

SUDHEE 2024

Department of Mechanical Engineering

MECHANICA 2024

About Mechanica

MECHANICA is the 2-day National Level Technical Fest of Department of Mechanical Engineering organised as a part of SUDHEE'24, the Technical Fest of CBIT. Mechanica has organised 10 euphoric events during the academic year 2023 - 2024. The fest was conducted on 26th of FEBRUARY and 27th of FEBRUARY, 2024 pragmatically. We had 575+ participants altogether.

Support from College

The college management, Principal, Head of the Department and SUDHEE Core Committee have encouraged, supported and guided us throughout this venture.

Faculty Coordinators

1. Sri. V. Jaipal Reddy (Assistant Professor, MED)



2. Sri. D. Ravi (Assistant Professor, MED)



3. Sri. Dr. Rahul (Assistant Professor, MED)



Student Coordinators

1. Mr. N. Nandhu



2. Mr. B. Mourya



Overall Event Heads

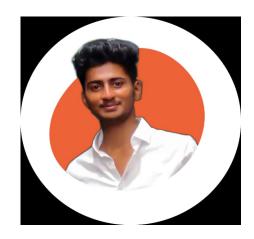
1. Miss. P. Omsri



2. Mr. Noaman



3. Mr. Ch. Suchith Reddy



Details:

1. INAUGURAL CEREMONY:

The Opening Ceremony of Mechanica, was conducted offline at 11:00 PM on26th FEBRUARY 2024. The ceremony was presided over by Dr. P. Prabhakar Reddy, Head of the Department (MED). The speaker Dr. G. Suresh Babu, then addressed the crowd. The technical fest was officially declared open.

Speaker: Dr. G. Suresh Babu

Topic: Design and analysis of composite structures by finite element

analysis.

Event Dates: 26th February and 27th February

Event Website: https://linktr.ee/mechanica 2k24

Guest Speaker:



Name in Full : Dr.G. Suresh Babu

Area of Specialization : Scientist works at ASL, DRDO.

Research and Development Activities

He started working for DRDO since 2007, his having an experience of 17 years on design & development of composite structures.

He contributed towards optimisation of composite pressure vessel which reduce the weight of the system which leads to enhance the performance of the missile and Generated a helical winding programme for different pressure vessels which varying dia 150 mm to dia 2400 mm

He worked both wet wound as well as towpreg systems by filament winding to over come certain

unique challenges. The casings developed by him have been qualified and utilised on static tests and flight tests of K4, A SAT (Shakthi), HSTDV & different Angi variant systems.

He generated a MATLAB algorithm of CLT for pressure vessels and simplified code for 3D FE models which will intended to reduce the simulation time.

He is a member in ISAMPE and presented 11international & national papers in mechanics composites. His contributions in CRMC design and development have been of high order.

He got three special team award from DRDO in the period of 2010, 2021 and 2022.

2. PAPER PRESENTATION:

Description:

It is the platform to vent your ideas in the form of well-integrated and intriguing presentation. It gives a unique opportunity to the youngsters to express and compete in the presence of jury. There are two stages in this event where in the first stage is submission of abstract and the next one is the final round where students must present in front of judges. Evaluation is done by highly qualified Judges.



Date & Time:

- February 26 1:00 to 4:00 PM
- February 27 10:00 AM to 12:00 PM

Venue:

• CFD lab, Mechanical Department, CBIT

Registration Fee: Rs.

400/- No. of Papers

Received: 35

Papers from other colleges: 2

External Jury:

- Dr. Y. Dilip Kumar (Assistant Professor, MED, MRCET) for Session 1
- Dr. C. Hari Vekareswara Rao (scientist DRDO, Ministry of Defence) for Session 2

Internal Jury:

- Dr. L. Suresh kumar (Assistant Professor, MED, CBIT) for session 1
- Smt. Anjani Devi (Assistant Professor, MED, CBIT) for session 2

Event Leads:

- Miss. Anvitha
- Mr. Manoj
- Mr. Rikwith Reddy

Winners:

- Mr. Kulkarni Nehasri
- Mr. Pol Bharath

Cash Prize: Rs. 2000/- for 1st Prize

Rs. 1500/- for 2nd Prize





3. POSTER PRESENTATION:

Description:

Poster presentation is the contest which may help one to portray their creativity in relevance to their technical knowledge. Consider it to be same as a paper presentation, poster presentation involves making a digital poster which depicts ones idea and research rather than a Power

Point presentation. There are two stages in this event wherein the first stage involves brief description of their idea and the next being the final round wherein students have to present their posters with enthusiastic explanation to the audience and judges. Evaluation is done by highly qualified judges.



Date & Time:

• February 26 - 1:00 - 3:00 PM

Venue: D-102, MED, CBIT

Registration Fee: Rs. 400/-

No. of Posters: 9

Internal Jury:

• Dr. A. Kiran Kumar, Assistant Professor, MED, CBIT

External Jury:

Dr. Alugoju Uday Kumar (Assistant Professor MED, SMEC)

Event Leads:

- Miss. Ch. Lavanya
- Mr. Charan Sai

Winners:

- Mr. Kanguala Jai Lakshmi
- Mr. Nandeeswar Rao

Cash Prizes: Rs. 2000/-





4. AutoCAD QUIZ:

Description: AutoCAD is a design and drafting software used by architects, engineers, interior designers to create 2D and 3D drawings and models which helps them in their design and analysis. The present quiz is a fun way to improve and test your knowledge about the software and drafting in general.



Date & Time: February – 10:00 to 12:00 PM

Venue: CAD lab, A Block (CIVIL), CBIT

Registration Fee: ₹50 per head

No. of Participants: 46

Event Leads:

• Mr. N. Nishanth

• Miss. V. Chaturya

Winners:

• Mr. P. V. Sravan Reddy

• Mr. G. Rithwik

Cash Prizes:

• First- Rs. 1000/-

• Second-Rs. 500/-



3D PRINTING WORKSHOP:

Description: 3D printing is the process of creating physical object from a digital 3D design. It is a growing field and most likely to become the future of manufacturing. The 3D printing workshop, we are conducting will help the students to explore the opportunities and its applications in today's developing world.

This workshop includes:

- Introduction about various 3D printing technologies and its applications.
- Slicing the 3D model using a software.
- 3D Printing the model.

After completion of the workshop, a Quiz will be conducted. The top three participants who score the highest marks in least possible time will be awarded with a merit certificate and a 3D printed model.



Date & Time: February 26 - 1:00 to 3:00 PM

Venue: DF Lab, MED, CBIT

Registration Fee: Rs. 50/- per head

No. of Participants: 37

Faculty Coordinator: Smt. Anjani Devi, Assistant Professor, MED, CBIT

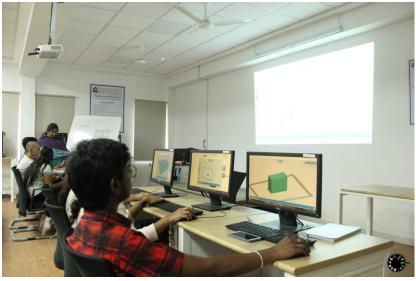
Event Leads:

• Mr. M. Srikar

• Mr. Saketh

• Mr. Narendar





5. ENTREPRENEURSHIP WORKSHOP:

Description: We are the MECHANICA, present you with our flashing event Entrepreneur workshop who doesn't have any idea about entrepreneurship.

This is the best platform to learn by participating in our entrepreneurship Workshop. This workshop consists of a seminar on entrepreneurship and teammanagement. In this corporate world people used to work as a team. So, for maintaining team spirit we are conducting team management games. There are some exciting games.



Date & Time: February 27 - 1:00 to 3:00 PM

Venue: D-102, MED, CBIT

Registration Fee: Rs. 50/- per head

No. of Participants: 41

Faculty Coordinator: Dr. Rahul, Assistant Professor, MED, CBIT

Event Leads:

• Mr. Gowtham

• Miss. Shreya

Cash Prize: 1500/-

Winners: Miss. Sreehitha





6. MECHANIZE:

Description: Unlock the secrets of industry practices and processes at our workshop, MECHANIZE. Gain foundational knowledge and immerse yourself in a thrilling competition where the ultimate victor takes home a cash prize.

Winner will be decided based on the accuracy of the sketch that is obtained atfirst person.



Date & Time: February 26, 1:00 to 3:00 PM

Venue: Central Workshop Mechanical Department, CBIT

Registration Fee: 30/- per team

No. of Participants: 20

Event Leads:

• Mr. Lokesh

• Mr. Shivaji

Cash Prize: 1st Place - 600/-

Winners: 1) Miss. Niharika



7. TOOL-LINEUP AND MECHAMAZE:

Description: We are the MECHANICA, present you with our flashing eventTool-Line up, arranging the tools in said order. Person who is fastest and accurate in arranging of tools is the winner.



Date & Time: February 26th and 27th, throughout the day

Venue: Open Air, Infront of Mechanical Department, CBIT

Registration Fee: Rs. 30/- per head, Rs. 50/- per duo.

No. of Participants: 25

Event Leads:

Miss.Niharika

• Miss. Ch. Akshitha

Cash Prize: 600/- 1st Prize 300/- 2nd Prize

Winners: Mr. Shivaji Miss. Omsri





8. Innovation Pitch

Description: Innovation Pitch CBIT is a platform for students to pitch their project ideas and in exchange get the fund required to kickstart their journey of turning the idea into reality.

Date & Time: February 26 - 1:00 to 3:00 PM

Prerequisites:

A detailed project presentation (PPT) with the following criteria:

- I An innovative Idea
- Its contribution to society in solving a problem
- Y Feasibility (transforming idea into product)
- Y Project Expenditure Credit System: Each of the above-mentioned criteria has5 credits.

Event Procedure: Each participant must pitch their project idea within 30 minutes. A panel of judges will analyse every aspect of the presentation, ask forclarifications over the above-mentioned criteria. Then there will be a discussion among the panel over the genuineness of

the idea and will finally take a call on awarding the funds to the participant. Note: The fund will be awarded by the panel based on the above-mentioned criteria may not match the participant's expected fund (it may be less).

Targeted Participants: 1 st, 2nd, 3rd, and 4th year Students from all branches, who have an excellent project idea and are looking for funding.



Registration Fee: Rs. 100/-

No. of Participants: 10

Event leads:

• Mr. Siddhartha

• Mr. Kaif Ur Rahman

• Mr. V. Sathwik

Winners:

• Mr. Baddarapu Sai Kiran

• Miss. Navya

Cash Prize: Rs. 1000/- 1st Prize

Rs. 500/- 2nd Prize

Photos:





10. DEBATE

Description:-

Get ready for a battle of intellects at our Debate event! Teams of three students will face off, tackling spontaneously assigned topics in a riveting exchange of ideas. Based on criteria the winner will be selected by the internal jury to give away the prizes.





Registration Fee: Rs. 100/-

No. of Registrations: 16

Event leads:

• Mr. Kumar

• Miss. Anusha

Winners:

• Mr. Sampath Kumar

• Miss. Preethi

Cash Prize: Rs. 1000/- 1st Prize

Rs. 500/- 2nd Prize





11. MECHA TEASURE HUNT

Description:-

Ignite Your Adventure!

Gear up for the thrill of a lifetime at the "Quest for the Hidden Relic"! Whether you're a solo explorer or prefer dynamic duos, immerse yourself in an unforgettable journey across our campus. Solve mind-bending puzzles, uncover secrets, and seize the chance to discover the relic that unlocks academic success.



Date & Time: February 26^{TH} and 26^{th} - 2:00 to 4:00 PM

Venue:Infront of Mechanical Block, Ground Floor, MED, CBIT

Registration Fee: Rs. 50/- per head

No. of Registrations: 32 (solo) 24(duo)

Event Leads:

- Mr. Shankar
- Miss. Vaishnavi

Winners:

SOLO:-

- 1) Prashanth Raju
- 2) Sreehitha

DUO:-

- 1) Gayatri
- 2) Devasai

Cash Prize:

Rs. 1000/- for 1st Prize (solo)
Rs. 500/- for 2nd Prize (solo)

Rs. 2000/- for 1st Prize (duo) Rs. 1500/- for 2nd Prize (duo)



MECHANICA'24 POSTER:



CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (A) DEPARTMENT OF MECHANICAL ENGINEERING SUDHEE 2024 (INNOVATE INTEGRATE INSPIRE) MECHANICA 2024 - CHAITANYA ASTRA (26-02-2024& 27-02-2024)

*** * A51'RA

Faculty Coordinators:MR D Ravi

Dr Rahul Dr Vasanth



Event Leads: Vikranth Jonna Sreshta Vejju Ishita Prasad Aman Reddy Sai Charan Divya Reddy Hemanth Verma Srinandan M Sabareesh Reddy

Circuit Showdown

Members of the CHAITANYA ASTRA club conducted CIRCUIT SHOWDOWN as part of their Sudhee Event CELESTE 1.0. The event was conducted on the 27th of February from 1:00 PM to 2:00 PM in class room E-203 of the Mechanical block.

Round 1:- Workshop on basics of 555 Timer IC, Potentiometer, breadboard, etc.

The event started with a brief introduction of the participants and then Hemanth explained what is a 555 Timer IC, Potentiometer, LED, Capacitor and Breadboard. Later on, he demonstrated a pre-built circuit showcasing the circuit chosen for the workshop.

Then the participants were shown how to build the circuit from ground up and also followed along in building the circuit on a breadboard. A physical manual was given for the participants to follow the process step by step. The manual also contained the details of each component used in the circuit.

Round 2:-Circuit assembly and building Competition

Then each participant were given a Breadboard, required components, and some Wires. The competition was to build the circuit shown in the workshop. The participant who builds the circuit in the least time possible was awarded as the winner.

Date & Time: February 27th- 1:00 to 2:00 PM

Venue: E-203 Mechanical Department, CBIT

Registration Fee: Rs. 52/- per head

No. of Participants:6

Event Leads:

Mr. Hemanth VermaMr. Sai Charan Reddy

Winner: S.Shiva Shankar

Cash Prize: 500/-







Rocket Rundown

Description:-

Members of the CHAITANYA ASTRA club conducted the ROCKET RUNDOWN as part of their Sudhee Event CELESTE 2.0. The event was conducted on the 27th of February 2024 from 2:00 PM to 4:30 PM in the CAD/CAM Lab of the Mechanical block.

Round 1:-

Vikranth opened the Workshop by explaining the basics of rocketry to the participants. He covered the components of a Rocket and explained them in great detail. Forces of acting

during the flight if a Rocket were too covered. Factors and Specifications affecting the

drag, lift and Thrust of a Rocket were explained to the participants. The Participants were

introduced to the concepts of Centre of Gravity and Centre of Pressure And the relation

between them was explained. Their significance and their positioning within a Rocket were

explained to them. Types of Rocket Engines were explained with emphasis on solid Rocket

engines. Apart from those, liquid and hybrid engines were too touched upon.

Various recovery systems of a Rocket after flight were introduced to the participants. They were introduced to the basics and the purpose of recovery in rocketry. Parachute systems and

their deployment methods were discussed with them.

The Aerodynamic and Thermodynamical Aspect of this topic was discussed in great detail.

This was followed by an open discussion on the communications between a Rocket in Flight

and the ground station. There was a spirited discussion on the purposes of the recovery of a

Rocket and the purpose of a payload that is flown on a Rocket.

This was followed by a demo of the Open Rocket software by the team, where the participants

were taught on how to add and alter the parts on the system. They were also taught how to

add and alter fins on the Rocket and add the Motor to it and configure it.

Round 2:-

This concluded the workshop part of the event following which the competition commenced.

The participants asked to build a Rocket in the OpenRocket software using the things that

they learnt in the workshop.

They were given a time of 15 minutes and a constraint of using a motor given by the

organizing team. The participant with the highest apogee would be declared the winner.

The competition was conducted and every participant very designed their rockets.

Date & Time: February 27th - 2:00 to 4:30 PM

Venue: CAD/CAM Lad, Ground Floor, Mechanical Block, CBIT

Registration Fee: Rs. 72/- per head

No. of Participants:5

Event Leads:

Mr. Vikranth Jonna

• Mr. Sabareesh Reddy

Cash Prize: 1200/-

Winner: Gaaurav Nath



Extraplanetary Estates

Description:-

Members of the CHAITANYA ASTRA club conducted the EXTRAPLANETARY ESTATES as part of their Sudhee Event CELESTE 2.0. The event was conducted on the 26th of February 2024 from 2:00 PM to 4:00 PM in the Central Workshop of the Mechanical block.

Brief Summary:-

Extraplanetary Estates is a strategy and trading game that tests an individuals's presence of mind while cutting deals to accumulate resources in-order to build various space establishments and climbing up the ladder with the ultimate goal to build a Mars base.

Game Flow:-

The Materials that one team will get is purely based on their luck. There are three bases a team has to build – The International Space Station, Moon Base and the Mars Base. To Establish the ISS, A team must have 5 successful launches. To Establish the Moon Base, A

team must have 3 additional successful launches. To establish Mars Base, A Team must have 4 additional successful launches. To launch a rocket, Each team must have to build a launch pad. The materials required for launching a rocket will vary for the 3 bases. The materials required for building all these will be disclosed before the start of the game. The team/individual that launches all the rockets successfully and builds the Mars base by taking the least amount of time will be declared the Winner.

Conduct:-

The amount of materials each team had was provided to them as slips, they soon made their decisions and started trading with others and got their trades approved by approaching the chair. The Chair kept track of all the resources and the progress of the team.

Date & Time: February 26th - 2:00 to 4:00 PM

Venue: Central Workshop, Mechanical Block, CBIT

Registration Fee: Rs. 72/- per team, Rs. 32/- per induvidual

No. of Participants:19

Event Leads:

Mr. Aman ReddyMr. Vikranth Jonna

Cash Prize: 900/-

Winner:

Tanush Maddulety











Space Splash

Description:-

Members of the CHAITANYA ASTRA in collaboration with CHAITANYA SRUJANA club conducted the SPACE SPLASH as part of their Sudhee Event CELESTE 2.0. The event was conducted on the 26th and 27th of February 2024 in front of the House Wiring Room (ASTRA workspace)

Brief Summary:-

Space Splash is a recreational event where participants were given T-shirts to paint, and were also provided with paint supplies to paint space themed art on the apparel. There was no time constraint and participants were also asked to form a pair of two.

Conduct:-

The entire events spanned over two days where 36 participants took part in the activity. People painted the T-shirts with their choice of music playing the in background. Overall the event response was great.

Date & Time: February 26th - 2:00 to 4:00 PM

Venue: Central Workshop, Mechanical Block, CBIT

Registration Fee: None **No. of Participants:** 36

Event Leads:

Ms. Ishita Prasad Ms. Divya Reddy









Aero Spectra

Description:-

Members of the CHAITANYA ASTRA conducted the Aero Spectra project as part of their Sudhee Event CELESTE 2.0. The event was conducted on the 26th and 27th of February 2024 in front of the CFD Lab entrance near the Mechanical Block.

Brief Summary:-

Aero Spectra aimed to demonstrate the application of radio communications that happens between a satellite and it's ground station. The simplified setup was realised and was put together. The main processor used is a Raspberry Pi microcontroller which received inputs from a temperature sensor, pressure sensor and a GPS module. This through a LoRa radio antenna was wirelessly transmitted to the receiver setup nearby.

Conduct:-

The event lead received many students and faculty who visited the project and enquired about it. The explanation was given regarding the functioning of various modules and the principle of working. The slides regarding the same were made and presented before the visitors. Respected Principal Dr.C.V Narasimhulu and Respected SUDHEE Chairman Dr.Prabhakar

Reddy too visited the project and were apprised of it's working. All visitors gave positive feedback regarding the presentation and overall setup of the project.

Date & Time: February 26th and 27^{th} – Entire day

Venue: Central Workshop, Mechanical Block, CBIT

Registration Fee: None

No. of Participants: Walk-in event

Event Leads:

• Ms. Sreshta Vejju









EVENTS SUMMARY:

S.No	Event Name	No. of Participants (Including Outside Participants)	No. of Outside Participants
1	Paper Presentation	35 Papers	4
2	Poster Presentation	9 posters	0
3	AutoCAD Quiz	46	5
4	3D Printing Workshop	37	13
5	Entrepreneurship Workshop	66	2
6	Mechanize	20	0
7	Tool-Lineup	39	0
8	Debate	48	0
9	Innovation Pitch	30	9
10	Treasure Hunt	80	2
11	Circuit Showdown	11	0
12	Rocket Rundown	24	0
13	Extraplanetary Estates	48	0
14	Space Splash	36	0
15	Solid work competition	9	8
16	Go-Kart Expo	10	0
17	Shop-N-Spirit	13	0
18	Escapebot	8	6
19	Sky Racer	8	6
	TOTAL	577	55

VALEDICTORY CEREMONY:

The Valedictory Ceremony of Mechanica, was conducted offline at 03:30 PM on 27th February, 2024. The ceremony was presided over by Dr. Prabhakar Reddy, MED. The number of registrations for each event were announced. The faculty coordinators Sri D. Ravi, Sri. V. Jaipal Reddy and Dr. Rahul then addressed the crowd. The winners & runners per event were announced. The program ended with vote of thanks

MECHANICA 2024 VALEDICTORY CEREMONY



Date & Time: 27th February, 2024 at 3:30PM

Audience: 230

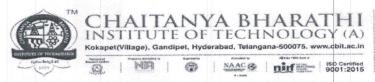
DEMOGRAPHICS:

The demographics for the event are as follows:

7 other colleges have registered which includes Mahatma Gandhi Institute of Technology, BR Ambedkar Open University, G.PullaReddy Engineering College, Vidya Jyoti Institute of Technology, Kg Reddy College of engineering and technology, Vasavi College of Engineering, Vardhaman College of Engineering, Jawaharlal Nehru Technoligical University, Osmania University.

VOTE OF THANKS:

We would like to thank CBIT Management, Principal, Head of Mechanical Engineering Department and all Teaching and Non-Teaching Staff of Mechanical Engineering Department for their help and support. We would also like to thank our speakers who gave the participants, the much-needed boost and their valuable guidance. We congratulate all the winners and all the participants.



COMMITTED TO RESEARCH, INNOVATION AND EDUCATION YEARS

SUDHEE 2023

Department of Mechanical Engineering MECHANICA 2023

About Mechanica

MECHANICA is the 2-day National Level Technical Fest of Department of Mechanical Engineering organised as a part of SUDHEE'23, the Technical Fest of CBIT. Mechanica has organised 09 euphoric events during the academic year 2022-2023. The fest was conducted on 31st of JANUARY and 1ST of FEBRUARY, 2023 pragmatically. We had 400+ participants altogether.



Support from College

The college management, Principal, Head of the Department and SUDHEE Core Committee have encouraged, supported and guided us through out this venture.

Faculty Coordinators

1. Sri. V. Jaipal Reddy (Assistant Professor, MED)



2. Sri. D. Ravi (Assistant Professor, MED)



Student Coordinators

1. Mr. T. Karthik



2. Mr. A. Anirudh



Overall Event Heads

1. Mr. Mohi Uddin



2. Miss. K. Lahari



3. Miss. Srihitha Malisetty



Details:

1. INAUGURAL CEREMONY:

The Opening Ceremony of Mechanica, was conducted offline at 11:00 PM on 31ST JANUARY 2023. The ceremony was presided over by

Dr. P. V. R Ravindra Reddy, Head of the Department (MED). The speaker, Dr. K. Veera Brahmam, then addressed the crowd. The technical fest was officially declared open.

Speaker: Dr. K. Veera Brahmam

Topic: DRDO's Bio-Degradable Alternative to Plastic

Event Dates: 31st January and 1st February

Event Website: https://linktr.ee/mechanica 2k23

Guest Speaker:



Name in Full : Dr. K. Veera Brahmam

Mobile No. : 09441426860

Area of Specialization : Development of Agni-3 missile, Composites

Process Development, Production and testing

Research and Development Activities

1. Integration, testing and Production of Agni-3 missiles.

2. Development of table top chromatography system for resins analysis.

3. Thermal and mechanical characterization of polyimide composites.

4. Life prediction and mechanical degradation studies of composite Structures.

5. Development of moisture resistant coatings for composite structures.

1	Prof. Bheemsenachar Gold Medal and Award for University FIRST
	RANK in M.Sc (PHYSICS) for the year 1997 from Sri Venkateswara
	University, Tirupati in 1997
2	Scientist of the year award from National Environment academy,
	New Delhi for the year 2014, for Design and development of
	indigenous non-contact method for cure monitoring of carbon-
	phenolic shells of Re-entry vehicle structure (RVS) of missiles by
	gas-chromatography,
3	Best technical Paper award for "Life prediction studies on
	composite structures", at BITS, Hyderabad, in 2015
4	Best technical Paper award for " Development of non-contact NDE
	method for cure monitoring of carbon-phenolic Composites by
	gas-chromatography", at British Institute of NDT, Telford, London
	with one lakh cash prize in the year 2015
5 " Scientist of the Year award -2021" from Assoc	
	Compostable Products in India(ACPI) & Hyderabad Plastics
	Industries Association
6	He has taken up the name of DRDO to good heights by inventing
	the biodegradable formulation for " Development of
	biodegradable bags for replacement of polyethylene bags " which
	is very useful to mankind and environment against soil and water
	pollution.
7	He is the receipent of "NAVANAKSHTRA SANMAANAM-2022"
	from TV9 Network , under Science and Technology field for
	Innovation of Bio-degradable carry bags for replacement of
	polyethyelenecarrybags

2. PAPER PRESENTATION:

Description:

It is the platform to vent your ideas in the form of well-integrated and intriguing presentation. It gives a unique opportunity to the youngsters to express and compete in the presence of jury. There are two stages in this event where in the first stage is submission of abstract and the next one is the final round where students must present in front of judges. Evaluation is done by highly qualified judges.



Date & Time:

- January 31 1:00 to 4:00 PM
- February 1 10:00 to 12:00 PM

Venue:

CFD lab, Mechanical Department, CBIT

Registration Fee: Rs. 400/-

No. of Papers Received: 27

Internal Jury:

- Dr. L. Suresh Kumar (Assistant Professor, MED) for Session 2
- Dr. Indira Priyadarshini (Assistant Professor, MED) for Session 1

External Jury:

- Dr. S. Madhava Reddy, Professor, MGIT, Kokapet (V), Gandipet (M), Hyderabad, Telangana, 500075
- Dr. C. Hari Venkateswara Rao, Joint Director, MSQAA, C/o DRDL, Kanchanbagh, Hyderabad – 500058, Telangana

Event Leads:

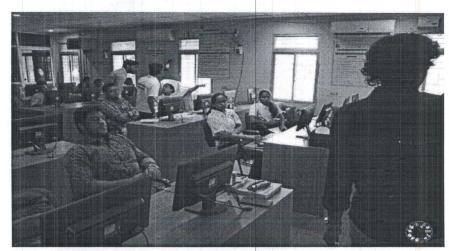
- Miss. Hansika Reddy
- Mr. Jashwanth Gajula

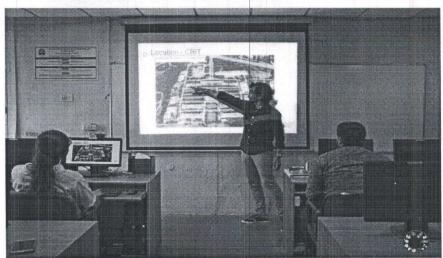
Winners:

• Mr. T. Sudhansh (Session 1)

Mr. Anumula Deeraj (Session 2)

Cash Prize: Rs. 2000/- for each Session





3. POSTER PRESENTATION:

Description:

Poster presentation is the contest which may help one to portray their creativity in relevance to their technical knowledge. Consider it to be same as a paper presentation, poster presentation involves making a digital poster which depicts ones idea and research rather than a Power

Point presentation. There are two stages in this event wherein the first stage involves brief description of their idea and the next being the final round wherein students have to present their posters with enthusiastic explanation to the audience and judges. Evaluation is done by highly qualified judges.



Date & Time:

February 1 − 10:00 − 12:00 PM

Venue: D-102, MED, CBIT

Registration Fee: Rs. 400/-

No. of Participants: 6

Internal Jury:

• Dr. A. Kiran Kumar, Assistant Professor, MED, CBIT

External Jury:

Dr. M. Satyanarayana Gupta, HoD, Department of Aeronautical Engineering, Professor in Mechanical Department, MLR Institute of Technology, Hyderabad.

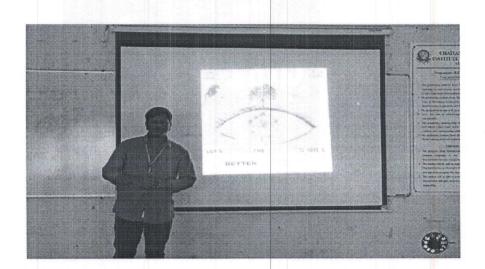
Event Leads:

- Mr. Goli Sai Charan
- Mr. Bavani Shankar

Winners:

- Mr. Ch Bavani Shankar
- Mr. Goli Charan Sai

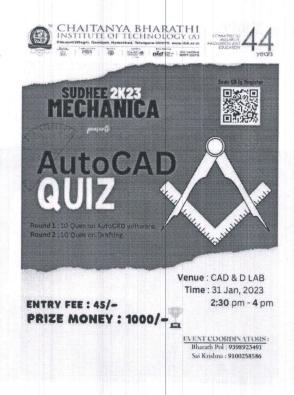
Cash Prizes: Rs. 2000/-





4. AutoCAD QUIZ:

Description: AutoCAD is a design and drafting software used by architects, engineers, interior designers to create 2D and 3D drawings and models which helps them in their design and analysis. The present quiz is a fun way to improve and test your knowledge about the software and drafting in general.



Date & Time: January 31 - 2:30 to 4:00 PM

Venue: CAD lab, A Block (CIVIL), CBIT

Registration Fee: ₹45 per head

No. of Participants: 32

Event Leads:

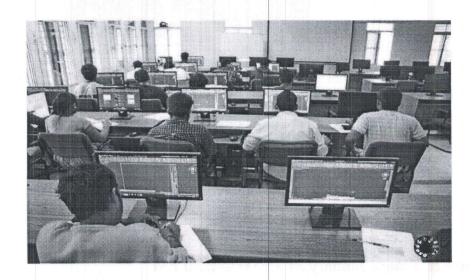
• Mr. Bharath Pol

Winners:

Mr. R Kiran Kumar

Cash Prizes:

• First- Rs. 1000/-



3D PRINTING WORKSHOP:

Description: 3D printing is the process of creating physical object from a digital 3D design. It is a growing field and most likely to become the future of manufacturing. The 3D printing workshop, we are conducting will help the students to explore the opportunities and its applications in today's developing world.

This workshop includes:

- Introduction about various 3D printing technologies and its applications.
- Slicing the 3D model using a software.
- 3D Printing the model.

After completion of the workshop, a Quiz will be conducted. The top three participants who score the highest marks in least possible time will be awarded with a merit certificate and a 3D printed model.



Date & Time: January 31 - 1:00 to 2:30 PM

Venue: CAD/CAM Lab, MED, CBIT

Registration Fee: Rs. 50/- per head

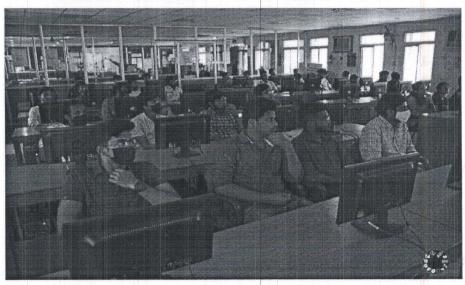
No. of Participants: 34

Faculty Coordinator: Mr. A. Chandrakanth, Assistant Professor, MED, CBIT

Event Leads:

Miss. Nausheen Firdouz





5. ENTREPRENEURSHIP WORKSHOP:

Description: We are the MECHANICA, present you with our flashing event Entrepreneur workshop Who doesn't have any idea about entrepreneurship ship? This is the best platform to learn by participating in our entrepreneurship Workshop. This workshop consists of a seminar on entrepreneurship and team management. In this corporate world people used to work as a team. So, for maintaining team spirit we are conducting team management games. There are some exciting games.



Date & Time: February 1 - 1:00 to 3:00 PM

Venue: D-102, MED, CBIT

Registration Fee: Rs. 50/- per head

No. of Participants: 66

Faculty Coordinator: Dr. Rahul, Assistant Professor, MED, CBIT

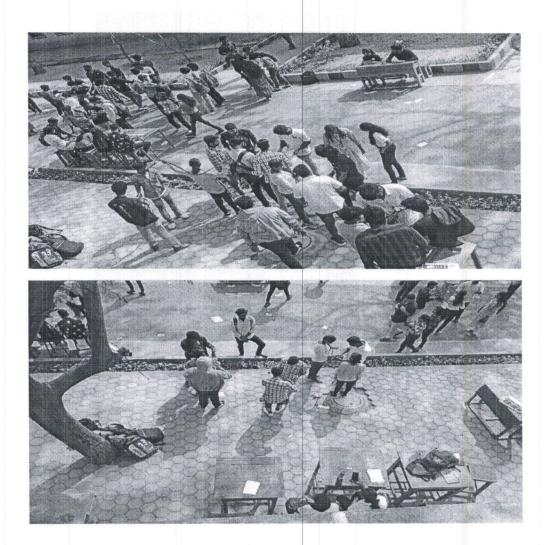
Event Leads:

Mr. Neelam Nandhu

• Miss. Akuthota Preethi

Cash Prize: 1500/-

Winners: Mr. CHALLA SUJAN



6. MECHAMAGE:

Description : A team of 4 members will be standing in an order such that all should face in same direction, we will be showing an image of mechanical component to the last person, he/she need to remember and draw it on a sheet and show it to the next person behind him, this process continues till the first person draws the sketch of the component. You will be evaluated based on:

Winner will be decided based on the accuracy of the sketch that is obtained at first person.



Date & Time: February 1, Throughout the day

Venue: Open Air, Infront of Mechanical Department, CBIT

Registration Fee: 100/- per team (Team should be of 4 members)

No. of Participants: 19 Teams

Event Leads:

- Miss. Deepa Podduturi
- Miss. Navya Gajula
- Miss. Saba
- Miss. Srujana

Cash Prize: 1st Place - 1000/-

2nd Place - 500/-

Winners: 1) Mr. Md Sohail and his team

2) Miss. Kahhkasha Sana Sania Banu and her team



7. TOOL-LINEUP:

Description: We are the MECHANICA, present you with our flashing event Tool-Line up, Arranging the tools in said order. Person who is fastest and accurate in arranging of tools is the winner.



Date & Time: February 1, Throughout the day

Venue: Open Air, Infront of Mechanical Department, CBIT

Registration Fee: Rs. 30/- per head

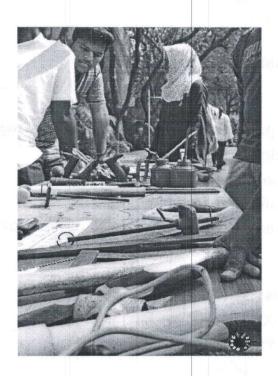
No. of Participants: 21

Event Leads:

Miss. Ayushi Chethurvedi

Cash Prize: 400/-

Winners: Miss. Arivilli Niharika





8. SHARK TANK CBIT

Description: Shark Tank CBIT is a platform for students to pitch their project ideas and in exchange get the fund required to kickstart their journey of turning the idea into reality.

Date & Time: January 31 - 1:00 to 4:30 PM

Prerequisites:
A detailed project presentation (PPT) with the following criteria:
☐ An innovative Idea
☐ Its contribution to society in solving a problem
☐ Feasibility (transforming idea into product)
☐ Project Expenditure Credit System: Each of the above-mentioned criteria has
5 credits.
Maximum Credits: 20
□ 19-20 credits=100% of ask
□ 17-18 credits=75% of ask
□ 15-16 credits=50% of ask
☐ 14 credits=Reg. Fee will be given back
Text 1.000 3 1.0 40 1.00 1

Event Procedure: Each participant must pitch their project idea within 30 minutes. A panel of judges will analyse every aspect of the presentation, ask for clarifications over the above-mentioned criteria. Then there will be a discussion among the panel over the genuineness of

the idea and will finally take a call on awarding the funds to the participant. Note: The fund will be awarded by the panel based on the above-mentioned criteria may not match the participant's expected fund (it may be less).

Targeted Participants: 1 st, 2nd, 3rd, and 4th year Students from all branches, who have an excellent project idea and are looking for funding.

Event Details: "Ask": It is the expected fund. It can range from ₹1000 to ₹5000 in multiples of 1000 Maximum "Ask": 5000/-



Registration Fee: 10% of "Ask"

No. of Participants: 13

Jury:

• Mr. Sai Kiran, Mechanical Student, CBIT

Event leads:

Mr. Veera Bhadra

• Mr. R. Sai Kiran

Winners:

• Mr. G. Chandrakanth Singh

Cash Prize: Rs. 1000/-

Photos:





10. Circuit Showdown

Members of the CHAITANYA ASTRA club conducted CIRCUIT SHOWDOWN as part of their Sudhee Event CELESTE 1.0. The event was conducted on the 31st of January from 2:00 PM to 4:30 PM in class room E-204 of the Mechanical block.

Round 1:- Workshop on basics of electronics and soldering process.

The event started with a brief introduction of the participants and then Hemanth explained the difference between AC&DC current, basics of electronics, basic electronic components. Later on,he also explained how the Half Wave Rectifier circuit will convert AC to DC. With the help of anoscilloscope he showed how the circuit works and how the pulse is changed.

Then the participants were introduced the basic soldering equipment (Soldering iron, Solder, Magnifying stand, Perf Board). He built the circuit in front of the

participants. With the help of aphone the process was shown in close up on the projector.

Round 2:- PCB assembly and building Competition

Then each participant was given a Perf board, required components, a Magnifying stand, Soldering Iron, Solder, and some Wires.

The competition was to build the circuit shown in the workshop. The participant who builds the circuit in the least time possible was awarded as the winner.

Date & Time: January 31st - 2:00 to 4:30

PMVenue: E-204 Mechanical

Department, CBIT Registration Fee: Rs.

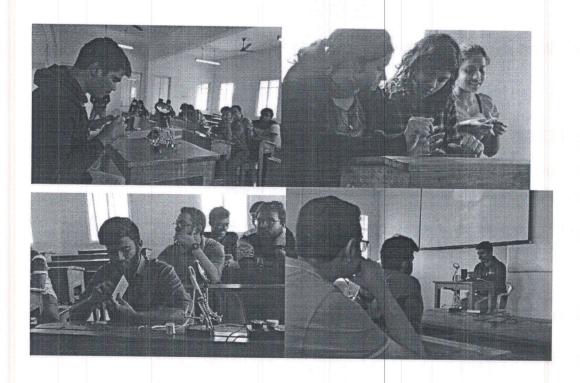
78/- per head

No. of Participants: 7

Winners:

1) Vinod

Cash Prize: 500/-





COMMITTED TO RESEARCH, INNOVATION AND EDUCATION YEAR YEAR OF THE PROPERTY OF T



11. Simulation Summit

Description:-

Members of the CHAITANYA ASTRA club conducted the SIMULATION SUMMIT as part of their Sudhee Event CELESTE 1.0. The event was conducted on the 1st of February from 2:00 PMto 4:30 PM in the CAD&D Lab of the Mechanical block.

Round 1:-

Vikranth opened the Workshop by explaining the basics of rocketry to the participants. He coveredthe components of a Rocket and explained them in great detail. Forces of acting during the flight ifa Rocket were too covered. Factors and Specifications affecting the drag, lift and Thrust of a Rocket were explained to the participants. The Participants were introduced to the concepts of Centre of Gravity and Centre of Pressure And the relation between them was explained. Their significance and their positioning within a Rocket were explained to them. Types of Rocket Engines were explained with emphasis on solid Rocket engines. Apart from those, liquid and hybrid engines were too touched upon.

Various recovery systems of a Rocket after flight were introduced to the participants. They were introduced to the basics and the purpose of recovery in rocketry. Parachute systems and their deployment methods were discussed with them.

Jashwanth then explained the shapes and types of nosecones used on a Rocket system in great detail. Nose Cone types of Ogive, Parabolic, Conical, Haack and Power Series were discussed with the participants.

Sabareesh took over the session to explain about the deeper physics behind the shapes of the nosecone and their effect on the overall rocket's performance. The Aerodynamic and Thermodynamical Aspect of this topic was discussed in great detail. This was followed by an open discussion on the communications between a Rocket in Flight and the ground station. There was a spirited discussion on the purposes of the recovery of a Rocket and the purpose of a payload that is flownon a Rocket.

This was followed by a demo of the Open Rocket software by the team, where the

participants were taught on how to add and alter the parts on the system. They were also taught how to add and alter fins on the Rocket and add the Motor to it and configure it.

Round 2:-

This concluded the workshop part of the event following which the competition commenced. The participants asked to build a Rocket in the OpenRocket software using the things that they learnt in the workshop.

They were given a time of 15 minutes and a constraint of using a motor given by the organizing team. The participant with the highest apogee would be declared the winner.

The competition was conducted and every participant very designed their rockets.

Date & Time: February 1 - 2:00 to 4:30PM

Venue: CAD&D Lad, Ground Floor, MED, CBIT

Registration Fee: Rs. 79/- per head

No. of Participants: 19

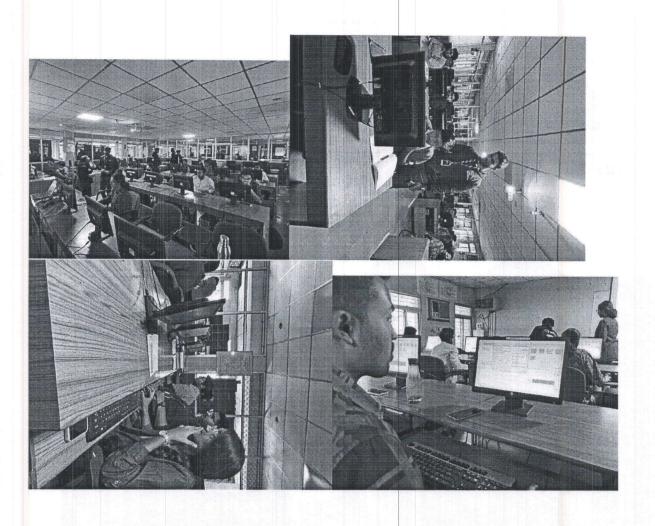
Event Leads:

- Mr. Sabareesh Reddy
- Mr. Jashwant
- Mr. Vikranth Jonna

Winners:

1) Akhilesh

Cash Prize: 3000/-





COMMITTED TO RESEARCH, INNOVATION AND EDUCATION YEARS

ASTRA

SUDHEE-23 SIMULATION SUMMIT



12. Shor in the Shore

I.Round 1: (Classic debate) (Time open to discussion is set for max 10 mins)

Rules -	Long and Many recording to the control of the contr
	A group of 6 participants will be sitting in a circle. And they will be given a statement.
	They are handed chits to decide whether they will debate for the statement or against the statement.
	They have the floor for 8 minutes.
	They have to stick to their stance and tell why their stance is the correct one.
_	g criteria -
П	Fluency - 10 marks Relevance of their argument - 10 marks
	Debate Ethics - 10 marks Listening skills - 10 marks
The 1	op 20 participants will move on to the next round
	and the second s
п.	Round 2: (create a planet) - (Time to speak - 3 mins, time to
thin	k - 2 mins)Rules -
	The participants will be given five random things/elements and they create a planet. Then they should specify/describe the details about the planet created. (Eg: elements: salt, volcano, fungi
	My planet has an abundance of salt coming from oceans and can generate electricity from waves and wind; there are volcano eruptions when it
	cooldowns it has many minerals; fungi help in the growth of plants.) Preparation time will be 2 mins, and delivery time will be 3-5 mins,
L	Freparation time will be 2 mins, and 30

Judging criteria -
 □ Creativity - 5 marks □ Spontaneity - 5 marks □ Wit - 10 marks □ Ability to include technical details - 10 marks From this round, 8 members will be selected for round 3
ROUND 3: (pitching)
Rules -
 □ The participants are put against each separate prompts (technologies). □ They have to convince the judges that their prompt is superior. □ It is a three-stage knockout tournament. □ 4 (one on one) debates will be going on simultaneously, the winners will move to thesemi-finals and the winners of the latter will move into the finals. □ The winner and runner-up will be awarded the prizes.
Judging criteria -
☐ Confidence - 10 marks ☐ Relevancy in arguments - 10 marks ☐ Pointing flaws of opponent - 10 marks ☐ Spontaneity - 10 marks ☐ Poto & Times January 21st 2:00 to 4:20 PM Files and a constant and a cons
Date & Time: January 31 st - 2:00 to 4:30 PM, February 1st – 2:00 to 4:30
Venue: E-203 Mechanical Department, CBIT
Registration Fee: Rs. 51/- per head
No. of Participants: 22
Event Leads:
☐ Shaguftha ☐ Samra ☐ Bhanu Sai ☐ KVH Kashyap

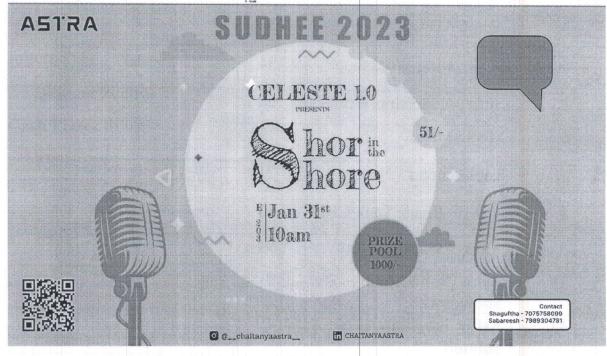
Winners:

1) Rami Reddy

Cash Prize: 1000/-



COMMITTED TO RESEARCH, INNOVATION AND EDUCATION YEARS



EVENTS SUMMARY:

S.No	Event Name	No. of Participants (Including Outside Participants)	No. of Outside Participants
1.	Paper Presentation	27 Papers	3
2.	Poster Presentation	6 posters	0
3.	AutoCAD Quiz	32	2
4.	3D Printing Workshop	34	16
5.	Enterprenuership Workshop	66	2
6.	MechaMage	19	1
7.	Tool-Lineup	21	0
8.	ASME_Shark Tank CBIT	13	0
9	ASME_Guest Lecture	94	0
10	Astra Club_Circuit Showdown	7	02
11	AstraClub_Simulation Summit	19	07
12	AstraClub_Shor in the Shore	22	02
	TOTAL	266	35

MECHANICA'23 POSTER:



VALEDICTORY CEREMONY:

The Valedictory Ceremony of Mechanica, was conducted offline at 03:30 PM on 1st February, 2023. The ceremony was presided over by Dr. NV Srinivasulu, MED. The number of registrations for each event were announced. The faculty coordinators Sri D. Ravi, Sri. V. Jaipal Reddy then addressed the crowd. The winners & runners per event were announced. The program ended with vote of thanks.

MECHANICA 2023, VALEDICTORY CEREMONY



Date & Time: 1st February, 2023 at 3:30PM

Audience: 199

DEMOGRAPHICS:

The demographics for the event are as follows:

7 other colleges have registered which includes Mahatma Gandhi Institute of Technology, BR Ambedkar Open University, G.PullaReddy Engineering College, Vidya Jyoti Institute of Technology, Kg Reddy college of engineering and technology, Vasavi College of Engineering, Vardhaman College of Engineering.

VOTE OF THANKS:

We would like to thank CBIT Management, Principal, Head of Mechanical Engineering Department and all Teaching and Non-Teaching Staff of Mechanical Engineering Department for their help and support. We would also like to thank our speakers who gave the participants, the muchneeded boost and their valuable guidance. We congratulate all the winners and all the participants.

PROFESSOR

Department of Mechanical Engineering Chaitanya Bharati Institute of Technology (A) Gandipet, HYDERABAD-500 075 (T.S.)

(Red 3 prop)

Rating: 5 – Excellent, 4 – Very Good, 3 – Good, 2 – Satisfactory, 1 – Poor

1.	How do you	feel the arranger	ments during the	2 programme		
	5	4	3	2	1	
2.	How do you	rate the quality o	f technical sessi	ons		
	5	4	3	2	1	
3.	How do you	rate the other tec	hnical events co	nducted during	MECHANICA 20	023
	5	4	3	2	1	
4.	How do you r	rate the ambience	:			
	5	4	3	2	1	
5.	Overall rating					
	5	4	3	2	1	
:	Suggestions if	any: Nice	eients.			moready
				De		FESSOR chanical Engineering

Department of Mechanical Engineering Chaitanya Bharati Institute of Technology (A) Gandipet, HYDERABAD-500 075 (T.S.)

Jeogla 200127

1.	How do you	feel the arrangen	nents during the	e programme 2	1	
2.	How do you	rate the quality of	technical sessi	ons		
	5	4	3	2	1	
3.	How do you	rate the other tecl	nnical events co	onducted during	MECHANICA 2023	
	5	4	3	2	1	
4.	How do you	rate the ambience				
	5	4	3	2	1	
5. (Overall rating	9				
!	9	4	3	2	1	
S	iuggestions i	fany: Gao So -Lo	me fun attrocct	games Cou more pas	ld have been condusted ticipants	

		1			
1.	How do you	feel the arrangem	ents during the	programme	
	5	4	3	2	1
2.	How do you	rate the quality of	technical session	ons	
	5	4	3	2	1
3.	How do you r	ate the other tech	nical events cor	nducted during M	ECHANICA 2023
	5	4	3	2	1
			***************************************		1
4. 1	dow do you ra	ate the ambience			
5		4	3	2	1
5. (verall rating				
5		4	3	2	1
S	aggestions if	any: Please	alot f	orize poul	without Considering use alot Budget to
0	the neg	istration f	ier And	also ple	ase alot Brodget to
,	individua	.1 Club/i	ren b.		Je 70

1	How do you f	eel the arrange	ments during th	ne programme		
	5	4	3	2	1	
2.	How do you ra	ate the quality o	f technical sess	ions		
	5	4	3	2	1	
3.	How do you ra	te the other tec	hnical events co	onducted during	MECHANICA 2023	
	5	4	3	2	1	
4.	How do you rat	e the ambience				
	5	4	3	2	1	
5.	Overall rating					
5	5	4	3	2	1	
5	uggestions if an	ny:				

1.	How do you	feel the arra	ngements during	the programme		
	5	4	3	2	1	
2.	How do you	rate the qua	lity of technical s	essions		
	5	4	3	2	1	
3.	How do you	rate the other	er technical event	s conducted dur	ing MECHANICA 2023	
	5	4	3	2	1	
4.	How do you	rate the amb	ience	-		
	5	4	3	2	1	
5.	Overall ratin	ng				
	5	4	3	2	1	
	Suggestions	if any:	II C			

Rating: 5 - Excellent, 4 - Very Good, 3 - Good, 2 - Satisfactory, 1 - Poor

1. How do you feel the arrangements during the programme

	5	4	3	2	1	
2.	How do you ra	te the quality of	technical sessio	ns		
	5	4	3	2	1	
3.	How do you ra	te the other tech	nnical events cor	nducted during M	1ECHANICA 2	023
	5	4	3	2	1	
4.	How do you ra	te the ambience				
	5	4	3	2	1	
5.	Overall rating					
	5	4	3	2	1	
	Suggestions if	any: Plz	arrange	the but	dgest	before
<		1 (rodays)				

1.	How do you fo	eel the arrangen	nents during the	programme	1
2.	How do you ra	ate the quality of	f technical sessio	ons 2	1
3.	How do you ra	ate the other tec	hnical events con	nducted during N	MECHANICA 2023
4.	How do you ra	ate the ambience	3	2	1
5.	Overall rating	4	3	2	1
Mandonce	Suggestions if Pleas and pu	any: e aooiango orchase de	partments	ed before h	and. And please merry

Rating: 5 - Excellent, 4 - Very Good, 3 - Good, 2 - Satisfactory, 1 - Poor

1.	How do you	i feel the arrang	ements during	the programme		
	5	4	3	2	1	
2.	How do you	rate the quality	of technical se	essions		
	5	4	3	2	1	
3.	How do you	rate the other t	echnical events	conducted duri	ng MECHANICA 2023	
	5	4	3	2	1	
4.	How do you	rate the ambier	nce			
	5	4	3	2	1	
5.	Overall rating	3				
	5	4	3	2	1	
			P	0		
	Suggestions i	fany: -Enti	y fees to	r Jome Ga	event could have been less	
		U	,	2 0	PROFESSOR	
Ne	Out 100/23	1			Department of Mechanical Engineerin Chaitanya Bharati Institute of Technology (<i>l</i>	

Gandipet, HYDERABAD-500 075 (T.S.)





SUDHEE 2022

Department of Mechanical Engineering MECHANICA 2022

About Mechanica

MECHANICA is the 2-day National Level Technical Fest of Department of Mechanical Engineering organised as a part of SUDHEE'22, the Technical Fest of CBIT. Mechanica has organised 09 euphoric events during the academic year 2021-2022. The fest was conducted on 23rd and 24th of MARCH, 2022 pragmatically. We had 400+ participants altogether.



Support from College

The college management, Principal, Head of the Department and SUDHEE Core Committee have encouraged, supported and guided us through out this venture.

Faculty Coordinators

1. Sri. P. Kiran Kumar (Assistant Professor, MED)



2. Sri. V. Jaipal Reddy (Assistant Professor, MED)



Student Coordinators

1. Mr. R. Ashish Choudhary



2. Mr. M. Sri Harsha



3. Mr. K. Nishanth



Overall Event Heads

1. Mr. Rohit Godse



2. Mr. Shaik Chand Pasha



Details:

1. INAUGURAL CEREMONY

The Opening Ceremony of Mechanica, was conducted offline at 12:00 PM on 23rd March, 2022. The ceremony was presided over by Dr. P. V. R Ravindra Reddy, Head of the Department(MED). The speaker, Dr. J. John Rozario Jegaraj, then addressed the crowd. The technical fest was officially declared open.

Speaker: Dr. J. John Rozario Jegaraj

Topic: Disruptive Technologies in Defence & Aerospace Applications.

Event Dates: 23rd and 24th March 2022

Event Website: https://linktr.ee/mechanica2022

Guest Speaker:



Dr J. JOHN ROZARIO JEGARAJScientist F in DRDL, Hyderabad.

Dr. J. JOHN ROZARIO JEGARAJ is serving as
Scientist F in Defence Research and Development
Laboratory (DRDL), DRDO, Hyderabad. Presently, he
is Deputy Technology Director and Head, Product
Engineering and Industry Interface Division,
Directorate of Productionization & Technology
Transfer, DRDL, Hyderabad.

He has completed his Bachelor's degree in Mechanical with Pondicherry Engineering distinction from Engineering College, Pondicherry Technological University, Pondicherry, and Masters degree Mechatronics in distinction with Gold medal from MIT, Anna University, Chennai. He got his Doctorate degree in Mechanical Engineering from Indian Institute of Technology Madras, Chennai in 2006.

He is having about 27 years of industrial and research experience. He is involved in the development of Critical Aerospace & Missile Hardware and having wide experience in the areas of product development and manufacturing of missile hardware such as Rocket Motor Assemblies, Airframe Sections, Fin Assemblies, Control Surfaces, Propulsion system components, Launchers and other Ground systems.

In 2018, he has been awarded prestigious "Engineer Of The Year Award" by the Government of Telangana and the Institution of Engineers (India), Telangana State Centre, Hyderabad. He has been also awarded "DRDO Science Day Award" in 2019, "Technology Group Award" in the year 2019 and 2020 for the development of processes for special hardware for missile applications. In 2021, he has been awarded "DRDL Laboratory award" for his

contributions towards 3D printing of components for missile applications and many other awards towards his contributions.

He is Fellow in various professional societies like Indian Institute of Production Engineers, Institution of Engineers (India), and member of Aeronautical Society of India, Astronautical Society of India, Society for Failure Analysis, Indian Society for Non Destructive Testing and many other forums.

He has guided Doctoral research, P.G and U.G project works and published many research papers in the International Journals and conferences in the area of manufacturing. He is a member of Board of Studies of many colleges and member of Advisory Boards of many Organizations.

His areas of interest are Product Development, Additive Manufacturing, Advanced Manufacturing, Innovative and Disruptive Manufacturing Technologies, Abrasive Waterjet Machining, Precision Machining, Mechatronics, Modeling and Simulation of Manufacturing processes.







Photos:

2. MECHANICAL QUIZ

Description: A quiz is a game which can also be called a mind sport wherein the players, either as individuals or in teams attempt to answer questions posed to them correctly, to win a prize. We designed these to promote, a fun way of study and help in the process of improving one's general knowledge.

Date & Time:

• March 23: 1:00 pm to 4:30 pm.

• March 24: 10:30 am to 1:00 pm.

Venue: D-201, MED, CBIT.

Registration Fee:

• Single- Rs. 50/-

• Pair- Rs. 150/-

No. of Participants: 30

Event Leads:

• Mr. V. S. L. Tanuj

• Mr. VIjayendra

Winners: Mr. N. Sashank & Mr. Rohit

Godse

Cash Prize: Rs. 400/-

Photos:





QUIZ:

Description: AutoCAD is a design and drafting software used by architects, engineers, interior designers to create 2D and 3D drawings and models which helps them in their design and analysis. The present quiz is



a fun way to improve and test your knowledge about the software and drafting in general.

Date & Time: 23 March- 2:00 to 3:00 PM

Venue: E-201, MED, CBIT

Registration Fee:

• Quiz for 1st year students: ₹30 per head

• Quiz for all other year students - ₹50 per head

No. of Participants: 28

Event Leads:

• Mr. Sudhansh

• Mr. Chinmay Krishna Peri

Winners:

• Miss. S. Sravya

• Mr. B. Kaushik

Cash Prizes:

• First- Rs. 500/-

• Second- Rs. 300/-

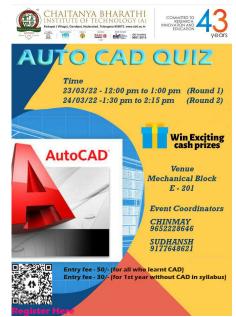
Photos:





SIGN MANIA:

Description: 3D Design Mania is 3D Modelling competition Of Daily used or any other Real-Time Examples. You use either Solid Works or Fusion 360 Software for Designing.



Date & Time: March 24th 10:30 to 1:00

Venue: CAD/CAM Lab, MED, CBIT

Registration Fee: Rs. 80/- per head

No. of Participants: 9

Event Leads:

Mr. Tarun Vishnu Vardhan

• Mr. Nirmit Naha

Winners:

• Mr. V. M. Bharadwaj

Cash Prize: Rs. 670/-

Photos:





5. 3D PRINTING WORKSHOP:

Description: 3D printing is the process of creating physical object from a digital 3D design. It is a growing field and most likely to become the future of manufacturing. The 3D printing workshop, we are conducting will help the students to explore the opportunities and its applications in today's developing world.

This workshop includes:

- Introduction about various 3D printing technologies and its applications.
- Slicing the 3D model using a software.
- 3D Printing the model.



After completion of the workshop, a Quiz will be conducted. The top three participants who score the highest marks in least possible time will be awarded with a merit certificate and a 3D printed model.

Date & Time: March 23-1:00 to 4:00 PM

Venue: CAD/CAM Lab, MED, CBIT

Registration Fee: Rs. 100/- per head

No. of Participants: 35

Faculty Coordinator: Smt. P. Anjani Devi, Assistant Professor, MED, CBIT

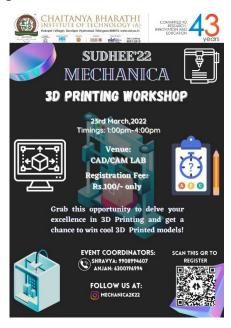
Event Leads:

• Mr. Vege Sai Anjan

• Miss. S. Shravya

Photos:







6. SCAVENGER HUNT

Description: Scavenger hunt is fun and informal event for team of two (or) individual.

It includes basic IQ riddles for all and everyone. Riddles are made by keeping in mind all the students from 1st - 4th year. It basically consists of 8-10 riddles printed on play-cards which would be hidden at different places. The participants have to solve the riddle on each card, which would guide them to the next place, where they would find the next riddle, till the last place. The participants have to collect all the cards, and each card will act as a piece for the final riddle which will include technical riddle and at last, they have to assemble them in such a way that the puzzle/riddle is solved. The team to finish it in best time will be considered as winner and the second place and third vice-versa.

Date & Time: March 24- 2:00 to 4:00

Venue: Assembly Point- MED Entrance & Hunt- Entire Campus

Registration Fee:

PM

• Single- Rs. 50/-

• Pair- Rs. 80/-

No. of Participants: 62



Event Leads:

- Mr. Mohammed Bilal
- Miss. Pravallika

Winners:

- First- Mr. B. Krishna Mourya
- Second- Miss. M. Sreenija
- Third-

Cash Prizes:

- First- Rs. 800/-
- Second- Rs. 600/-
- Third- Rs. 500/-

Photos:





7. POSTER PRESENTATION

Description:

Poster presentation is the contest which may help one to portray their creativity in relevance to their technical knowledge. Consider it to be same as a paper presentation, poster presentation involves making a digital poster which depicts ones idea and research rather than a Power Point presentation. There are two stages in this event wherein the first stage involves brief description of their idea and the next being the final round wherein students have to present their posters with enthusiastic explanation to the audience and judges. Evaluation is done by highly qualified judges.

Date & Time:

• March 23- 1:00 to 4:30 PM

• March 24- 10:00 to 4:30 PM

Venue: D-201, MED, CBIT

Registration Fee: Rs. 400/-

No. of Participants: 0

Event Leads:

• Miss. Anushka

• Mr. Aravindam

Winners: 0

Cash Prizes: Rs. 2000/-



8. PAPER PRESENTATION

Description:

It is the platform to vent your ideas in the form of well-integrated and intriguing presentation. It gives a unique opportunity to the youngsters to

express and compete in the presence of jury. There are two stages in this event where in the first stage is submission of abstract and the next one is the final round where students must present in front of judges. Evaluation is done by highly qualified judges.

Date & Time:

- March 23- 1:00 to 4:30 PM
- March 24- 10:00 to 4:30 PM

Venue:

- Seminar Hall, MED, CBIT
- E-303, MED, CBIT

Registration Fee: Rs. 400/-

No. of Participants: 38

No. of Papers Received: 30

Internal Jury:

- Dr. N. V. Srinivasulu, Professor, MED, CBIT.
- Dr. Md. Aleem Pasha, Associate, MED, CBIT.
- Dr. Ch. Indira Priyadarshini, Assistant Professor, MED, CBIT.
- Dr. B. V. S Rao, Assistant Professor, MED, CBIT.

External Jury:

- Dr. T. Rammohan Rao, Professor & Head, Vasavi College of Engineering.
- Dr. K. Sudhakar Reddy, Professor & Head, Mahatma Gandhi Institute of Technology.
- Dr. S. Naga Sarada, Professor, JNTUH.
- Dr. P. Srinivasa Rao, Professor & Head, Vardhaman College of Engineering.

Event Leads:

• Miss. E. Pranitha Raj



Miss. N. Satvika

Winners:

• Mr. D. Hemamsu

• Miss. Sruthi Shanker Pydimarry

• Mr. A. Sharath & Mr. R. Tharun

• Mr. G. Harshavardhan Reddy

Cash Prize: Rs. 2000/- for one paper

Photos:





9. SHARK TANK CBIT

Description: Shark Tank CBIT is a platform for students to pitch their project ideas and in exchange get the fund required to kickstart their journey of turning the idea into reality.

Date & Time: 23rd March- 1:00 to 4:30 PM

Prerequisites:

A detailed project presentation (PPT) with the following criteria:

An innovative Idea

Its contribution to society in solving a problem

I Feasibility (transforming idea into product)

Project Expenditure Credit System: Each of the above-mentioned criteria has 5 credits.

Maximum Credits: 20

19-20 credits=100% of ask

17-18 credits=75% of ask

■ 15-16 credits=50% of ask

14 credits=Reg. Fee will be given back

Event Procedure: Each participant must pitch their project idea within 30 minutes. A panel of judges will analyse every aspect of the presentation, ask for clarifications over the above-mentioned criteria. Then there will be a discussion among the panel over the genuineness of the idea and will finally take a call on awarding the funds to the participant. Note: The fund will be awarded by the panel based on the above-mentioned criteria may not match the participant's expected fund (it may be less).

Targeted Participants: 1 st, 2nd, 3rd, and 4th year Students from all branches, who have an excellent project idea and are looking for funding.

Event Details: "Ask": It is the expected fund. It can range from ₹1000 to ₹5000 in multiples of 1000 Maximum "Ask": 5000/-

Registration Fee: 10% of "Ask"

No. of Participants: 3

Jury:

- Dr. Puneet Chandran, Assistant Professor, CBIT
- Dr. Ammireddy Kiran Kumar, Assistant Professor, CBIT
- Dr. Hari Krishan Yadav,

Event leads:

- Mr. N. Jaya Sai Sashank
- Mr. A. Tharun

Winners: Team of 3

- Mr. Mukund Vishwanath
- Mr. Prasanna Ganapati Manjunath Nayak
- Mr. Jayesh Dhooth

Cash Prize: Rs. 2500/-



Photos:





ZZ

Description: Participants will be given a problem statement they have to provide the right solution. The best among them will be awarded with cash prize.

Date & Time: 23 March- 1:00 to 4:30 PM

Venue: E-203, MED, CBIT

Registration Fee: Rs. 50/-

No. of Participants: 3

Jury: NIL

Event Leads:

Mr. SadanandMr. Vijay Sai

Winners: 0



EVENTS SUMMARY:

S.N Even	t Name	No.	of 1	No. o	of Outside
----------	--------	-----	------	-------	------------

0		Participants (Including Outside Participants)	Participants
1.	Mechanical Quiz	30	6
2.	AutoCAD Quiz	28	0
3.	3D Design Mania	9	0
4.	3D Printing Workshop	35	0
5.	Scavenger Hunt	62	0
6.	Paper Presentation	30	8
7.	Poster Presentation	0	0
8.	Shark Tank CBIT	3	0
9.	Tech Whizz	3	0
	TOTAL	200	14

MECHANICA'22 POSTER:



VALEDICTORY CEREMONY:

The Valedictory Ceremony of Mechanica, was conducted offline at 03:00 PM on 24th March, 2022. The ceremony was presided over by the Head of the

Department, Dr. P.V.R Ravindra Reddy, Professor, MED. The number of registrations for each event were announced. The faculty coordinators Sri P. Kiran Kumar, Sri V. Jaipal Reddy then addressed the crowd. The winners & runners per event were announced. The program ended with vote of thanks.

MECHANICA 2022, VALEDICTORY CEREMONY

Date & Time: 24th March,2022 at 3:00PM

Audience: 199

DEMOGRAPHICS:

The demographics for the event are as follows:

5 other colleges have registered like Mahatma Gandhi Institute of Technology, Guru Nanak Institute of Technology, Deccan College of Engineering, Vasavi College of Engineering, University College of Engineering & Technology for Women.

VOTE OF THANKS:

We would like to thank CBIT Management, Principal, Head of Mechanical Engineering Department and all Teaching and Non-Teaching Staff of Mechanical Engineering Department for their help and support. We would also like to thank our speakers who gave the participants, the much-needed boost and their valuable guidance. We congratulate all the winners and all the participants.





Sudhee 2021

Department of Mechanical Engineering

Mechanica 2021

About Mechanica

Mechanica is the two-day National-Level Technical Fest of Department of Mechanical Engineering organized as a part of Sudhee 2021, the Technical Fest of CBIT. Mechanica has organized 7 ecstatic events during the year 2020-2021. The fest was conducted on the 3rd and 4th of March, 2021 virtually. We had **237** participants altogether.

Support from College

The College Management, Principal, Sudhee Core Committee, Head of the Department have encouraged, supported and guided us in this endeavor.

Faculty Coordinators:

1. Dr. S. Solomon Raj, Associate Professor



2. Sri. P. Kiran Kumar, Assistant. Professor



Student Coordinators:

1. Vignan Babu. D

2. Kaleemullah. M

3. Dheeraj. N







DETAILS ABOUT THE EVENT

Inaugural Ceremony

The Opening Ceremony of Mechanica, was conducted online at 11:30 AM on 3rd March, 2021. The ceremony was presided over by the Head of the Department, Mechanical Engineering, Professors, faculty Coordinators and faculty members. The speaker, Dr.L.Siva Rama Krishna, then addressed the crowd. The conference was officially declared open.

Speaker: Dr. L.Siva Rama Krishna

Topic: Innovative Application of 3D printing

Event Dates: 3rd and 4th March 2021

Event Website: <u>HOME | Mechanica2021 (wixsite.com)</u>

Guest Speaker



Dr. L. Siva Rama Krishna. Asssociate Professor MED, OUCE.

Profile:

Dr. L. Siva Rama Krishna, is presently working as Associate Professor in the Dept. of Mech. Engineering, University College of Engineering(A), Osmania University. Presently he is working as Joint Director, Centre for Product Design, Development and Additive Manufacturing (A centre of Excellence established under RUSA 2.0), Nodal Officer PMSSS (J&K), Single Point of Contact for Local Chapter SWAYAM- NPTEL, NSS program officer, and Faculty Adviser for M.E course on DFM. Course. He has also worked as Joint Director of Evaluation Examination Cell, University College of Engineering, Osmania University.

Some Professional milestones:

He is Reviewer for many reputed journals like Institute of Engineers India Series C journal Springer Series, British Journal of Medicine and Medical Research, etc. He has won the best research paper award in the International Conference on Recent Innovations in Engineering and Technology at Bhubabeswar. He has guided more than 60 ME projects and presently guiding 9 Ph.D students. He has delivered 85 guest lecturers in various UGC & AICTE refresher courses, webinars, in house training programs of prestigious organizations like BHEL (R&D), BDL etc. He has also organized various STTP's, International Conferences, workshops etc. He works with MDS Care Hospitals Banjara Hills, Yashodha Hospitals Secunderabad and Sri Sai Dental College, Mahbubnagr for solving various critical cases related Cranioplasty and Maxillofacial Surgeries.

The schedule for the event was as follows:

Mechanica 2021 Inaugural Function

Date & Time:

03-03-2021 11:30 AM to 11:45 AM

Event 1: Guest Talk

Date & Time:

03-03-2021 11:45 AM - 01 : 15 PM

Speaker: Dr. L. Siva Rama Krishna

Topic: Innovative Application of 3D printing

Audience: 50 Count **Event Description:**

To uphold the enthusiasm and excitement of the students in emerging technologies in the field of Mechanical Engineering. We have come up with an industrial expert who will explain the scope of their studies in practical applications

The event will help the students to choose their career path by exercising every step, in relation to the future demanding skills.

Links:

https://drive.google.com/file/d/184dlDyPqsufOK58KXe6ZygjN-C4GtiEJ/view?usp=sharing







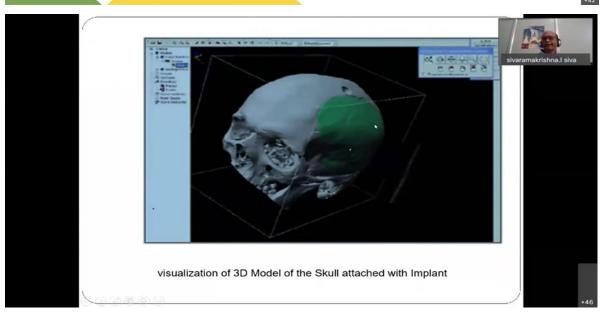


Guest Talk



Dr. L. SIVA RAMA KRISHNA
Prof, MED, OUCE
INNOVATIVE APPLICATION OF 3D PRINTING

42





Event 2: Paper Presentation

Event Description:

It is the platform to vent your ideas in the form of well-integrated and intriguing presentation. It gives a unique opportunity to the youngsters to express and compete in the presence of jury.

There are two stages in this event where in the first stage is submission of abstract and the next one is the final round where students must present in front of judges. Evaluation is done by highly qualified judges.

Date and Time:

03-03-2021 : 1:30 PM - 03:30 PM

04-03-2021 : 10:30AM - 01:30PM

No. of Participants: 23

Faculty Committee/Jury:

Day 1

Dr. N. V. Srinivasulu Dr. N. Janardhan

Day 2

Dr. K. Gurubramham

Dr. G Laxmaih

Winners:

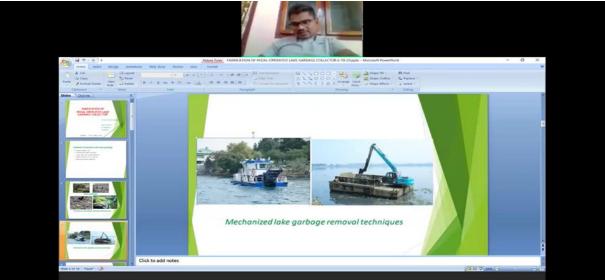
Prize-1: KONAGALLA MANIKANTA, Department of Mechanical Engineering, SASI INSTITUTE OF TECHNOLOGY AND ENGINEERING.

Prize-2: Rohit Rahul Godse & Suyog Sharnagat, Department of Mechanical Engineering, CBIT

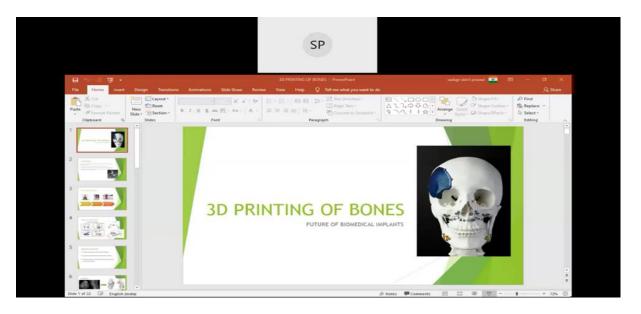
Links:

https://drive.google.com/file/d/1vhaOfO_j0NGVry4UTZdoVA621AozJLKJ/view?usp=sharing
https://drive.google.com/file/d/1cZSbblA4tvjZztblrA6-Y-4_Coe1Xk_t/view?usp=sharing
https://drive.google.com/file/d/1z-oWCYIR5NQ7oISUgCWrrpGq_R0O8aTk/view?usp=sharing
https://drive.google.com/file/d/18MJORxfwE1-NPYI3FJ5G3zSjofdU9rtK/view?usp=sharing
https://drive.google.com/file/d/1SBWWB6AjDqVm-W9IiLZArrpZdgxBCq66/view?usp=sharing











Event 3: Quiz

Event Description: Quiz competition is a pursuit of trivial Knowledge, encouraging students to achieve academic excellence and Increase their awareness of the world around them.

There are two rounds, where preliminary round has 10 exciting questions along with Riddles and Fill in the Blanks based on the world of Engineering! Final round includes some Pictionary questions.

Date & Time:

03/03/2021 1:30 PM - 02:30 PM

04/03/2021 11:00AM - 12:00PM & 12:45PM - 01 : 15PM

No. of Participants: 48

Faculty Committee/Jury: NA

Winners:

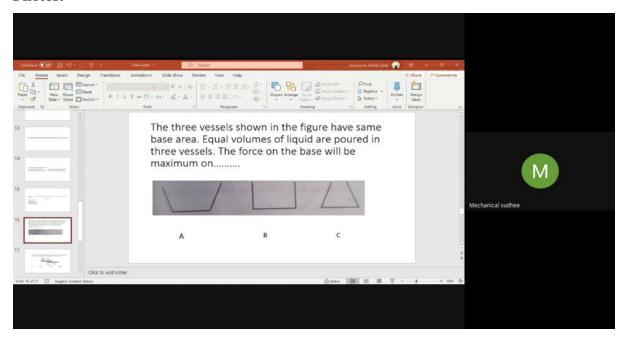
Prize-1: Baladitya Boddu, Mechanical Engineering. CBIT

Prize-2: GANJI SAI RAM, Mechanical Engineering, CBIT

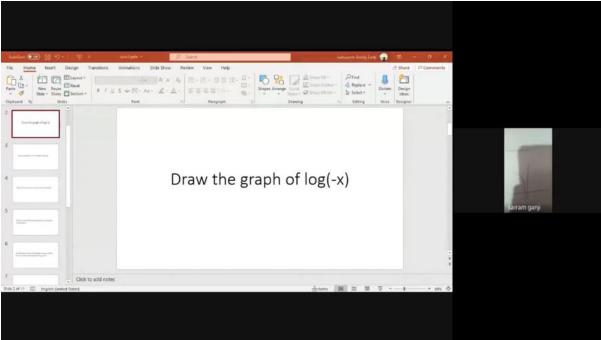
Links:

https://drive.google.com/file/d/1rzEZGX2-gLyvRtKsuDyujihPf3L4k8Q2/view?usp=sharing

https://drive.google.com/file/d/10wheKxzOtjJdWp-VEVfheE223kDwnn9t/view?usp=sharing

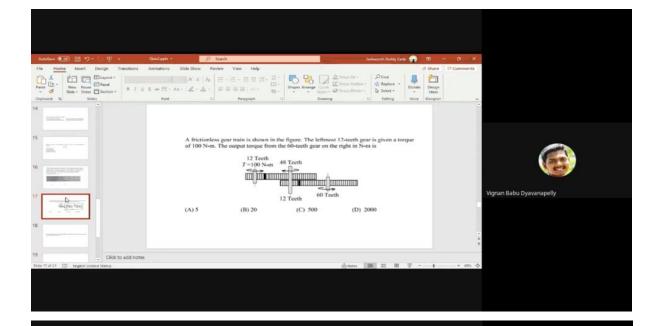












What type of heat exchangers do you prefer for less space heating/cooling, why?



Event 4: Elocution

Event Description

Want to improve your communication skills and become more persuasive when you speak? A stage for lighthearted What If-s and Once upon a time not so long ago-s, we present to you an amazing opportunity to oil your lever of creativity and public speaking. This event consists of three rounds of exponential fun and laughter where content, fluency and vocabulary pedal the enthusiasm in a medium of profound story telling. Six topics will be given to the participants a day before for preparation and a dice is rolled at the time of the contest upon which the participant has to speak.

Time:

04-03-2021 : 11 : 30PM - 12 : 30 PM

No. of Participants: 09

Faculty Committee/Jury: Dr. K. Kishor

Winners:

Prize1: Konagalla Manikanta, Department of Mechanical Engineering, SASI INSTITUTE OF TECHNOLOGY AND ENGINEERING

Prize2: M.S.SAWANTH, Mechanical Engineering, CBIT

Links:

 $\frac{https://drive.google.com/file/d/16bcE97nMizVXYRKJXKlq5EVooeh_PP5-/view?usp=sharing}{https://drive.google.com/file/d/1fvRB0wLRiPPTjzZChXZRV3slPxDoKjZB/view?usp=sharing}$







Event 5: CAD modelling

Event Description:

Here is an amazing opportunity to showcase your skill on a unique and mostly used platform called Computer Aided Designing. It strives to explore the competency of young minds by giving their incredulous ideas a Shape, Form and helps in dynamic analysis of different worldly things.

In this event, the participants have to draw the 2D view of the given 3D Model, given by the organizing team within the stipulated time, which is decided prior to the event. The designs are evaluated based on the precision of design and the time in which the design is submitted.

Date and Time:

03/03/2021 1:30 PM - 02:30 PM

04/03/2021 10:00AM - 01:00PM

No. of Participants: 20

Faculty Committee/Jury: Smt. Ch. Indira Priyadarsini

Winners:

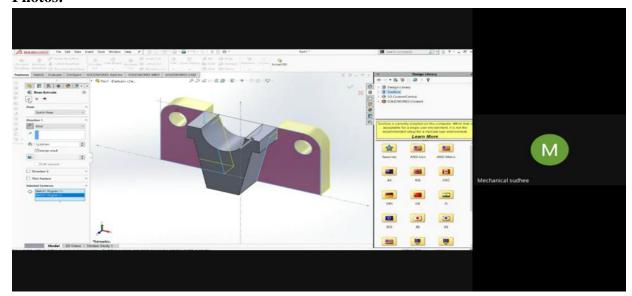
Prize1: Yashwanth K, mechanical Engineering, CBIT

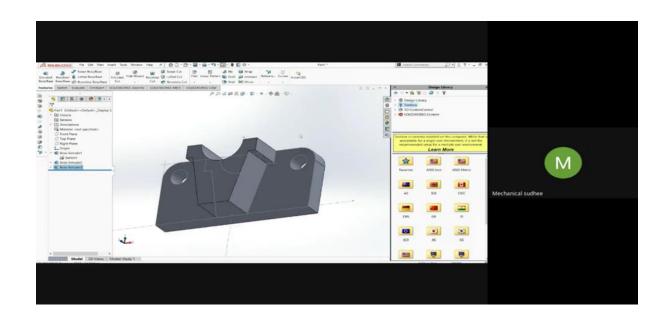
Prize2: Jashwanth Reddy Earla, Mechanical Engineering, CBIT

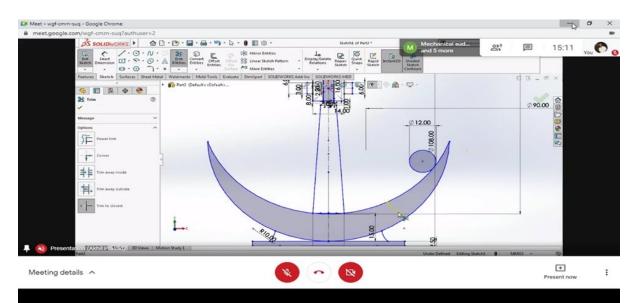
Links:

https://drive.google.com/file/d/1ayel-h_I2VjMURQXRkImzSQDjTiCxHyq/view?usp=sharing

https://drive.google.com/file/d/1ILGdC1K3Zjc8mujjYGDJKnE63jzhllAY/view?usp=sharing









Event 6: Poster Presentation

Event Description:

Poster presentation is the contest which may help one to portray their creativity in relevance to their technical knowledge. Consider it to be same as a paper presentation, poster presentation involves making a digital poster which depicts ones idea and research rather than a Power Point presentation.

There are two stages in this event wherein the first stage involves brief description of their idea and the next being the final round wherein students have to present their posters with enthusiastic explanation to the audience and judges. Evaluation is done by highly qualified judges. The event will be held online

Date and Time:

04/03/2021 : 12 : 30PM - 01 : 30 PM

No. of Participants: 09

Faculty Committee/Jury: Smt. Ch. V. Sushma

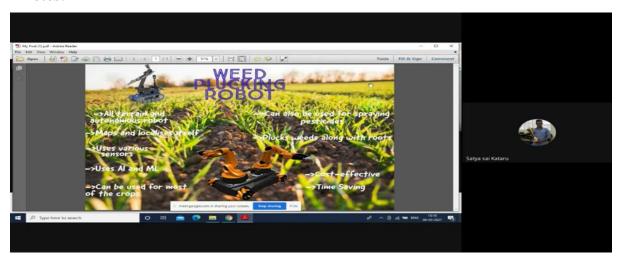
Winners:

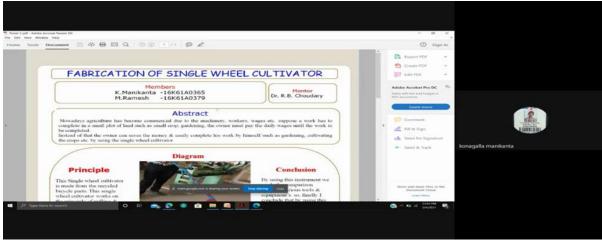
Prize1: KONAGALLA MANIKANTA, Department of Mechanical Engineering, SASI INSTITUTE OF TECHNOLOGY AND ENGINEERING

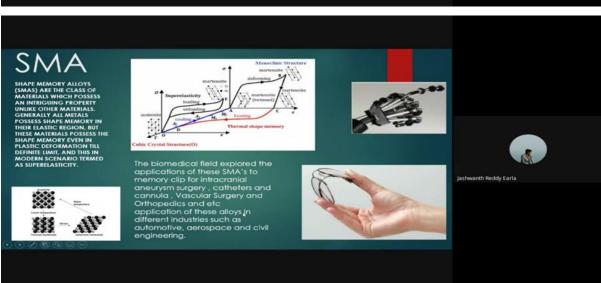
Prize2: Satya Sai Kataru, Mechanical Engineering, CBIT.

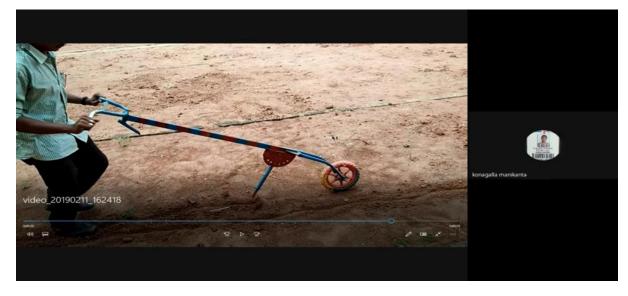
Links:

https://drive.google.com/file/d/1uvA-jjkAkaKx0CCbZ8w9t9 BZCePWf7l/view?usp=sharing









Event 7: Web Design

Event Description:

Our moto of making people multi-talented and making self-reliable has come up come an exciting event in which we made participants to design a website that will help for their startups as a publicity tool, and we hope that our Mechanical engineers will be self-reliable to perform some basic IT tasks

Date & Time:

04/03/2021 10:00 AM - 11:00 AM

No. of Participants: 08 Teams

Faculty Committee/Jury: Smt. Ch. V. Sushma

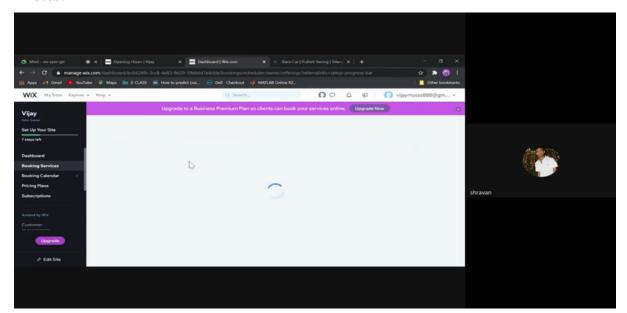
Winners:

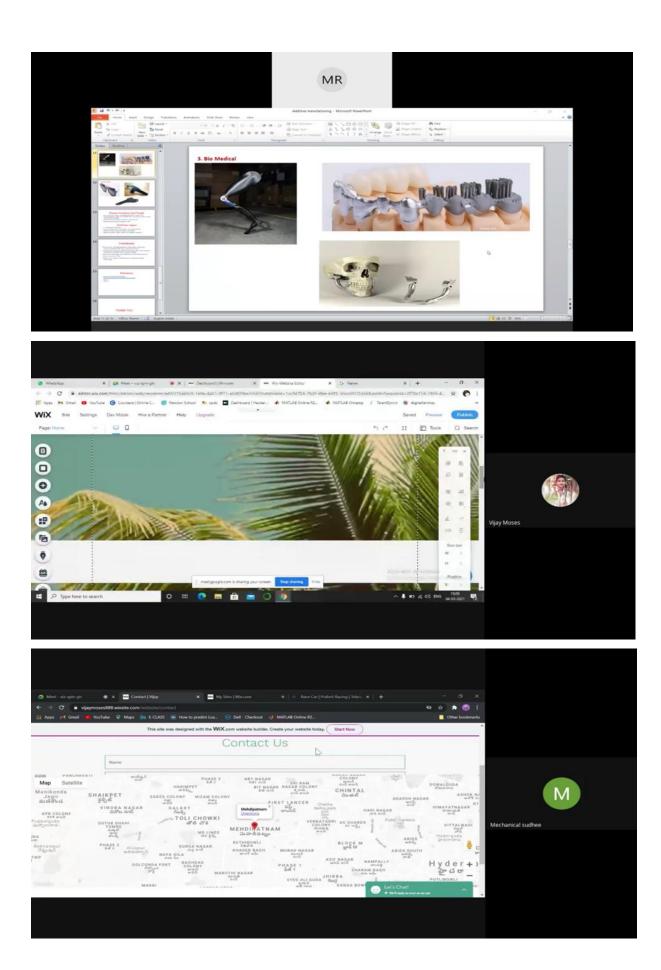
Prize1: Shravan Jagadam, Mechanical Engineering, CBIT

Prize2: Vijay Raju, Chemical Engineering, CBIT

Links:

https://drive.google.com/file/d/1c36Lx6DyfB_xGM7ARrdjAljdPtOsjEQp/view?usp=sharing





Events Summary:

S.No.	Event Name	No. of Participants (No. of Outside
		Including Outside	Participants
		Participants)	
1	Paper Presentation	23	04
2	Poster Presentation	09	02
3	Quiz	48	02
4	Elocution	09	01
5	CAD Modelling	20	01
6	Web Design	08	01
7	Guest Talk	50	02
8	Valedictory Ceremony	70	00
9	Total	237	13







Valedictory Ceremony

The Valedictory Ceremony of Mechanica, was conducted online at 03:45 PM on 4th March, 2021. The ceremony was presided over by the Senior Faculty Dr. N.V. Srinivasulu, Professor, MED. The number of registrations for each event were announced. The faculty coordinator Dr. S. Solomon Raj, Sri P. Kiran Kumar then addressed the crowd. The Winners, Runners per event were announced. The program ended with vote of thanks.

Mechanica 2021 Valedictory Ceremony

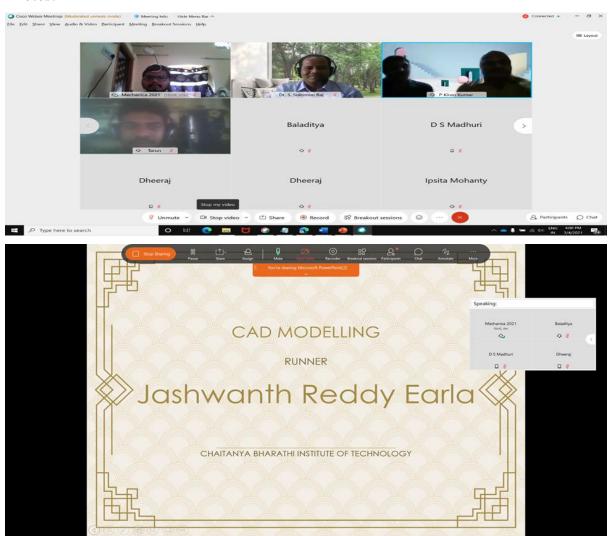
Date & Time:

04-03-2021 03:45 PM to 04:15 PM

Audience: 70

Links:

https://drive.google.com/file/d/1jQA tSWbJ8Lez8hfu1prb6va4ZN2wEgh/view?usp=sharing





Demographics

The demographics for the event are as follows:

1. 13 other colleges have registrations like CMR, Sasi Institute of Technology & Engineering, Khammam Institute of technology and science, BVRIT HYDERABAD COLLEGE OF ENGINEERING FOR WOMEN, Vardhaman, St.Pious x degree, VASAVI COLLEGE OF ENGINEERING, Teegala Krishna Reddy college of engineering and technology.

Vote of Thanks

We would like to thank CBIT Management, Principal, Head of Mechanical Engineering Department and all Teaching and Non-Teaching Staff of Mechanical Engineering Department for their help and support. We would also like to thank our speakers who gave the participants, the much-needed boost and their valuable guidance. We congratulate all the winners and all the participants.