1-day workshop. These individuals led this seminar: Mr. K. Narayan Murthy, an expert in the field of patents who is currently employed by the Patent Office in Mumbai as an Examiner of Patents & Designs (Grp A Gazetted), which is part of the Ministry of Commerce & Industry, Government of India's Department for Promoting Industry, and Internal Trade. His work primarily entails reviewing patent applications in the mechanical group (metallurgy) to determine whether a patent can be granted for various new inventions. He has more than three years of experience in the patent field.

In this workshop, the attendees got to find out about the Intellectual property privileges (IPR), Patent systems in India, requirements, enrolment course of events, prosecution issues, kinds of IPR, Patent Frameworks in India, patent drafting, and so forth.



75 Azadi Ka Amrit Mahotsav

RAJIV GANDHI INSTITUTE OF TECHNOLOGY, MUMBAI

INTELLECTUAL PROPERTY INDIA

INSTITUTION'S INNOVATION COUNCIL

NIPAM NATIONAL IP AWARENESS MISSION

Awareness Program on INTELLECTUAL PROPERTY RIGHTS (IPR's)

Date:- 28th February, 2023

Time:- 2:30 pm onwards

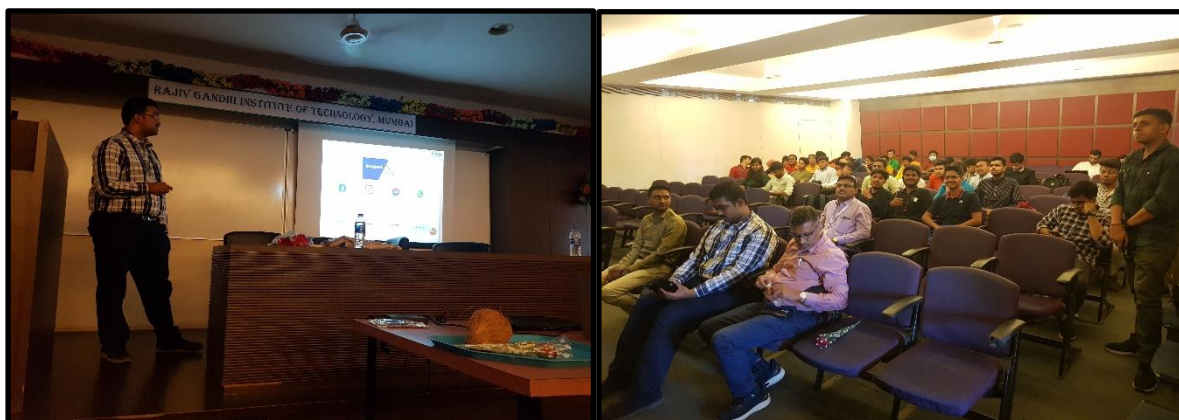
Venue:- Seminar Hall

Juhu Versova Link Rd, Andheri West, Mumbai, Maharashtra 400053

K. NARAYANMURTHY
NIPAM Officer

- B. Tech (Majors in Metallurgy/ Material Science, Minor in management) Indian Institute of Technology, Kanpur (IITK)
- Examiner of Patents & Designs (Group A Gazetted) (3 Year+ Experience)

The hosts welcomed the chief guest, Mr K Narayan Murthy, the principal, HOD, faculty convenor, & the faculty members. The felicitation of the chief guest was done by the Principal sir & felicitation of Principal was done by the HOD and Faculty Convenor. A short introduction on the Intellectual property rights was done by the hosts and the stage was hand over to the chief guest. The chief guest 'Mr. K. Narayan Murthy' introduced himself, the organisation & the briefed about the topics of introduction to IPR, its necessity, types of IPR, Patent Systems in India, Role of Government of India in Patent Field, Patent Requirements, etc.



The attendees gained valuable knowledge regarding the IPR, Indian Patent registering Systems, Patent's prosecutions & issues, lab sessions on patentability, search & patent drafting, etc. The Seminar was concluded by the doubt solving sessions for the audience and thanking the Chief Guest. Overall, the IPR Session was an excellent opportunity for all the attendees to learn about the Intellectual Property Rights (IPR). The attendees were very engaged and excited to learn about the IPR throughout the session. Overall, the session was a great success and the participants learnt a lot.

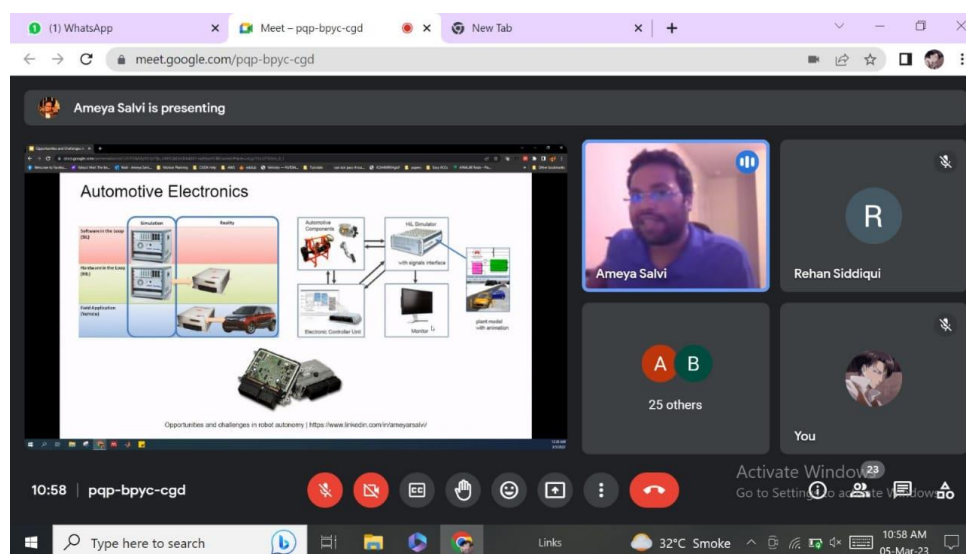


WEBINAR ON ROBOT AUTONOMY: OPPORTUNITIES & CHALLENGES

Date :23rd and 24th February 2023

Time:7:30 PM

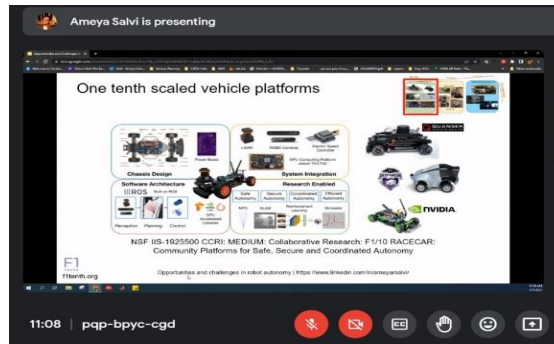
Venue: Google Meet



On 5th March 2023 RGIT's MESA organized a webinar on ROBOT AUTONOMY: OPPORTUNITIES & CHALLENGES in Public Sector Institutions. The speaker for this event was Mr. AMEYA SALVI. He is a PHD Scholar, Robotics Autonomy, Clemson University USA and also alumni of RGIT. The purpose of this event was to explain the students about the opportunities and challenges in Robot Autonomy.

The anchors for the event were Yash Pednekar and RGIT'S MESA's President Aishwarya Kakodkar. The event started with the welcoming of the chief guest by our respectful HOD Dr. R. V Kale and our convenor Prof. Rehan Siddiqui.

The speaker started the session by explaining overview of the Modern-Day Vehicle as a Cyber-Physical system. He also covers the sense think act the Challenges in Perception planning and control. He also explains simulation to reality (SIM2REAL TRANSITION). Our speaker explained the importance of Deep Reinforcement Learning for Autonomy. Before concluding the event an interactive question & answer session was conducted by the hosts.



The Speaker greatly enhanced the student's knowledge related to Robot Autonomy.

Industrial Visit to MAHANAND DAIRY

Date: 9th March ,2023

Time: 1 PM & 2 PM (For Batch A & Batch B)

Venue: Aarey Colony, Western Exp. Highway, Goregaon East



On March 9th, 2023 an official industrial visit was conducted on the behalf of students of mechanical branch of Rajiv Gandhi Institute of Technology by the RGIT'S MESA . The I.V was designed with the student's curriculum in mind, and it provided them with an overview of the H.V.A.C processes. After all the students were gathered at the platform, roll call was taken at approximately 12:30. Prof. Rehan Siddiqui Sir and Prof. Parmeshwar Paul Sir were the supervisors besides us. The entire crowd was club into 2 groups. Two club members were appointed to each group. We arrived at the site at 12 p.m and rendezvoused with the MAHANANDA staff.

After that, each of the student groups visited different plants. Different types of machineries were witnessed by students regarding packaging and production. First, the students saw the milk processing section in which they perform various operations such as clarification, pasteurization, standardization, homogenization, chilling.



On the other hand, the students witnessed the utilities part in which the refrigeration section was shown it is a artificial withdrawal of heat from the substance or within the space at the temperature lower than ambient temperature. It depends on Refrigerant Used and Compressor Used. In refrigerants they use ace glycol for negative temperature, brick and ammonia, beside compressor oil separator fixed which separates the lubricating aids coming with refrigerant for increasing the efficiency of refrigerant. The Compressor used in it is Reciprocating Compressor. It is a positive-displacement compressor that uses pistons driven by a crankshaft to deliver gases at high pressure. Reciprocating compressors require air reservoir tanks to handle larger air demands and reduce air pulses created in the compression process.



At the end the students witnessed the boiler section, there are two boilers to meet the steam requirement of plant: Water- tube type boiler is available at Mahanand dairy. Details of steam production: Soil water is used for the production of steam in boiler to avoid scaling over the tubes. Hardness of water is maintained at 3PPM and Ph 9.5. 1101 water is taken from solar system Solar panels are installed for the purpose of preheating of the water. Its capacity is 30,000 lit/day at a temp of 70-800c from the room temperature. The combustion of the heats the water in the tubes and water gets convened in the steam, For the safety of the boiler there are two spring-loaded safety valves arc fitted. Valves open if the pressure exceeds 26 kg/cm2 in order to prevent the bursting of boiler.

Blow down valve: - This valve is filled at bottom center of the boiler body blown off the dirt sediment impurities at each shift for 5-10 min, by opening the valve.

Non-return valve: - The produced Steam passes through NRV to header.

After the successful conduction of I.V refreshments were provided to the students. And the IV came to a conclusion at 4:30 pm.

Technical Poster Presentation competition

Date: 23rd & 24th March 2023

Time: 10:30 AM TO 4:30 PM

Venue: RGIT Classroom



The ICARUS (Technical fest of RGIT) was conducted in our college and finally after a long wait of 4 years, it was decided that event will be conducted on 23rd and 24th March 2023. RGIT'S Mesa in collaboration with IETE RGIT was given the opportunity to host the Technical Poster Presentation competition. Several participants from all over Mumbai took participation in the competition . In all there were 13 teams which took part in the competition. Competition was held in the college premises. Event heads for the competition – Akbar Sayyed (Mesa), Jaya Verma (IETE).The judges for the competition were Prof. Amol Mangrulkar, Prof. Dilip Dalgade, Prof. Surendra Sutar, Prof. Ankush Hutke, Dr. Jyoti Deshmukh. Event started at 10.30 am with a welcome speech by the event host – Ekta Bhowad.



After the welcome speech the competition started with each teams presenting the poster work along with the physical working models. One by one each team presented their posters and accordingly the scores were given by the judges. The competition ended at 4.30 pm . The results were declared in the valedictory session which was arranged the next day. The winners were given medals, gift vouchers and price money. The event was successfully conducted with the cooperation of the Principal, Student Council and each and every member of the Mesa .

Technical Project Presentation competition

Date : 23rd & 24th March 2023

Time: 10:30 AM TO 4:30 PM

Venue: RGIT Classroom



The ICARUS (Technical fest of RGIT) was conducted in our college and finally after a long wait of 4 years, it was decided that event will be conducted on 23rd and 24th March 2023.

RGIT'S Mesa in collaboration with IETE RGIT was given the opportunity to host the Technical Project Presentation competition. Several participants from all over Mumbai took participation in the competition . In all there were 15 teams which took part in the competition. Competition was held in the college premises. Event heads for the competition - Yash Madkaikar (Mesa), Jaya Verma (IETE).The judges for the competition were Prof. R Y. Kurane, Prof. Y. P. Deshmukh, Prof. Kausar Attar, Prof. Suresh Mestry , Prof. A.B.Bedke, Prof. Sawarkar. Event started at 10.30 am with a welcome speech by our Asst Director of Photography - Sahil Dhamne.



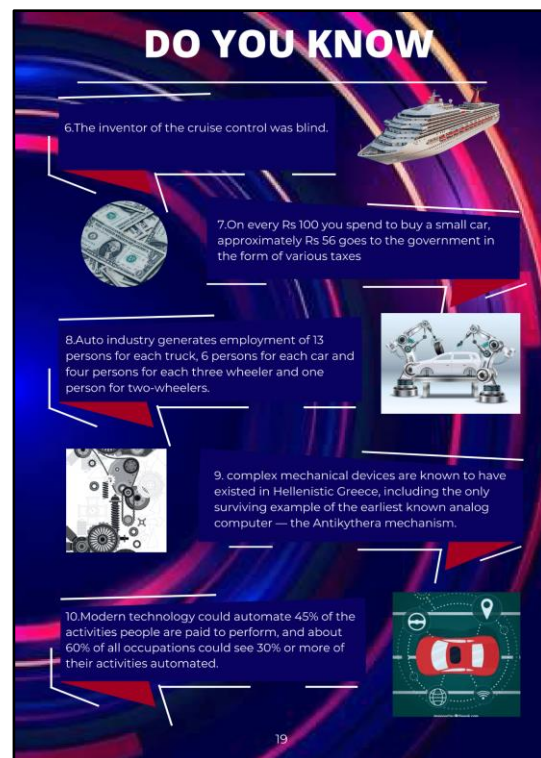
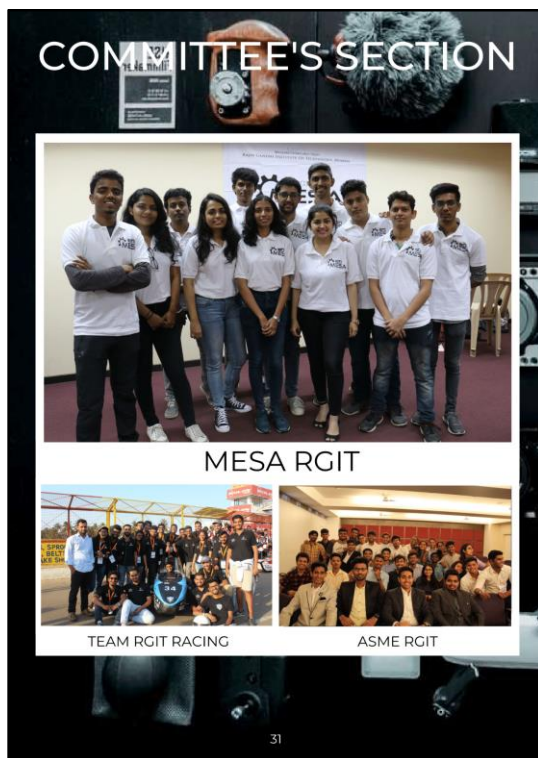
After the welcome speech the competition started with each teams presenting the project work along with the physical working models. One by one each team presented their projects and accordingly the scores were given by the judges. The competition ended at 4.30 pm . The results were declared in the valedictory session which was arranged the next day. The winners were given medals, gift vouchers and price money. The event was successfully conducted with the cooperation of the Principal, Student Council and each and every member of the Mesa .

OUR DIGITAL MEDIA HANDLES

➤ MECHAZINE 2.0

Last year, Team RGIT's MESA launched the second edition of its much-awaited yearly magazine 'MECHAZINE 2.0'. The preparations for this edition were initiated by the 2019-2020 team & was completed by June 2021.

[Click here](#) to read 'MECHAZINE 2.0'



INDUSTRY 4.0

The First Industrial Revolution

The industrial revolution in Britain came in to introduce machines into production by the end of the 18th century (1760-1840). This included going from manual production to the use of steam-powered engines and water as a source of power.

The Second Industrial Revolution

The second one dates between 1870 and 1914 and introduced pre-existing systems such as telegraphs and railroads into industries. Perhaps the defining characteristic of that period was the introduction of mass production as a primary means to production in general.

The Third Industrial Revolution

Perhaps the third one is much more familiar to us than the real as most people living today are familiar with industries leaning on digital technologies in production. However, the third industrial revolution is dated between 1950 and 1970.

The Fourth Industrial Revolution

The fourth industrial revolution takes the automation of manufacturing processes to a new level by introducing customized and flexible mass production technologies.

INDUSTRY 4.0 COMPONENTS

- Cyber-Physical Systems
- Internet of Things
- Smart Factory
- Internet of Services
- Smart Product
- M2M, Machine-to-Machine
- Big Data Cloud

INDUSTRY 4.0 DESIGN PRINCIPLES

Interoperability

Objects, machines and people need to be able to communicate through the Internet of Things and the Internet of People.

Virtualization

CPSs must be able to simulate and create a virtual copy of the real world.

Decentralization

The ability of CPSs to work independently. This gives room for customized products and problem solving.

Real-Time Capability

A smart factory needs to be able to collect real time data, store or analyze it, and make decisions according to new findings.

Service-Oriented

Production must be customer-oriented.

Modularity

In a dynamic market, a Smart Factory's ability to adapt to a new market is essential.



FINAL THOUGHTS

Industry 4.0 is definitely a revolutionary approach to manufacturing techniques. The concept will push global manufacturers to a new level of optimization and productivity. Not only that, but customers will also enjoy a new level of personally customized products that may have never been available before. As mentioned above, the economic rewards are immense. However, there are still many challenges that need to be tackled systematically to ensure a smooth transition. This needs to be the focus of large corporations and governments alike. Pushing research and experimentation in such fields are essential. While speculations regarding privacy, security, and employment need more study, the overall picture is promising. Such approach to manufacturing industries is truly revolutionary.

Prof. Anil Mangalika

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SPACE BULLETIN

Opportunity Spends 15 Years On Mars

Opportunity Rover also known as "Mars Exploration Rover - B" completed its 15 years of exploration on planet Mars on 25th January 2019. It landed on 25th January 2004 on the surface of Mars on a place named 'Meridiani Planum'. It was originally designed for only 90 sols (sol is a martian day which is equivalent to 24 hours and 40 minutes on Earth). It has travelled the longest distance on a celestial body other than Earth. It has travelled 45.16km on Mars till 30th January. It is in hibernation since June 2018 due to dust storm. So currently, taking into account the days of silence, it has spent 5340 Sols on Mars.



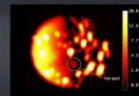
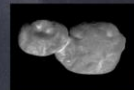
Rain Seen On The Titan's Northern Hemisphere

The Cassini mission which continued for 13 years ended in September 2017 has captured images which are still in process and studies. It studied Saturn and its moons in its mission life. Some of the images of Titan showed that there was some light glinting off a wet surface. Recently, a paper was accepted for publication in a journal of American Geophysical Union. It has discovered the rainfall in the North Polar Region of Titan using these images. The speciality of this rainfall is that it rains liquid methane on Titan. It is the only body in the solar system with such a thick and dense atmosphere and is a moon of a planet. The yellow square shows the region.



New Horizons Flew By A Kuiper Belt Object

On the New Year's Day, New Horizons spacecraft flew by a Kuiper Belt Object named 2014 MU69 (aka: Ultima Thule). Kuiper belt objects are the objects beyond the orbit of Neptune. It is the farthest object studied by humans in such a detail. It is at a distance of around 6.5 billion kilometres from Earth. The object is approximately 30 km long in size. Here is one of the detailed images of the object.



Active Volcano Seen On the Jupiter's moon Io

Io is one of the planet Jupiter's moons. The Juno spacecraft captured images which show an erupting volcano on Io's surface. Io is covered with many volcanoes but they were never captured in action. The most powerful volcanic eruption observed on Io was an "outburst" eruption at Surt, observed by Earth-based astronomers on February 22, 2001.

There Was Life on Moon

China's Lander Chang'e-4 sprouted the first plants on the lunar surface. The plants are in a container which admit only sunlight. These plants are in a photograph released by Chinese space agency on 14th January 2019. The plants are dead now which occurred couple of days later potentially due to the lunar environment. The circular white object seen in the image left in the upper second square is the sprouted plant.

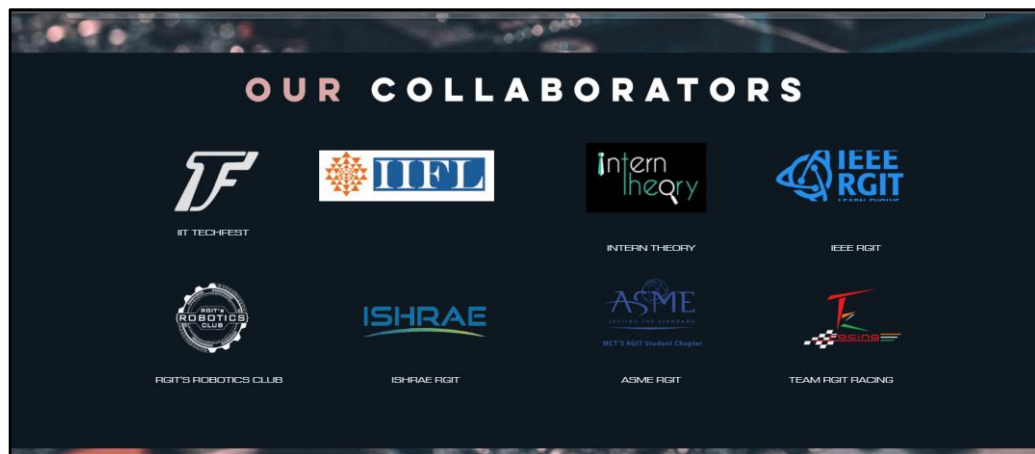


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Prasad Vengurlekar
BE Mechanical

➤ WEBSITE

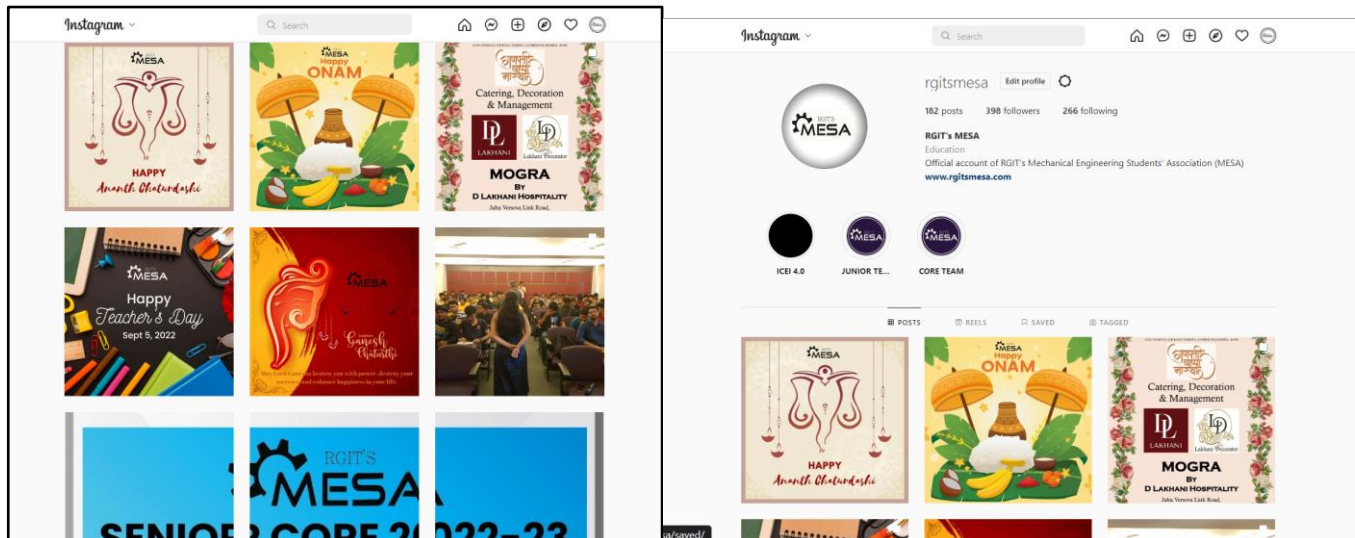
The official website of RGIT's MESA 'rgitsmesa.com' is being regularly updated with latest events & team information. It also covers a book drive which contains electronic copies of Mechanical Engineering E-Books & Past Year Papers with Solutions.





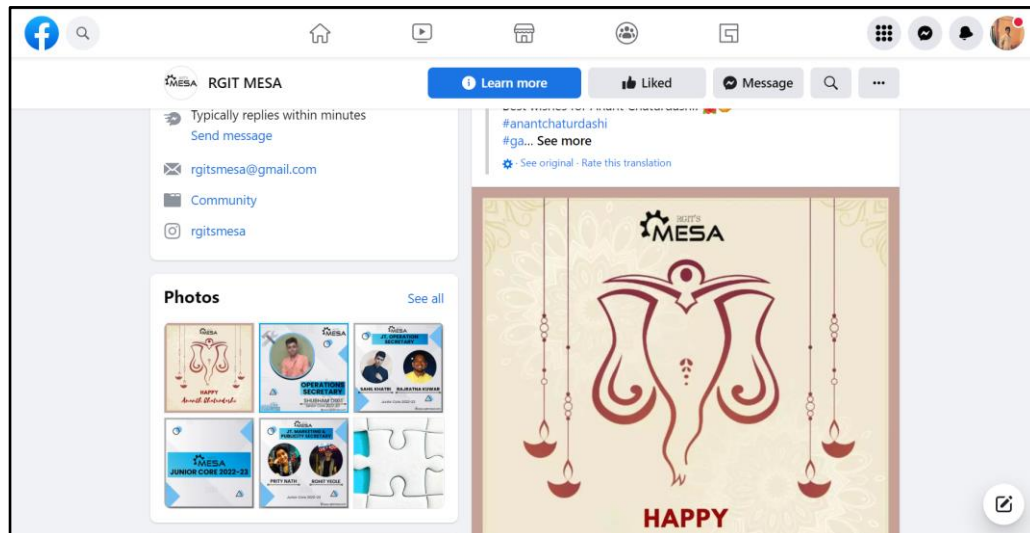
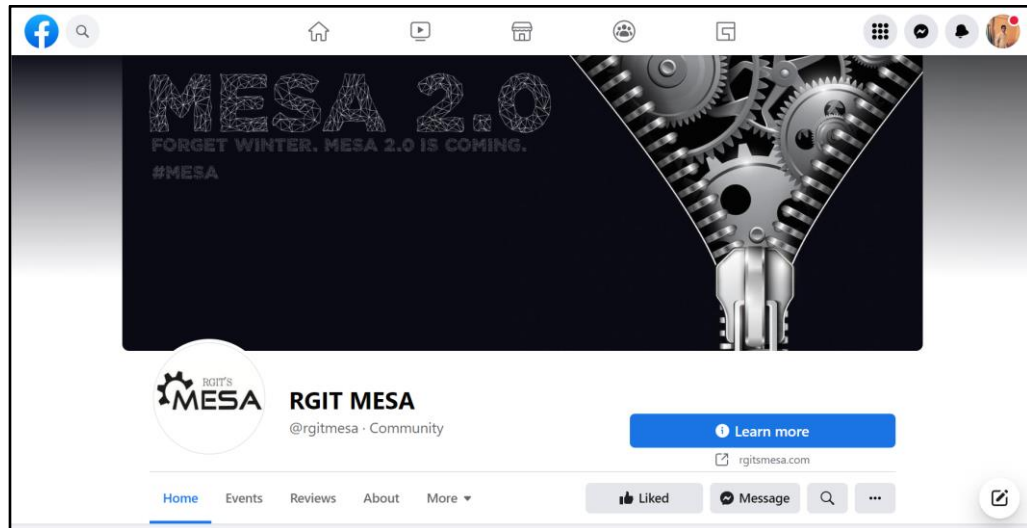
➤ INSTAGRAM

MESA also has an official Instagram handle '[rgitsmesa](https://www.instagram.com/rgitsmesa)' wherein posts about upcoming events, festival posters & wishes, past workshops, team information are posted regularly.



➤ **FACEBOOK**

The [facebook page](#) supports the Instagram account for those folks who don't use Instagram. Facebook also contains a closed group in which old members of RGIT's MESA Team are added.



➤ LINKEDIN

All updates pertaining to upcoming events, new teams are posted on [LinkedIn Account](#) in a professional manner by members of the D.C team.

