



**MAHARSHI KARVE STREE SHIKSHAN SAMANTHA'S
CUMMINS COLLEGE OF ENGINEERING FOR
WOMEN**

MECHANICAL EXPRESS

**MECHANICAL ENGINEERING
DEPARTMENT**

**2021-2022
ISSUE#10**

OUR TEAM

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Toppers A.Y. 2020-21



**Final year
Siddhi Joshi**



**Third year
Manali Deore**



**Second Year
Sakshi Koshe**

Industrial Visit



**Visit to Someshwar
Sugarcane Factory**



**Deenanath Mangeshkar
Hospital**



Cummins India Limited

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From HOD's Desk



Greetings to all!!!

It gives me utmost pleasure to express my thoughts for this edition of Mechanical Express. Having being entrusted with the responsibility as Head of Department since October 2021, it is my first time that I am penning my views via this medium.

We always know that after every darkness there is a ray of light, and we experienced it again when the collective effort of entire mankind helped us tide over the Covid-19 pandemic. Slowly but surely life returned to normal & we resumed our regular duties. The shift from online to classroom sessions happened slowly but surely & the entire teaching community (students & teachers alike) were more than happy to be back to the classrooms & labs.

The pandemic has definitely taught us that adapting ourselves to extreme situations is the only way forward and these were the times when we brought out our inner resilience to overcome very difficult times. Having said that everyone coming back to normal life cycle was a big relief.

The regular academic activities were again slowly picking up. It is a pertinent point to mention that unless the students perform hands on practical's in the laboratories, they will not get a better understanding of the subjects related to Mech. Engg., the pandemic didn't allow it to happen, but we the faculties of the department collectively took a decision & conducted extra practical sessions for the students so as to make them confident related to respective subjects. It was a rigorous exercise but was very well supported by staff & students alike.

Events & Activities under various student chapters of professional bodies such as ASME, SAE etc. started in full swing. ASME since its inception 7 years ago has evolved into an active student body & helping the students not only becoming better Mechanical engineers but also inculcating leadership qualities in them.

The most important & exciting event under the SAE calendar is BAJA. After a gap of 2 years the BAJA event was conducted physically at Pithampur. Our team's performance was exemplary, having secured prizes under various categories & securing an All India Rank of 7th overall. The determination, grit, hardwork & team spirit of the students were highly appreciated by the college authorities.

The Annual Cultural & Technical festivals were also celebrated with great enthusiasm. In the AnnualTech fest, Innovation, there were 2 events which were conducted by the department & we got a very good response from students across the city.

The placements of the department have also been phenomenal. Nearly 95% students got placed, all in core companies with a good salary package. My hearty congratulations to all!!

In a nutshell, this year has been that of a transition, a year of picking up the pieces, a year of forgetting the difficult past & moving ahead with extra rigor & enthusiasm. I am sure that the future is definitely very bright & we all will continue to give the same amount of efforts to take the department to greater & newer heights!!

Best Wishes to all!!

Dr.Gautam Chandekar,

HOD, Mech. Engg. Dept.

Word from the Team

Dear Readers,

Here we are, back again with the Mechanical Express Edition 10, to give you a glimpse of all the wonderful events and activities conducted during the past year. As we conclude A.Y. 2021-22, let us reminisce our department happenings over the past year. This year was a transition phase for all of us, shifting from online mode to offline mode. And this has made our faculty and students' achievements much greater. This year's magazine showcases all the events conducted by professional bodies & clubs under our department. And not to mention the best highlight of every year- Alumnae & Industry expert interviews. Our team, this year, has curated the best possible articles of, which we are sure, would give you a trip down the memory lane. We would like to thank all the faculty and students who contributed to this effort. We thank Poonam ma'am for her timely guidance, and the entire department for making Mechanical Express a huge success.

Happy reading!!!

DEPARTMENT VISION

To be recognised as a centre for quality education to develop women professionals in Mechanical Engineering.

DEPARTMENT MISSION

1. To impart knowledge and skills in the field of Mechanical Engineering.
2. To develop Mechanical Engineers with professional ethics, who will respond to the current and future needs of society through academic, industrial, and research activities.
3. Develop facilities for higher education and promote research activities.

National Service Scheme



“NOT ME, BUT YOU”

The National Service Scheme (NSS) is a Central Sector Scheme of Government of India, Ministry of Youth Affairs & Sports. The sole aim of the NSS is to provide hands on experience to young students in delivering community service. As always, this year too, the NSS team of our college wholeheartedly participated in community service, serving the nation with full spirit and enthusiasm, spreading awareness about various events of social, cultural, and historical importance.

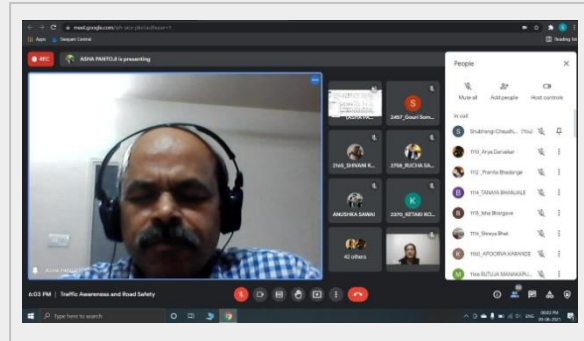
A few of the activities conducted by them during this academic year-

Traffic Awareness and road safety

Date: 9th August 2021

Nearly 50 students participated in this session; the session created a general awareness about traffic rules. The session started with the introduction of the speaker, and it highlighted the rights and duties of responsible citizens. Students got to learn a lot and added more value to their knowledge. The speaker further explained different road symbols and spoke about

what one should do in case of emergency or accidents.



Traffic awareness and Road safety session

Water Conservation

Date: 23 Aug 2021

NSS CCOEW invited Niranjana Upasani - promoter of NGO- 'Jeevitnadi living river foundation', A former Japanese language specialist, Founder director of sustainable living solutions Pvt. Ltd. This event was organized under the volunteering of 10 Students, and an overwhelming response from one hundred people. This event was successful as there were many students who had some doubts which were cleared by the guest. Teachers also took part in the discussion. Everyone learnt lot from this event.

POSHAN ABHIYAN

Date: 14 Sept 2021

NSS CCOEW has organized an event 'NUTRITIOUS FOOD COMPETITION' under Poshan Abhiyan which motivated people to consume healthy and nourished food. All participants got to know about the importance of a healthy diet in our busy lives, where people hardly care about intake of healthy foods. Although being Indian residents, we have a variety of healthy

foods like pulses, leafy vegetables, beans, fruits, and dry fruits. Everyone took part & showed enthusiasm & according to their locally preferred foods; they consumed healthy food. NSS team thanked Government for bringing in such a great event.

7 Days, 7 Challenges

Date: 8th to 15th of Sept 2021

NSS CCOEW has organized a weeklong activity to spread awareness of one's physical health and wellbeing.

Day 1 - Plank Position , Day 2 – Ushtasana (Camel Pose), Day 3 – Vrikshasana (Tree Pose), Day 4 – Dhanurasana (Bow pose) , Day 5 – Gomukhasana (Cow face pose), Day 6 – Adhomukhaswanasana (Downward Facing Dog pose) , Day 7 - Virasana (Warrior pose). There was active participation from students, and they learnt a lot about different yogasanas and their importance.

NSS DAY PLEDGE

Date: 24 Sep 2021

On the occasion of NSS Day, NSS team organized a pledge for the event. Nearly 30 students and staff participated in the pledge which was followed by a prayer. Students pledged to never resort to violence and disputes regarding region, castes, race, or any other grievances.

Gandhi Jayanti Celebration

Date: 2nd October 2021

NSS team took the privilege to celebrate this auspicious occasion by sharing a video demonstrating the works of Mahatma Gandhi. A google form was circulated among the students asking their awareness about Mahatma Gandhi and to share their

experiences of reading about him. He was a great person to learn from and look up to.

Survey on avoiding use of plastic

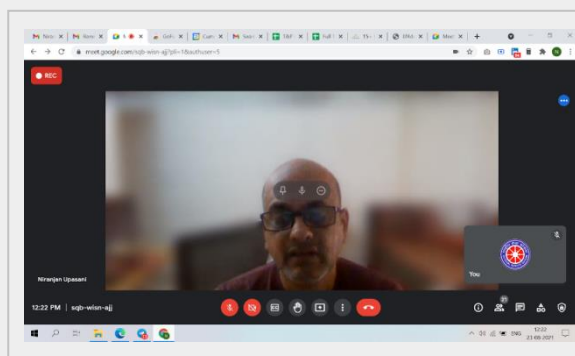
Date: 26 Oct 2021

NSS team circulated an email in our college regarding a survey on avoiding use of plastic in the form of a google form to be filled by the students. It was an activity with some questions like what measures can be taken to avoid plastic and how the students are avoiding it in daily life. Along with that there was an activity of uploading a picture of oneself, avoiding the use of plastic in the same google form.

GENDER SENSITIZATION WORKSHOP

Date: 25 Nov 2021

Gender Sensitization Workshop was conducted at SPPU's Environmental Science Department by NSS SPPU in coordination with MKSSS's Women Study and Research Centre, Pune. Two student representatives from each college and their Programme Officer were the participants in this workshop. Mrs. Anjali Aapte, a retired judge, was the chief guest. The workshop mainly focused on breaking norms regarding gender sensitization and bringing enthusiastic mindsets for a better tomorrow.



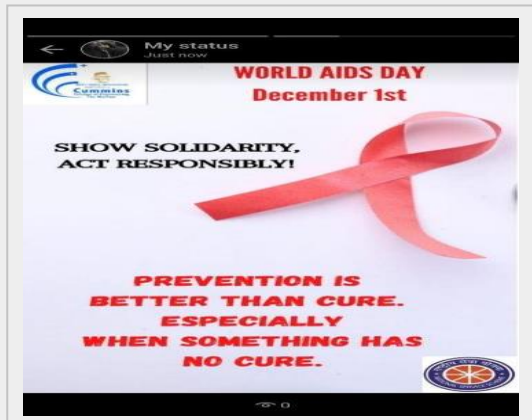
Virtual Workshop

Respected Chancellor Mr. Nitin .R. Karmalkar addressed the audience which brought wide smiles to the faces of students. Different games like handshakes, coordination tasks, and Bollywood tasks were conducted by MKSSS's Women Study and Research Centre team. Beautiful poems along with different slogans were performed by NSS volunteers. 'Respecting Diversity' was the motto of the workshop which successfully seemed to be achieved. Certificates and guidebooks for the workshop were distributed among participants.

World AIDS Day Report

Date: 1st Dec 2021

NSS CCEW circulated an email in our college regarding the awareness about HIV/AIDS and also made a poster asking everyone to put it up on their stories so that it could reach out to more people. They helped in creating awareness among people.



Poster for World Aids Day

Victory Day Celebration

Date: 16th December 2021

On the occasion of 50th Vijay divas also known as 'Victory Day', the students, NSS volunteers and faculty members celebrated the day to honour the fighters' sacrifices. A presentation was made and presented by NSS volunteers along with posters to spread awareness about this day; students also posted these posters on various social media platforms, to spread awareness among the people. Five NSS volunteers also attended an exhibition which had a bunch of informative posters displayed to appreciate the fighters who lost their lives for victory.



Free Dental Checkup

Surya Namaskar for Vitality

Date: 14th January 2022

NSS volunteers and students pledged together to make our campus carbon neutral by enhancing energy efficiency, deploying renewable energy, innovating the sources of energy like hydrogen, waste and others and offsetting CO2 through tree plantation.

Dental Check-up and Concession in Pathology Test

Date: 10th March 2022

On this occasion, NSS team took upon the task of awareness of self-health of women.

A camp was arranged that provided a free dental check-up and Pathology Tests at minimal charges in Association with Dr. Godbole Laboratory. About 50 students from the college took a dental check-up under Dr. Sneha Niwane, while 30-35 students had their blood tests like Hemogram, Serum Calcium, Random Blood Sugar and Thyroid Function Test. Staff support was seen by their active presence and appreciation at the camp.

NSS CCOEW team has continued to make our college proud by conducting such activities that are worth appreciating. In spite of not being able to deliver on-ground service, NSS members made sure that they never stopped achieving their goal by conducting appropriate virtual events. Their hard work and continued community service is truly commendable. We all are proud of you!

Faculty advisor:

Prof. Shridhar A. Kedar

Essay Writing Competition

Date: 14 April 2022

NSS CCEW conducted a competition, which was open for all students and staff, and one could submit the essay in English, Hindi, or Marathi language.

Dr. Prachi Mukherji, Dr. Deepak Watvisave and Prof. Suhas Pawar were the judges for this competition and evaluated the essays in order to come up to a winner. The prize distribution ceremony for the same was held on 26th April 2022 in Mechanical Auditorium where all the winners were felicitated. The winners were as follows-

NSS Volunteers from Mechanical Department:

Name	Year
Rucha Sangale	TY
Harshada Dhumal	TY
T. Sanathani	TY
Riddhi Pendse	SY
Komal Chourpagar	SY
Teertha Kulkarni	SY
Pournima Pawar	SY

Sr.No.	NAME	Participant Type	Department	Year	Rank
1	Saloni Raut	Student	Instrumentation	Second Year	1 st
2	Priyal Pramod Bansod	Student	E&TC	First Year	2 nd
3	Gayatri Girish Bhandare	Student	Mechanical	Second Year	2 nd
4	Ganesh Padalkar	Staff	E&TC	Second Year	3 rd

Winners



NSS TEAM

Sharvari Kulkarni, TY Mechanical

Did you know:

1. With a massive weight of 360 tonnes, Belaz 75710 is the world's largest dump truck with a hauling capacity of 450 tonnes. The giant dump truck consists of a pair of eight wheels, each capable of supporting 102 tonnes.

-Interesting Engineering

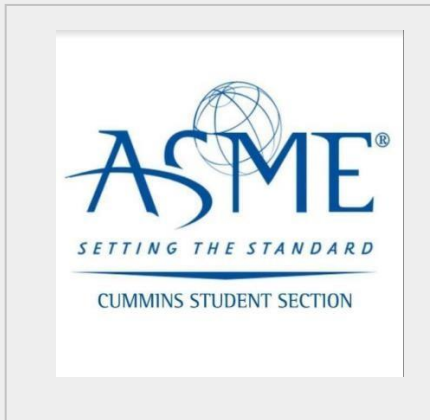
2. The 9.02 km-long Atal Tunnel on at an altitude of above 3,048 meters (10000 feet) in Rohtang, Himachal Pradesh is the world's highest-altitude tunnel, recognizable for its strategic significance also contains an escape tunnel in itself making it India's first tunnel to have this peculiar feature.

-The HINDU, India Defense news

3. Mechanical Engineering is one of the broadest Engineering fields, the oldest branch of Engineering and the only branch with an undead future!

4. The highest rpm attained by an engine is 12100 rpm, by the Murray T50 V12 engine.

ASME 2022



The student section of American Society of Mechanical Engineers or ASME, is active in Cummins College of Engineering since 2015.

WORLD STANDARDS DAY POSTER MAKING COMPETITION – NOVEMBER 28TH 2022



POSTER PRESENTATION COMPETITION

Register now!

Topics will be released on :
17th September 2021

Deadline for submission :
21st September 2021

Eligibility Criteria :
Open for all ASME members

Theme:
World Standards Day

ASME-CCOEW
ASME- Cummins Student Section
@asme_ccoew
ASME Cummins Student Section
asme@cumminscollege.in

Poster for Competition

On the occasion for World Standards Day A Poster Making Competition, with the theme of World Standards' Day was held by the ASME student section across colleges. The topics for the posters were:

- I. Industrial standards
- II. Engineering Innovations for World Peace

Maithili Deshpande from SY Mechanical won the first position in this competition. Her topic was based in ISO 22000 Food Safety & Management System.

Avanti Durale was the runner up with another exciting topic: "ISO 11161 - Safety of machinery – integrated manufacturing systems."

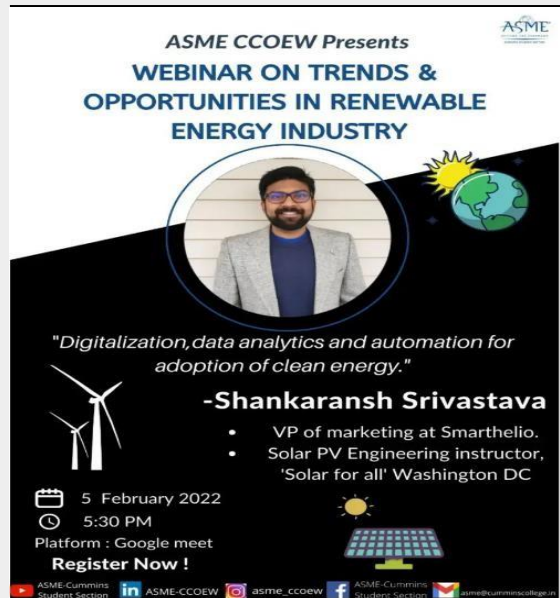
TECHFLIX 2020-21 – NOVEMBER 2021

The Techflix motto is "An engineer's guide to entertainment" and they've truly been helping us engineers to see the jovial side of the technicalities. Under this series, the team posts weekly stories about different books, web series, movies, videos etc. about topics like science fiction, engineering, technology, science etc. keeping their viewers awaiting the next post with gusto.



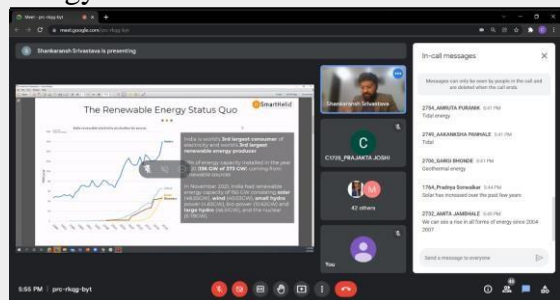
Poster for Techflix

WEBINAR ON SOLAR ENERGY – FEBRUARY 5TH 2022



Poster for Webinar

ASME Cummins held an online webinar with Mr. Shankaransh Shrivastava, Vice-President of Marketing at SmartHelio. SmartHelio is a start-up, based in Switzerland, whose primary view is the automation in the troubleshooting process of solar panels and the associated setup. Their aim is to make green energy reliable, affordable, and sustainable. Mr. Shankaransh Shrivastava spoke about the company's initiation, his transition from job to entrepreneurship, and how the global trends are paving the way for a green energy dominant world. He also discussed how the India has a geographical advantage in terms of solar power and the government's attempts to popularize solar energy.



Online Webinar

INTERNSHIP TALK 2.0 – 2ND MARCH 2022

The Internship Talk 2.0 was conducted in the Mechanical Building Auditorium. It was an interactive session for the TY and SY students, to understand the internship acquiring process through or without the college. Firstly, the Training and Placement Cell Head Dr. Amit Rajurkar also spoke to the TY and SY students about the different companies which hire interns from Cummins College, their expectations from the students and the academic criteria. The speakers were from Final Year, BTech and they shared their experiences on different types of internship opportunities available through the college and external options also. They gave tips on how to approach the officials, how to make maximum use of the time available to learn as much as possible. The following students from Final Year shared their experience: Rasika Kalokhe, Rutuja Sakhare, Kshitija Chavan, Radhika Joshi, Siddhi Kinage and Awanti Marathe.



Internship Talk by Seniors

INNOVATION 2022 – CRACK DOMAIN

ASME Cummins Section held the event called 'Crack Domain' in the college technical fest Innovation. It comprised of teams with two students each. A problem statement was given to students falling under the following categories:

- I. Automation
- II. Biomedical
- III. Disability
- IV. Drone technology
- V. Environment

Students were given 2.5 hours to research about this topic and provide a solution according to their branch of engineering and had to justify the solution to a panel of judges in an 8-minute presentation, followed by Q/A session.

The winners of Crack Domain are as follows:

1st Place – Anwasha Sen & Gayatri Jadhav

2nd Place – Akshata Vaditak & Sanskruti Gaikwad

3rd Place – Shivani Mishra & Vismaya Mulay

Special Mention – Janvi Shinde & Anvi Shah

Along with the events conducted in the college, the members individually have also been quite active in other activities hosted by ASME across the world.

Radhika Joshi represented the ASME Cummins student section for the 2nd consecutive time in the Student Regional team for the Asia-Pacific region. She was also a part of the Annual ASME Student.

Rasika Kalokhe became the consecutively third chairperson of the ASME Cummins Student section to be selected for the Annual ASME Student Leadership Training Conference.

A special shoutout to the team's faculty advisor, Professor Yashwant Munde, who has been a valuable support to the team. Cummins College only hopes that the ASME Cummins Student section continues to grow and bloom and bring more and more opportunities for the students to benefit from.

Prajakta Joshi, TY Mechanical

Facts:

1. Bagger 288 is one of the world's largest and heaviest moving machines which can move about 240,000 cubic meters of soil in a single day. The machine took ten years to complete, from design to assembling with a total cost of \$100 million.

-Interesting Engineering

2. According to Moore's Law, microchips double in power every 18 to 24 months.

-RELIABLE PLANT

ASHRAE Student Chapter



The American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) is a global professional association seeking to advance heating, ventilation, air conditioning, and refrigeration (HVAC&R) systems design and construction. Founded in 1894 it now has more than 50,000 members worldwide, composed of building services engineers, mechanical contractors, equipment manufacturers, and others concerned with the design and construction of HVAC&R systems in buildings. The society funds research projects, offers continuing education programs and develops and publishes technical standards to improve building services engineering, energy efficiency, indoor air quality, and sustainable development.

The MKSSS's Cummins College of Engineering, Pune - ASHRAE Student chapter was founded in January 2022. Currently, the chapter has 19 student members from the Mechanical Engineering Department. This year, 4 industrial visits, 2 quizzes and 1 guest lecture, by an industry expert have been conducted to date.

The industrial visits included trips to Someshwar Sugar Factory (Someshwar), Ziehl Abegg Plant (Chakan), Deenanath Mangeshkar Hospital (Kothrud), and Whirlpool Manufacturing Plant (Ranjangaon) in the months of March and April 2022.

A wide range of engineering applications ranging from boilers and ventilation systems to quality control principles on the shop floor were observed. It helped the students relate the theoretical knowledge taught in the classroom to their actual implementation in the engineering world.

A guest lecture was conducted by Mr. Mukund Ranade on "Vapor Absorption Machines" on 31st March. The session began with the introduction of what an absorption cycle is and moved on to cover the process, construction of the machines, substances used, efficiency, etc. The use of color-coded diagrams, graphs, images, and ample examples helped the students to grasp the working principle quickly.

This section gained enthusiastic and talented student members in the first year of its foundation in the college itself. In the month of May 2022, Ms. Rohini Sangle, from Third Year, won a prize of 300 dollars in the ASHRAE RAL (Region - at - Large) International Quiz after 3 rounds of competing with students from 35 countries around the globe. She also stood first in the HVAC&R Quiz Competition conducted by the ASHRAE Pune Chapter along with Ms. Shreya Vijith who stood third. Both of them received cash prizes of Rs 3000 and Rs 1500 respectively.

The first year of the ASHRAE Cummins Student Chapter was indeed a great success thanks to the overwhelming response from the students. Currently, the chapter has 19 student members from the Mechanical Engineering Department. It will continue to flourish under the guidance of faculty advisors Prof. Rujuta Agavekar and Prof.Parag Chaware. The chapter is looking forward to welcoming new members and conducting many more such interesting events in the upcoming academic sessions.

Faculty Advisors:
Prof. Parag Chaware
Prof. Rujuta Agavekar

Members

Name	Position	Year
Shreya Vijith	President	TY
Avanti Durale	Vice President	SY
Khushboo Agarwal	Secretary	TY
Rucha Shende	Treasurer	SY



Industrial Visit at Whirlpool

Shreya Vijith, TY Mechanical

Gandhaar 2022

After a break of almost 2 years, the most exciting event - The Annual Social Gathering of Cummins - GANDHAAR finally took place this year from 4th April to 7th April 2022. With all the students, the students were guided well by the faculty advisors Prof. Poonam Bhore and Prof. Radhika Bhagwat and the event was a huge success. Participation from the Final Year students was also high, who had specially kept their fingers crossed, to experience Gandhaar one last time, before they become alumnae of the college.



The theme this year was - “A Mythical Chronicle 2.0”, a continuation of what we had left in the year 2020, before the pandemic. The inauguration took place with an amazing performance of Dhol-Tasha Pathak, amplifying the energy of students with its beats. This year there were only intra-college events, due to restrictions on the gathering of large crowds. But this did

not dampen the spirits of the students. Our department’s theme was Norse Mythology. Different departments and teams competed against each other in various events which included group dance, group singing, painting, doodling, Trashion (fashion from trash), etc. making the atmosphere truly exciting and vibrant. Not to forget, the BE Fashion show, in which our seniors flaunted their stunning attires from different themes. BE Students of the Mechanical Department walked the ramp with the theme of “Modern day Princesses”.

The highlight of the function was the faculty performance, in which faculties of all departments showed their talent on stage. Students got to see the hidden talents of the professors. The students were also equally competent. On the final day, the winners of all the events were awarded.

The award ceremony also included the esteemed “Best Outgoing Student” award, which was bestowed to Eshwari Gudhate from our department.

The credits for the success of Gandhaar go to teachers, all members of the student panel and volunteers from various years who had been working enthusiastically for 2 months prior to the main event. Special thanks to department faculty advisor Prof. Vishwanath Mali.

From our department, the students who won different awards in various events include -

Position	Event	Year	Name
1st	Treasure Hunt	BTech	Radhika Joshi and Radhika Ganu
2nd	Rangoli	SY	Ruchita Kadam and Snehal Gholpe
3rd	Sketching	BTech	Samiksha Deshmukh
3rd	Group Singing	TY	Sanathani, Dnyaneshwari, Sakshi and Ritavi
Best Marathi Reciter	Recitation	BTech	Prajakta Nene

Shreya Vijith, TY Mechanical

Facts:

1. Engineers are involved in all aspects of interactive TV technology, from designing new cables, to creating new film emulsions, to engineering better sound quality. This technology allows viewers to select any program, film, or game from more than 500 channels. -**National Society of professional Engineers**

2. At over 2000 km long, the Great Barrier Reef is the largest living structure on earth.

3. During the race, the tires lose weight. Each tire loses 0.5 kg in weight due to wear. Racing tires are designed to last 90-120 km. At top speed, F1 tires rotate 50 times a second.

4. Khasi people in Meghalaya build living bridges from tree roots.

INNOVATION 2022

After a break of 1 year, The Annual Technical Fest of Cummins- INNOVATION took place this year on 8th April and 9th April 2022. The spirits were really high this time with all the students back on campus. The 2 days of the intra-college event was filled with action, adventure, thrill, and brainstorming.

The mechanical engineering department planned and successfully executed 2 events - The mechanical department's Traditional - Cylothion and a new event named - Crack Domain.

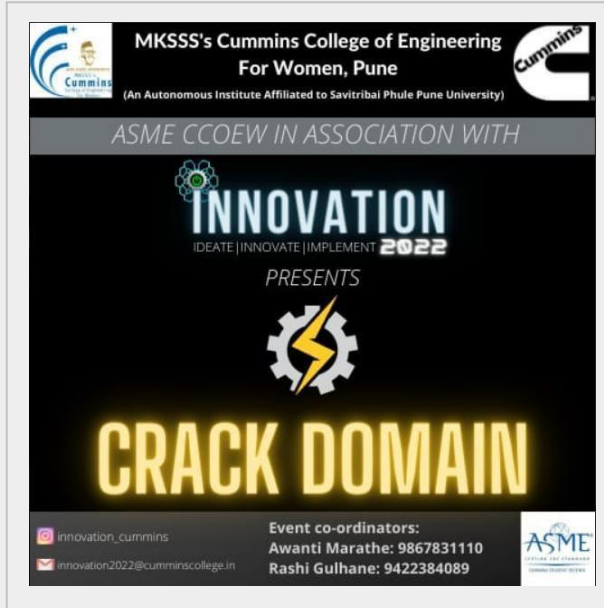
Cylothion tested the hands-on skills of the participants. Participants had to assemble a cycle and take 2 laps on the cycling track provided within 25 minutes with the given set of tools. The criteria for judging were accuracy in assembly and the overall time taken for the round. The second round involved more complex assemblies. This year's event incorporated slight changes compared to the previous ones by including special bonus points and a penalty for solving a puzzle making the event more challenging but fun.



Students assembling a cycle in Round 1

2 special rounds were held - one for the student panel and another for faculty. From renting the cycles to actually learning to dismantle and assemble back accurately after each round, a group of 20 volunteers was on their toes during the entire event. Though the event was just an intra-college one, it received a hefty number of registrations- 50 different teams from various branches and years of our college itself!!

Crack Domain is a newer version of the brainstorming event conducted by the ASME Student Section of Cummins - Inventrix. Teams had to choose one of the five domains (from Automation, Drone technology, Bio-medical, Disability, and Environment) and then a problem statement related to it was allotted. Participants were to ideate solutions to the problem statement by conducting extensive research on the topic. At the end of 2.5 hours, the teams presented their idea in front of judges in 7-8 minutes, followed by a question and answer session for 2-3 minutes. Students were evaluated based on technical content, presentation skills, and their understanding of the role that their branch plays in practical world applications. This year, the judges were industry experts Mr.Santosh Pathrudkar and Ms.Gargi Singh (from Cummins India. Ltd). Many creative ideas were presented by the teams and the judges had a tough time deciding. So much so, that a special mention prize of appreciation was given by Mechanical Faculty to a team for their creative effort, who had missed the third rank just by a very small margin!!



**Poster of the new event introduced
– Crack Domain**

On the last day, there was a prize distribution ceremony in which prizes were given to winners of various events of both Gandhaar and Innovation. For Innovation, cash prizes worth Rs.20,000 were distributed. Innovation gave the students and volunteers the opportunity to showcase their technical skills. All this was possible due to the collective efforts of students and teachers. Special thanks to faculty coordinator Prof. Avinash Shinde, Prof. Yashwant Munde, and the various panel members who take charge of the organizing part of the events and made it a grand success.

List of Winners:

Cyclathon

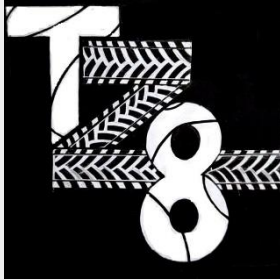
Position	Name	Prize
Winner	Radhika Joshi Rahee Kulkarni	Rs.5000
1st RunnerUp	Rishika Lalwani Aadnya Bhaip	Rs.3000
2nd RunnerUp	Dhanashree Jagtap Riddhi Kahar	Rs.2000

Crack Domain

Position	Name	Topic	Prize
1st Position	Anwasha Sen Gayatri Jadhav	Challenges and advances observed in drone simulators.	Rs.5000
2nd Position	Akshata Vaditake Sanskruiti Gaikwad	Deteriorating air quality is a growing environmental problem in Nairobi city. Motor vehicle traffic is one of the key sources of harmful emissions that pollute the city's air.	Rs.3000
3rd Position	Shivani Mishra Vismaya Mulay	On board diagnostics of automotive vehicle using automation techniques.	Rs.2000
Special Mention	Janvi Shinde Anvi Shah	Manufacturing industry has a potential to bring the advantages to human life, but it can cause the drawbacks to environmental too such as air, water, and land pollution. How to reduce the waste to zero effect and also improve the ecology to our environment.	

- **Shreya Vijith, TY Mechanical**

SAE BAJA Team Zenith 8.0



The Baja competition organized by the Society of Automotive Engineers or SAE, is an opportunity for mechanical engineers to delve into innovation and experience to build an All-Terrain Vehicle and race it against other teams of the country. This is a national level competition, and undergraduate college teams from across India, build ATVs designed to stand the test of the weather, the terrain and many more challenges posed every year. For many years, National Automotive Testing Tracks or NATRAX, has been hosting this event in Pithampur, Madhya Pradesh.

ABOUT TEAM ZENITH:

Team Zenith is the college's very own Baja team, and this is their 11th year of competing in Baja. It starts with 25 to 30 enthusiastic members, who want to work together to use their knowledge for a brand-new creation every year, and Cummins College has been a spectator of their success, year after year.

The team operates in 5 technical subsystems:

I. Chassis

This includes the rollcage, body panels, seatbelts, and other attributes contributing to framework

II. Vehicle Dynamics

Vehicle dynamics includes Suspensions and Steering, and these subsystems are responsible for the dynamic motion of the vehicle.

III. Powertrain

Powertrain deals with power and transmission and acceleration of the vehicle.

IV. Brakes

Brakes deals with the braking of the vehicle, and the wheel hubs

V. Data Acquisition

DAQ deals with validation of predicted and actual parameters with the help of electronic devices.

With these 5 subsystems, there are separate sections for

- I. Cost
- II. Sales
- III. Sponsorship
- IV. Manufacturing

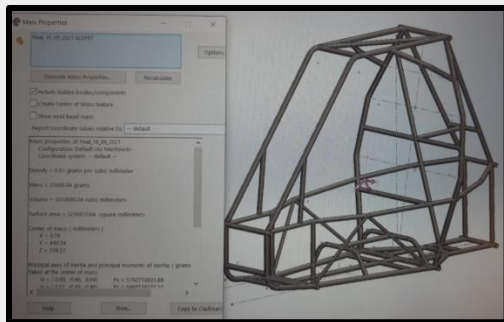
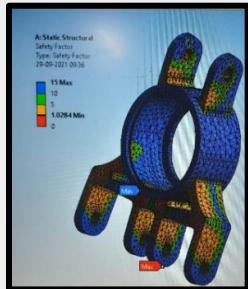
About the BAJA 2022 season:

This year the competition was conducted in 3 phases:

- I. Virtual statics
- II. Virtual Dynamics
- III. Physical Dynamics

The first phase or Virtual Statics consisted of events like cost, sales, manufacturing, design etc., wherein the teams prepared a for a

virtual round about their initial vehicle plan and presented to a panel of judges. The designs of the vehicle were done on Solidworks, Catia, Altair Hyperworks, Ansys, MATLAB, Adams softwares. Different types of simulations were performed for material and design selection. Team Zenith was selected for the CAE and Design finals in the virtuals.



Simulations in different softwares

In 2021, due to the Covid pandemic, the Baja event was conducted virtually on the IPG Carmaker software. This year, in 2022, it was included as an event. Teams had to race their respective virtual models on virtual tracks provided. The different fixed parameters of the vehicle which govern motion of the vehicle were fixed initially, and the vehicle had to be run on different types of tracks like acceleration, suspension, maneuverability etc.



Virtual Event on IPG Carmaker Software

Between the 2nd and 3rd phase, the manufacturing of the vehicle was completed, and testing was carried out to analyse the real time performance of the vehicle. This is necessary for the driver to be comfortable with the vehicle, and to analyse the different failure possibilities which may occur. The number of required spares, assembly time, assembly ease etc. can also be predicted.



Vehicle Testing

The third phase of Baja was held in Pithampur, Indore. The vehicle was shipped to Indore, and we saw the Baja event unfold

in its full glory after 2 years. This event was conducted across 4 days:

I. Day 0 – Inauguration

II. Day 1 – Technical Inspection and Virtual Finals

The team cleared the Technical Inspection on the first day itself. Out of the 80 teams present on-site, only 39 teams cleared the TI. The team also had their CAE finals presentation and earned an AIR 3 rank.

III. Day 2 - Brake test and Virtuals Finals

The brake test is part of the dynamic TI, and this too was cleared in the second attempt. Design finals were also held, and the team secured AIR 4.

Day 3 – Manuverability and Suspension & Traction

This was the first time, when the team successfully completed both attempts of the S&T track, without incurring any failure. It was also the hardest S&T track ever with 11 feet drop and extremely high gradeability. Manuverability was also completed in two attempts.

IV. Day 4 – Endurance race and Valedictory

The most awaited and Grand Endurance Race involves the vehicle completing a 2.5 km track in 4 hours, with pit stops only for refuelling of repairs. It is the ultimate test of the driver and the vehicle with rocks, logs, swampy areas, steep gradients etc. and the team finished this track with 14 laps and stood 12th in the grid after the race



Endurance race

This year, Team Zenith made its first ever 4-wheel drive vehicle, which was an exciting new enterprise with benefits but also, brought with it a new set of challenges and limitations. This includes many sleepless nights, working long hours in the college and so many more things which cannot be governed. However, the efforts taken by the team are extremely creditable and they have made the college proud with what they have achieved. Today, Team Zenith is no longer recognized as an all-women's team, but they are recognized as a team of capable future engineers, with great potential, and they stand tall, as tough competitors to look out for.

This year the team stood **AIR 7**, with the following ranks:

Statics-

- CAE: AIR 3
- Design: AIR 4
- 4WD Design: AIR 5
- Go Green: AIR 9
- Manufacturing: AIR 17
- Cost: AIR 49
- Sales: AIR 65

Overall Statics: AIR 8

Dynamics-

- Sledge Pull: AIR 1
 - Acceleration: AIR 2
 - Suspension and Traction: AIR 7
 - Endurance/Durability: AIR 12
 - Manuverability: AIR 15
- Overall Dynamics: AIR 12**

TEAM MEMBERS:

Sr.No.	Name	Engineering Branch	Year	Position
1	Rajeshwari Vaidya	Mechanical	Final Year	Captain
2	Tanishka Damle	Mechanical	Final Year	Finance Head
3	Unnati Chambare	Mechanical	Final Year	Manufacturing Head
4	Disha Shinde	Mechanical	Final Year	IPG Head
5	Vaishnavi Raut	Mechanical	Final Year	Sponsorship Head
6	Aditi Khaire	Mechanical	Third Year	Vice Captain
7	Rugweda Nalawade	Mechanical	Third Year	Suspension Head
8	Neha Kolhe	Mechanical	Third Year	Steering Head
9	Adishri Desai	Mechanical	Third Year	Vehicle Dynamics
10	Siddhi Khambe	Mechanical	Third Year	Vehicle Dynamics
11	Yashaswi Gadekar	Mechanical	Third Year	Transmission
12	Shruti Choudhary	Mechanical	Third Year	Transmission
13	Sharvari Kadam	Mechanical	Third Year	Transmission
14	Samruddhi Ambavale	Mechanical	Third Year	Treasurer, Brakes Head, Primary Driver
15	Chaitrali Kelkar	Mechanical	Third Year	Secondary Driver, Brakes
16	Anusha Patil	Mechanical	Third Year	Rollcage Head
17	Pragalbha Kurane	Mechanical	Third Year	Rollcage
18	Sai Phate	Mechanical	Second Year	Vehicle Dynamics
18	Avani Pande	Mechanical	Second Year	Vehicle Dynamics
19	Aditi Durge	Mechanical	Second Year	Vehicle Dynamics
20	Amita Jambhale	Mechanical	Second Year	Transmission
21	Akanksha Chodankar	Mechanical	Second Year	Transmission
22	Aabha Kulkarni	Mechanical	Second Year	Brakes
23	Vaikhari Kharul	Mechanical	Second Year	Brakes

24	Rutuja Bobade	Mechanical	Second Year	Rollcage
25	Sayali Chakre	Mechanical	Second Year	Rollcage
26	Neha Deodhar	E&TC	Third Year	Data Acquisition
27	Shivani Khilari	E&TC	Third Year	Data Acquisition
28	Gargi Jain	E&TC	Third Year	Data Acquisition

Sai Phate, SY Mechanical

Facts:

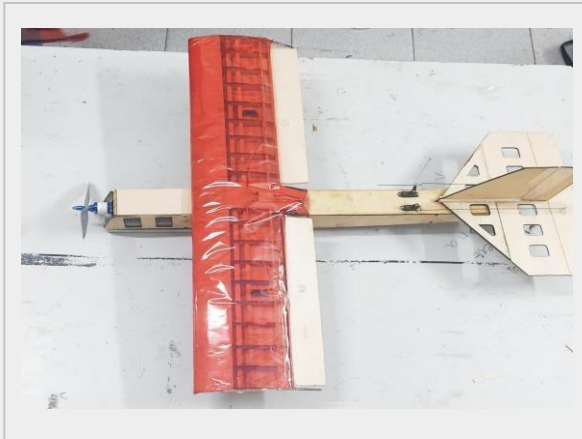
1.NASA's Johnson Space Center designed a shape-changing submersible robot in collaboration with Nauticus Robotics Inc providing a lot of convenience to the maritime industry. The robotic diver reduces shipping costs and can also performs underwater equipment inspection and maintenance.

2.Scientists built a magnet in China that is a million times stronger than Earth's magnetic core (45.22 Tesla)

3.Researchers at Stanford University and NVIDIA teamed up to tackle one of the biggest challenges facing virtual reality (VR) experiences, the bulky headsets. In a new research paper, the team showed how they could be reduced down to a thickness of a pair of regular-looking glasses using 2.5 mm "pancake lenses"

4.Wisk Aero will release its 6th generation e-VTOL model, an autonomous battery powered flight in 2023.

They began with a small prototype model made of correx sheets to learn the basics of aircraft modelling and moved on to the more advanced balsa wood models with multiple iterations. There were at least 6 different prototypes created with modifications made to each model to increase the payload fraction and improve aerodynamic stability.



Balsa Wood Model

Various electronic configurations were tested to provide maximum thrust capacity without affecting the weight of the model. Multiple innovations including a new and improved wing configuration and aerofoils best suiting the application were used.



SAE Workshop in Chennai

Some team members attended the SAE workshop in Chennai where they learned various fabrication techniques on RC model

planes and performed a series of flight tests in difficult weather conditions. The whole team participated in their online lecture series held over a series of two weekends.

Team Bharadwaj believes in a consistent learning process which is why they participate in various competitions along with keeping an eye on the main goal. They achieved a AIR 2 in Udaan Drone Ideation Competition 2022 held by MITAOE.

Udaan - Drone Ideation Competition
23rd March 2022

After the presentation round
We have compiled evaluation done by 2 judges and final marks of the competition are as follows:

Evaluation	Max Marks	Team Sanjeevani	Team Bharadwaj	Samaritan Aerospace	Team Ventus	Droners	Started 1
Round 1 and 2	200	122	144	156	Not Present	85	Not Present

Final Results are:

Winners: Samaritan Aerospace

1st Runner Up: Team Bharadwaj

Udaan drone ideation competition

Team Bharadwaj will be participating in the SAE ADC 2022 competition in Chennai, India in July and hope to demonstrate that there is nothing a group of smart, talented individuals who share a common passion for aeromodelling cannot achieve. The past years have shown some stellar results and Team Bharadwaj continues to aim ever higher.

Sr. No.	Name	Engineering Branch	Year	Position
1	Kalyani Mahajan	Instrumentation	TY	Captain & Avionics
2	Pranjal Patil	Mechanical	TY	Vice-Captain, Treasurer, Design
3	Shivani Pandit	Mechanical	TY	Design & PR
4	Saakshi Cholkar	Mechanical	TY	Design & Social Media
5	Akanksha Salunkhe	E&TC	TY	Avionics & Co-Treasurer
6	Pranali Mane	E&TC	TY	Project Manager & Avionics
7	Anwasha Sen	Instrumentation	SY	Wing Design
8	Krishna Chavan	Mechanical	SY	Wing Design
9	Gayatri Jadhav	Mechanical	SY	Avionics
10	Anuja Patil	Mechanical	TY	Fuselage Design
11	Divyanshi Alok	Mechanical	SY	Wing Design
12	Shruti Chavan	Mechanical	SY	Fuselage Design
13	Mitali Diwekar	Mechanical	SY	Stabilizer Design
14	Sae Gokhale	Instrumentation	SY	Social Media
15	Shivani Patil	E&TC	SY	Avionics
16	Suman Pidwani	E&TC	SY	Avionics
17	Samiksha Tawde	Computer	SY	Sponsorship



Team Bharadwaj

-Shivani Pandit, TY Mechanical

Best Outgoing Student



Name of the student: Eshwari Gudhate

1. Congratulations on your great achievement! How do you feel having won the Best Outgoing Student Award for the academic year 2021-22?

Ans: Thank you. I am very happy to receive this prestigious award. Except me almost my entire class knew earlier that I had got selected for this award but I was clueless until I received an email from the college. Now I feel responsible and that reminds me of the great saying “Great Power comes with great responsibilities.”

2. What was your priority when you were an Engineering Student at Cummins College?

Ans: When I first entered the gates of this college, I did not have anything specific in my mind. I was open to all the opportunities that came along my way. I think this helped me not only to develop my resume, but my personality as a whole.

3. What is the biggest lesson that you have learnt in your time here?

Ans: I learnt to live in the present moment. Grab the opportunities that come along your way and live college life to the fullest.

4. What tips would you like to share to your juniors?

Ans: I would like to tell my juniors to keep yourselves busy and acquainted with tasks that will help you to grow and improve. Try to gain the satisfaction that comes from doing little things well. Enjoy the four years, work smartly and be clear with your choices.

5. How did you balance extra-curricular activities with academics?

Ans: Extra-curricular activities are those which we love to do and help us to improve our focus and self-confidence. I never felt like I was wasting my time doing such activities. There is no need to take out extra time. You always need to prioritize your tasks and spare some time for your area of interest other than the curriculum.

6. What factors do you think made you win this award?

Ans: I always maintained my CGPA above 9 throughout my four years. I am a volleyball player and I am part of our college team. I got well appreciated for my performance in the seminar. Moreover, I explored many internship opportunities which included research internships. These helped me develop my skills beyond my limits. So, I

think all these factors contributed to me getting selected for this award.

7. As you mentioned earlier that you have done research internship as well as a company-based internship, so will you tell us a bit more about it? How was your experience?

Ans: I did my internship in a “Special Purpose Machine” based company. I had got the internship of campus. It was during the lockdown but I got the opportunity to work there in of line mode.

8. In which company have you got your placement? How did your internship experience help you during the placement interview process?

Ans: I got placed at Mercedes-Benz. It was an on-campus selection process which started in the month of August. During my two months of internship, the concepts on which I got a practical knowhow boosted my confidence during the placement interview.

9. What are your plans for the future?

Ans: Mercedes-Benz being a German based MNC, I am planning to learn German language which would help me in my future

career. I also plan to do a masters after gaining some work experience.

10.As you leave the gates of this institution, what are you going to miss the most and least?

Ans: I think the cultural fest “Gandhaar” and technical fest “Innovation” will be the most missed by me. Of Course, I will miss the late-night assignment completions, submissions and every other element which make these four years memorable. As for missing the least, it would of course be the early morning classes.

11. If you could, what is the one thing that you would change in the education system?

Ans: As everyone knows, the Indian Education system is very exam-centric and sometimes students lose their interest in actually learning the concept. So, I think that should really change if we want to bring about a revolution. But I think, the new education policy which our honourable prime minister has introduced will bring that change creating new hopes for the coming generation.

**Shreya Vijith, TY Mechanical
Prajakta Joshi, TY Mechanical**

Alumnae Interview



**Name of the Alumnae: Meera Garud
(2013 pass out)**

1. How was your journey after Graduation until now (from Cummins to IISc to Cornell)?

Answer: I feel it was not planned, but it turned out very good. When I joined Cummins, I did not have any plans for masters etc., but here I am now in Cornell University for a Postdoctoral. Cummins being a women's college, I feel we are exposed to everything as compared to a co-education college, especially in the Mechanical engineering branch. For my final year project, I remember Chandekar Sir and Dixit Sir had been my advisors. The faculty of Cummins motivated me to go for higher education at an eminent place. I had taken up a direct PhD program after my B.Tech (no separate masters). The faculty, especially my advisor at IISc also motivated me. When the people around you are passionate about the work they do, you also develop interest in the field up to a point

when even you are passionate about the same. This is what happened to me.

2. What was your major subject for Ph.D.? What were the factors that motivated you to choose this field?

Answer: My PhD was in the Nanoscience department in MEMS (Micro Electrical Mechanical Systems). Nanoscience is an interdisciplinary subject. During the interview for the PhD admission, I was coincidentally interviewed by Prof. Rudra Pratap, who was the HOD of Nanoscience department of IISc Bengaluru and who later was also my advisor for PhD. I worked on MEMS Speakers, which is a very interesting topic. More than what I want to do, I knew what I didn't want to do. So, excluding those, I explored other options. At present, there are so many career options available. For example, I did not like History and Biology in school days, but now during my research many projects were related to Biology as everything is interdisciplinary and over the period, I learnt that some things are important and I gradually developed interest in them.

3. According to you, which is the best part of your research career that you are proud of?

Answer: I would not call a particular incident or piece of work of which I am proud. However, I am proud of myself when my professors or advisors feel that I have done something good. This makes me happy. There are many intelligent and well accomplished people around me, but starting from where I was to where I am today makes me feel happy.

4. Did you face any failures during the journey and how did you overcome that?

Answer: I would not say challenges. It is always difficult for anyone, who changes institutes, to get used to the new place. Combined with new stuff to study and learn it sometimes did become overwhelming, but that is a part of everyone's academic career. I took help from my peers and faculty who were also kind enough to help me and after the initial 1-2 years I became more confident with my work. In fact, I would say I was privileged enough to have everything - books, people to help with academics and no financial strains or distractions. When I look at a few of my colleagues, who had come from different and less privileged backgrounds which made it more difficult for them to achieve what they wanted, I feel I was lucky in this aspect.

5. What do you feel is the difference between engineering education and research in India and abroad?

Answer: To be honest, coming to Cornell from IISC, I did not feel out of place. The Nanoscience department was up to date and we got so much exposure related to various aspects of the field, for instance fabrication facilities, that coming here things have become easy for me. I did not feel at any point that I should have come to the USA before, because back in India, the institutes had so much to offer to students who had genuine eagerness to learn.

6. How was your family supported while pursuing PhD? Is there any family background behind it?

Answer: Yes, my father is a PhD holder. He inspired me to choose this career path. My mother is a homemaker. Both of them trust me a lot and always support me in whatever decisions I make right from the past till present. However, my mother is still concerned about this fact and always

reminds me to get married soon. (laughs).

7. Given a choice, would you like to serve the MKSSS as faculty in some challenging senior role?

Answer: I have no plans yet to become a professor and I visualize myself joining the industry. At the moment, the Industrial revolution is taking place which is reshaping the foundation of many industries. Many industries are boosting their R&Ds so well that there is an immense demand for it. Nevertheless, I am not going to restrict myself to only one career option. If possible, in future I may rethink and if my personal plans align with this, there is a possibility. I also want to serve my college in whatever possible ways that I can and give back to the society and roots, because of which I am here today.

8. 10 years down the lane, where do you see yourself? What challenges do you foresee in the future? (Which can make you think of alternate career directions?)

Answer: I plan to be back in India. With the knowledge that I have gathered I aspire to do something to motivate and do something for others, to give back to the community. It may be academic or just a general perspective in life, to any profession, but if I am able to contribute to someone's journey, it would be an achievement for me. I plan to go into the industry after my post-doc but I want to be in the research field itself, to find new things. I remember an advice from Chandekar Sir that at some point we need to limit our options.

If I want to settle in the career aspect of my life, I feel I should limit my options to one single topic. So, if my job is in the research field, I think it would be the best option possible.

9. How different is this Meera Garud, when compared to the student Meera Garud at Cummins?

Answer: Yes, I can say that this Meera Garud

is different. I have gained self-confidence over the span of time. Now that I have got a global exposure my horizon has broadened and I have come out of my shell. When we are in our hometown, living with our family, we are very much protected but when we cross the geographical boundaries that's when we become culturally intelligent. It helps to increase our network too. So, not just me but every other student can relate to what I said.

10. What message would you give the students who will soon be working in the

industries and to those who aspire to pursue a Ph.D.?

Answer: I would like to them that being a PhD holder has a lot of scope in industries these days and it is not just limits to being in the academic background (as teaching faculty). Every industry is adopting a 'learn & grow' culture within it and it is helping PhD students to flourish. To do a doctorate needs a lot of patience and dedication but the end results are always fruitful. Stay focused and explore all the opportunities that come along your way. The Cummins College itself provides its students with a lot of opportunities. Keep a look out for these opportunities, grab them and make the best out of your student day

Shreya Vijith, TY Mechanical
Prajakta Joshi, TY Mechanical

Technical Facts:

1. The New Materials that are in demand in building a sustainable E-Mobility are Neodymium, Praseodymium and Dysprosium - the rare earth metals. -

SAEIndia Magazine

2. The phasedown of Hydrofluorocarbon refrigerants leading to global warming is getting a huge response from innovative low-GWP refrigerants. - **ASHRAE**

India

PURDUE INTERVIEW

Cummins Fellowship Program - Purdue University

(Recipient: Tanvi Arey & Rahee Kulkarni)

1.Kudos to your achievement Rahee and Tanvi! For any engineering student, these four years are the remarkable years of his/her life. What would you both like to say about your journey at Cummins College?

Ans: Tanvi: For me, these four years were unforgettable and an overwhelming journey. As the pandemic hit us, two years went online and since then everything was like a roller coaster ride.

Rahee: The pandemic surely made things difficult, but it was an indelible journey for me too. The experience otherwise was amazing and definitely emotional!

2.Studying abroad is always a fascination for students like you and me and that too from Purdue University is like an icing on the cake. How excited are you both to sail your voyage in Purdue University?

Ans: Tanvi & Rahee: We are truly excited. We will always be grateful to our college for this outstanding opportunity. But we feel that going abroad comes with a wide range of emotions as we have to be in a different place, with a new culture, far from our dear family and friends. At the same time, we need to be responsible as well.

3.Before applying for the Cummins Fellowship program, what had you decided earlier as a future career progression plan?

Ans: Tanvi: I was looking for placements and a great job description which would match my score and ranking.

Rahee: Pursuing higher education was my goal, but I had also applied for the placement process of our college and prepared for a role that fits my interests.

4.Which all exams or preparations do you need to do for this program?

Ans: Tanvi & Rahee: There are only two exams, GRE and TOEFL and IELTS is an option for TOEFL. GRE is a test which has questions based on quantitative aptitude and English. TOEFL is mainly to check our English proficiency.

5.How did you start your preparation for those exams? Did you take any coaching?

Ans: Tanvi: I hadn't taken any coaching for these exams. I started my preparation during my internship period itself. First, I appeared for the GRE and then the TOEFL exam.

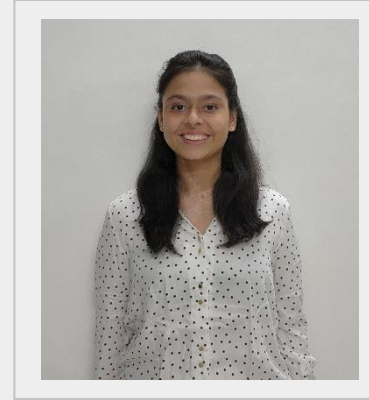
Rahee: Even I didn't take any coaching. It was totally self-study. As far as I remember, there was a gap of one month between both exams during which I appeared for the GRE first and then for TOEFL.

6.What challenges ahead do you foresee while pursuing a degree at Purdue University?

Ans: Tanvi & Rahee: The only significant challenge that we both could observe is the change in education pattern. In India, we are so much into Textbook learning, whereas, there it totally depends on how you can practically apply your knowledge that you gain. Also, as we mentioned earlier cultural and climatic differences will remain but as the time passes, we will get habituated with it.



Tanvi Arey



Rahee Kulkarni

7.Can you please elaborate how the Cummins fellowship program works?

Ans: Tanvi & Rahee: The Cummins Fellowship Program consists of three rounds. In the first round, interviews are conducted by all department heads of our college and our Principal ma'am where GRE score is a factor. In the second round, interviews are taken by the Cummins India Industry personnel. In the last round, we are asked to submit Letters of Recommendation (LOR) and other important documents. This is just the end of the application procedure. Further the final selection is done by the University and Cummins India.

8.What subjects or core curriculum learning do you intend to do at Purdue?

Ans: Tanvi: I have chosen my masters in Mechanical Engineering with the core subject as Design. Besides this, we are allowed to choose other subjects parallel to our liking and the research which we intend to do.

Rahee: I have also chosen my Masters in Mechanical Engineering with specialization in Materials. Other subjects should be in accordance with our core subject and liking. The next step involves checking if we have covered all the pre-requisite subjects which are needed to proceed with our research study.

9.Does this fellowship program come with some monetary benefits associated with it which helps or supports your dream?

Ans: Tanvi & Rahee: It is a completely sponsored program. The word fellowship itself makes us know that it offers us 100% scholarship.

10.After completing the Purdue program, which career direction would you like to choose?

Ans: Tanvi: I think 2 years is a big span to change our decisions so I haven't decided yet. There might be some career paths which are unknown to me right now and will get open as I make progress over there.

Rahee: I don't have much clarity about this right now. I plan to go there and explore other options so as to know my inclination and other future prospects that come along the way.

11.In this entire journey; What was the most valuable advice you got during your preparation?

Ans: Tanvi: It is a rigorous process and I think the most valuable advice that I have got is to keep a lot of patience and to keep a positive attitude till the end.

Rahee: The process really takes a toll on your mental health (laughs). One

important piece of advice that I received was to put constant efforts for every opportunity that comes in front of me and patiently trusting the process.

12.Lastly, what advice would you like to give to your juniors?

Ans: Tanvi: I would like to suggest to my juniors to not to give up and even though any process is tiresome, multitasking has to be done. Give your interest a priority always.

Enjoy your college life to the fullest. These years won't come back.

Rahee: Put your 100% efforts in whatever you do. Be optimistic and have a lot of patience throughout your journey, you will surely succeed in your life, but also enjoy these four years with friends. Participate in cultural and technical events.

Prajakta Joshi, TY Mechanical

Technical Facts:

1. Quantum computing will potentially give us computing power that is a trillion times more powerful than what we get from today's advanced supercomputers. - **Forbes India.**

2. Today's Military uses high tech weaponry that are marvels of Engineering such as UAV, Precision guided Munitions, and robots that may be soon taking on the battlefield. - **ASME**

3. The St. Louis Gateway Arch–The Millau Viaduct, which spans across the valley of the River Tarn near Millau in southern France is the tallest cable-stayed road bridge in the world. It is the 12th highest bridge in the world at 890 feet high below road deck (The Gateway Arch is 630 feet tall) and spans 8,071 feet (1 ½ miles). -**Ivey Engineering Inc.**

RESULT ANALYSIS: A.Y. 2020-21

Second Year Mechanical Engineering (Top 10)

Rank	Name	CGPA
1	KOSHE SAKSHI JITENDRA	9.59
2	GUJARATHI ANUSHRI NITIN	9.47
3	SHAH ANVI PARESH	9.38
4	SHINDE JANVI BABASAHEB	9.35
5	KHANNA SIMRAN DINESH	9.34
6	PANDIT SHIVANI ASHISH	9.29
7	KULKARNI SHARVARI MILIND	9.16
7	SANGLE ROHINI GAHININATH	9.16
8	JOSHI PRAJAKTA ABHAY	9.10
9	VADITAKE AKSHATA SUKHADEO	9.07
10	CHAUDHARI MRUDUL PRAMOD	9.04

Third Year Mechanical Engineering (Top 10)

Rank	Name	CGPA
1	DEORE MANALI SANJAY	9.33
2	KINAGE SIDDHI PRAKASH	9.19
3	BHURKE SIMRAN VIVEK	8.92
4	GUDHATE ESHWARI RAVINDRA	8.82
5	RASAL SALONEE SUNIL	8.74
6	BHOLE DEVASHREE VIJAY	8.65
7	BURANDE PRERNA AVINASH	8.54
8	AREY TANVI BIPIN	8.50
9	KULKARNI RAHEE VAIBHAV	8.45
10	KULKARNI VAISHNAVI SANJAY	8.44

Final Year Mechanical Engineering (Top 10)

Rank	Name	CGPA
1	JOSHI SIDDHI UMESH	9.50
2	SABNIS NAMITA JAYANT	9.26
3	BHIDE NEERAJA ANAND	9.12
4	SHETE RUTUJA SATISH	9.07
5	KULKARNI DEVIKA SANJAY	9.03
6	KALE SHRADDHA NARENDRA	8.96
7	SHINDE KETKI NISHIT	8.95
8	JOGLEKAR MRUNAL UMESH	8.92
9	MHASAKAR GARGI ABHIJIT	8.84
10	PATIL PRIYANKA VINOD	8.83

SUBJECT TOPPERS

SEMESTER 1 SECOND YEAR

SR.NO	STUDENT NAME	SUBJECT NAME	MARKS
1	SHRUTIKA BHAGWAT	Engineering Thermodynamics	92
2	VIJITH SHREYA	Materials Technology-I	98
3	ADITI KHAIRE	Manufacturing Process-I	96
4	SAMRUDDHI AMBAVALE	Electrical & Electronics Engineering	97
5	SAKSHI KOSHE	Principles of Economics and Finance	96

THIRD YEAR

SR.NO	STUDENT NAME	SUBJECT NAME	MARKS
1	MRUNMAYI PATWARDHAN	Computer Oriented Numerical Methods	97
2	SALONEE RASAL		97
3	MANALI DEORE	Analysis and Synthesis of Mechanisms	91
4	MANALI DEORE	Heat Transfer	91
5	SIDDHI KINAGE	Automation & Control Engineering	85
6	SALONEE RASAL		85

FOURTH YEAR

SR.NO	STUDENT NAME	SUBJECT NAME	MARKS
1	MONALI BENDALE	CAD/CAM & Automation	93
2	SAMRUDDHI PATIL	Transmission System Design	91
3	PRIYANKA PATIL		91
4	NEERAJA BHIDE	Economics for Engineers	88
5	ADITI SHINDE	Advanced Entrepreneurship Development	92
6	NISHA SHELKANDE		92
7	ANAGHA GHUMATKAR		92
8	NEHA DESHMUKH		92

SUBJECT TOPPERS

SEMESTER 2 SECOND YEAR

SR.NO	STUDENT NAME	SUBJECT NAME	MARKS
1	SAMRUDDHI AMBAVALE	Engineering Mathematics-III	96
2	MRUDUL CHAUDHARI	Strength of Material	98
3	ADITI KHAIRE	Fluid Mechanics	96
4	SANSKRUTI GAIKWAD	Manufacturing Process-II	96
5	SHRUTIKA BHAGWAT	Rigid Body Dynamics	45
6	MRUDUL CHAUDHARI		45
7	ANUSHRI GUJARATHI		45
8	SHIVANI PANDIT		45
9	ADITI KHAIRE	Materials Technology-II	43

THIRD YEAR

SR.NO	STUDENT NAME	SUBJECT NAME	MARKS
1	MANALI DEORE	Applied Thermodynamics	99
2	SIMRAN BHURKE	Machine Design	89
3	MANALI DEORE	Metrology & Quality Control	91
4	PRAJAKTA NENE	Computational Fluid Dynamics	88
5	RAHEE KULKARNI	Mechanics of Composite Materials	88
	PRAJAKTA MAHAJAN		88
6	SIDDHI KINAGE	Jig & Fixture Design	93

FOURTH YEAR

SR.NO	STUDENT NAME	SUBJECT NAME	MARKS
1	GARGI MHASAKAR	Turbo Machines	91
2	SAKSHI SALVI	Mechanical Vibration	99
	KAJAL BOKDE		99
3	AISHWARYA SHEWALE	Advanced Manufacturing Processes	92
4	RUTUJA SHETE	Operations Research	97
	SHRADDHA KARANDIKAR		97
5	SHWETA MORE	Renewable Energy Resources	86
6	RUCHA PATIL	E- Business	89

Placement Record

Company	Student Name	CTC
ExxonMobil	Tanvi Bipin Arey	11.41
	Rahee Vaibhav Kulkarni	11.41
	Rutuja Sakhare	11.41
Siemens PLM	Gayatri Bhagat	11
	Prerna Burande	11
Siemens PLM	Aakruti Ghatole	11
Fractal Analytics	Siddhi Kinage	10.5
Caterpillar	Salonee Sunil Rasal	10.35
	Awanti Uday Marathe	10.35
	Mrunmayi Tushar Patwardhan	10.35
	Apeksha Vyankat Motade	10.35
	Mugdha Patil	10.35
Ather Energy	Prajakta Mahajan	10
	Unnati Chambare	10
Boeing	Ovi Dinesh Doke	9.16
	Nidhi Wadhwa	9.16
Bridgestone	Vaishnavi Sanjay Kulkarni	9
	Pooja Janardhan Kokate	9
	Prajakta B. Nene	9
Mercedes Benz	Khushboo Sanjay Kaul	8
	Gargi Sachin Salvekar	8
	Swapnali Appasaheb Madane	8
Mercedes Benz	Rujula Hingmire	8
	Eshwari Ravindra Gudhate	8
	Anjani Dandgawal	8
	Shruti Sethuramalingam	8
	Simran Vivek Bhurke	8
	Radhika Nitin Joshi	8
Deloitte	Tanishka Shekhar Damle	7.6
Hero Motocorp	Rajeshwari Vaidya	7.5
	Manali Deore	7.5
	Sakshi Joshi	7.5
	Aishwarya Sonawande	7.5
	Kalyani Dehsmukh	7.5
PWC	Vaishnavi Vinod Shrigadi	7

	Neha Nitin Patil	7
	Rahee Mahendrasingh Raghuwanshi	7
	Rutuja Balaji Gawali	7
	Siddhi Shantaram Pujari	7
Eaton	Disha Shinde	6.8
	Vaishnavi Raut	6.8
	Shraddha Manore	6.8
	Harshada Memane	6.8
	Shivani Sukale	6.8
Anand Group	Damini Narkhede	6.5
	Krushna Vasant Balsaraf	6.5
	Rutuja Shete	6.5
JCB	Shagorika Patil	6.5
MG Motors	Samiksha Deshmukh	6
Tata electronics	Aishwarya Umap	6
Kennametal	Pranali Pawar	5.74
Ford Motors	Renuka Bangar	5.7
Suez Water	Eera Pendharkar	5.63
Ingersollrand	Radhika Ganu	5.25
Kohler	Maithilee Laturkar	5
Atomberg	Saylee Thorkar	5
	Vaishnavi Sarwade	5
Linde	Mansi Navghade	5
Dematic	Rasika Rahul Chavan	5
Faurecia	kshitija Chavan	4.5
AN/MS	Vishakha Kamble	4.5
KPIT	Harshada Bagad	4
TOX	Chaitri Ambekar	3.67
	Ahilya Bondre	3.67
Boeing	Pallavi Telange	

MECHANICAL ENGG. STUDENTS IN STUDENT PANEL

Name	Year	Position
Tanvi Arey	B.Tech	Technical Secretary
Mrunmayi Patwardhan	B.Tech	English Editor
Vaishnavi Shrigadi	B.Tech	Assistant Sports Secretary
T. Sanathani	TY	Assistant Cultural Secretary
Khushboo Agarwal	TY	Training and Placement Representative
Shrushti Deore	TY	Branch Representative
Rutuja Deshpande	TY	Assistant Treasurer
Nutan Lagad	TY	Assistant Operations Secretary
Bhagyashri Swamy	TY	Assistant Magazine Secretary
Amita Jambhale	SY	Assistant Technical Secretary



The Student Panel

ACHIEVEMENTS 2020-21

SR.NO	NAME	A. YEAR	ACHIEVEMENT	DESCRIPTION	TEAM MEMBERS
1	Maithili Mukund Deshpande	SY	Winner of Poster Presentation competition	ASME Cummins student section event	NA
2	Gayatri Girish Bhandare	SY	Second rank in essay competition	On the occasion of Dr. Babasaheb Ambedkar jayanti, an essay competition was held.	NA
3	Divyanshi Alok	SY	Won 2nd place at the Drone Ideation competition, MIT Alandi	Team mates from Team Bharadwaj participated in the Drone Ideation competition at MIT Alandi. The competition designed a drone that would deliver various medicines in cases of medical emergencies.	Anwasha Sen Krishna Chavan Gayatri Jadhav
4	Gayatri Jadhav	SY	Secured 1st position in ASME's Crack domain	Innovation 2022	
5	Nutan Madhav Lagad	TY	Certificate of Appreciation from Thermax Limited	Campus leader of Thermax Limited at our college	NA
		TY	Received SAS Research and Development India (Muskaan Scholarship)	Scholarship from SAS for college Fees.	NA
6	Anvi Paresh Shah	TY	Foreign Scholarship/Internship	Received a 3-month internship in Volvo Cars, Sweden.	NA

7	Shivani Pandit	TY	AIR 14 in the IPTSE Olympiad		NA
		TY	Winners of the BIT TECHFEST 2021 Smart DRone	Organised by Bannari Amman Institute of Technology, Tamil Nadu	Saakshi Cholkar Pranjal Patil Akanksha Salunkhe Kalyani Mahajan Anwasha Sen Krishna Chavan Gayatri Jadhav
8	Pranjal Kiran Patil	TY	1st place in Technical Presentation (in Regular Class) in SAEINDIA Southern Section Aero Design Challenge 2021	SAEISS Aero Design Challenge	Vandanarani Mishra Eera Pendharkar Meghana Dhanke Vaishnavi Kshirsagar Prajakta Mahajan Pranjal Patil Sakshi Koshe
9	Akshata Sukhadeo Vaditake	TY	1st Runner up ASME's Crack Domain event	Innovation 2022 event	Sanskriti Gaikwad
10	Isha Anand Ekbote	TY	Attended Summer School at Indian Institute of Astrophysics, Bengaluru	Attended Summer School at IIA from 1st July to 8th July. She learnt about Solar physics, Stars and Interstellar Medium, Galaxies and Intergalactic Medium, Astronomical Instrumentation, Exoplanets, Cosmology.	NA

11	Rohini Gahininath Sangle	TY	Earned 3rd Rank in ASHRAE RAL International Quiz	Three rounds consisted of two MCQ rounds and one Q & A round. Heat transfer, thermodynamics, and refrigeration and air conditioning were the subjects covered in the quiz.	NA
			Secured 1st Rank in ASHRAE Pune Chapter Quiz	Participated in the quiz held by the ASHRAE Pune Chapter, in two rounds. The first was an MCQ round, and the second was a Q & A session.	NA
12	Shreya Vijith	TY	Secured 3rd Rank in ASHRAE Pune Chapter Quiz	Participated in the quiz held by the ASHRAE Pune Chapter, in two rounds. The first was an MCQ round, and the second was a Q & A session.	NA
13	Radhika Joshi	B.TECH	Selection at ASME Student regional Team, Asia-Pacific as Member-At large.	Collective representation of ASME Sections across six countries constituting the Asia Pacific region.	NA
		B.TECH	Selected to attend ASME Student Leadership Training conference in November 2021.	3-day virtual conference including interactive sessions with senior board members of ASME	NA

14	Rahee Vaibhav Kulkarni	B.TECH	Cummins Purdue Fellowship		NA
15	Tanvi Arey	B.TECH	Cummins Purdue Fellowship		NA
16	Prerna Avinash Burande	B.TECH	Xartup Fellowship - Entrepreneurship Based (individual)	<p>As a Xartup Fellow, she is entitled to the following benefits for the next 1 year -</p> <ol style="list-style-type: none"> 1. \$200,000 technical & marketing credits (No T&Cs) 2. 1 year access to weekend mentoring sessions by CEOs 3. 8-week case studies based peer-to-peer mentoring program 4. Get help from a network of 500+ Xartup Fellows 5. Pitch to investors when you gain traction 	NA
		B.TECH	Johnson & Johnson Crackathon Runner Up - in team	Process: the competition had 4 stages and 2 teams won	

SPORTS 2020-21

SR.NO.	NAME	A. YEAR	ACHIEVEMENT	DESCRIPTION	TEAM MEMBERS
1	Pooja Ankush Thorat	SY	2nd place in selection in zonal university matches in Kho Kho	-	Divya Gaikwad Namrata Jadhav Sakshi Tanvi
2	T. Sanathani	TY	Basketball Winners- 1st place	MIT national level inter-engineering college event namely "MIT-SUMMIT".	NA
3	Ritavi Gaikwad	TY	MIT WPU Volleyball match- 1st rank with a cash prize	Won gold MIT WPU Volleyball Match which was held in November	Eshwari Gudhate Anushka Pawar Indraja patil Ritavi Gaikwad Tanishqa Borse Avni Chawardol Pooja Bansode
			COEP Zest Volleyball Match - 2nd position	Won silver in COEP Zest Volleyball match which was held in February	NA
4	Eshwari Gudhate	B.TECH	MIT summit Volleyball	Participated in Volleyball and won gold medal and got 15,000 cash prize.	Eshwari Gudhate Anushka Pawar Indraja Patil Ritavi Gaikwad Tanishqa Borse Avni Chawardol

					Pooja Bansode
		B.TECH	Played zonals	Based on the her performance in a team tournament, she was selected to play for zonal level.	
		B.Tech.	COEP Zest	Participated in Volleyball, won silver medal and got 4000 cash prize.	

Pentacle 2022



Faculty Team



Handball



Volleyball



Innovation 2022



IOT Workshop



Cyclothon



Inauguration



EMPULSE Workshop



Gandhaar 2022



Book Opening




Yoga



Rangoli



Faculty Performance

A painting of a blue sky with white clouds and a blue sea with white-capped waves. The sky is a deep blue, and the clouds are white with some light blue shading. The sea is a darker blue, and the waves are white with some blue shading. The overall style is impressionistic.

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-Sakshi Pohekar
S.Y.Mechanical