VEER SURENDRA SAI UNIVERSITY OF TECHNOLOGY, BURLA

NEWSLETTER

AUG 2023 - DEC 2023

Issued by ***Technical Society***

VICE CHANCELOR

PROF. BANSHIDHAR MAJHI

Looking back on the past academic year, we have witnessed a diverse range of academic pursuits and engaging club activities that have ignited the passions and potential of our students. This newsletter serves as a dynamic showcase, highlighting their intellect, creativity, and unwavering enthusiasm. Congratulations to the students who initiated this platform, showcasing their innovative thinking and collaborative spirit.

We express our appreciation to the entire Veer Surendra Sai University of Technology, Burla community. Our collective blend of diverse perspectives, determination, and pursuit of excellence defines us. With this formidable synergy, we are prepared to explore new horizons and reach greater heights.

DEAN OF STUDENTS' WELFARE

PROF. SANJAY KUMAR PATRO

Within our institution, thriving communities of students are fueled by an unwavering dedication to innovation. These communities, driven by passion and curiosity, provide fertile ground for experimentation, learning, and collaboration. Their collective ambition inspires us to embrace change with resilience and explore new frontiers. As we witness remarkable projects and initiatives emerging from these groups, I urge each of you to actively engage with and draw inspiration from these exceptional individuals.

Together, we can cultivate a culture of innovation that propels our institution forward and positively impacts our evolving world. By championing and celebrating the outstanding efforts of our students, we can collectively shape a future marked by innovation and progress. Let us unite in our shared mission to empower today's innovators to shape tomorrow's world.

ASSOCIATE DEAN STUDENTS' WELFARE

DR. PUNYAPRIYA MISHRA

In our institution, vibrant student communities thrive on a relentless dedication to innovation. Fueled by passion and curiosity, these groups serve as dynamic hubs for experimentation, learning, and collaboration. Their boundless ambition inspires us to embrace change with resilience and explore new horizons. Witnessing outstanding projects and initiatives emerge as the best venture.

Together, let's cultivate a culture of innovation that propels our institution forward and leaves a lasting impact on our evolving world. By celebrating the remarkable efforts of our students, we can collectively shape a future characterized by innovation and progress. Let's unite in our mission to empower today's innovators to shape tomorrow's world.

TECHNICAL VICE PRESIDENT

DR. BIDYADHAR ROUT

Reflecting on the academic voyage we've traversed, a tapestry of scholarly quests and vibrant club endeavors unfolds before our eyes. This missive stands as a living tapestry, a vibrant canvas capturing the brilliance, innovation, and boundless zeal of our student body. Hats off to those pioneering minds who conceived this platform, a testament to their ingenuity and collaborative ethos.

Gratitude cascades through the hallowed halls of Veer Surendra Sai University of Technology, Burla, embracing every member of our community. Our amalgam of diverse viewpoints, relentless drive, and relentless pursuit of perfection defines us. With this formidable alliance, we stand poised to explore uncharted realms and scale loftier summits.

Step into the heart of our institution, where innovation reigns supreme and creativity knows no bounds. Here, amidst the bustling corridors and vibrant student communities, a symphony of passion and curiosity echoes through the halls. These dynamic hubs, fueled by an unyielding dedication to pushing boundaries, serve as beacons of inspiration and collaboration. As we gaze upon the remarkable projects and initiatives taking shape, we are captivated by the sheer ingenuity and relentless pursuit of excellence. It is a mesmerizing sight, where resilience meets creativity, and where each endeavor propels us closer to new horizons. Together, we embark on a journey where the possibilities are endless, and the future is ours to create.

CO-ORDINATOR STUDENTS' WELFARE

MR. ANANDA KUMAR BEHERA

FROM THE EDITOR'S DESK

ROHIT MOHANTY
(EDITOR-IN-CHIEF)

Transitioning from a mere content writer to assuming the role of editor-in-chief for the technical newsletter has been an incredible journey, enriching my writing skills immensely. I am thrilled to have had the opportunity to contribute to this exceptional journal for the Technical Society and aspire that it serves as an ideal platform for the tech enthusiasts of VSSUT, Burla.

As the Editor-in-Chief, I am continually inspired by your unwavering support, enthusiasm, and dedication with which we lead in all technical domains. Together, we have built more than just a magazine; we have cultivated a vibrant and inclusive community bound by a shared love for knowledge, creativity, and the power of words. As we move forward into the future, I am excited about the possibilities that lie ahead and the stories we have yet to tell.

SHREYA SWAIN
(EDITOR-IN-CHIEF)

TECHNICAL SOCIETY COORDINATORS

PRATHYASTEE ACHARYA

INAYATULLA KHAN

DESIGNED BY

AUMSHUMAN MOHAPATRA

RASHMI REKHA SAHU

INDEX

AEROTECH

MS. ANISHA EKKA
(FACULTY ADVISOR)

12

ANUBHAV PANIGRAHI
(CO-ORDINATOR)

AEROTECH

AVIATION CELL

SAE DDC 2023

In a dazzling showcase of precision and ingenuity, our team, with our model XOR 1.0, clinched the 16th position in the Micro Model category at the SAE DDC 2023 held in Rajalakshmi Engineering College, Chennai. The skies above Chennai witnessed the flight of miniature marvels, and our team's exceptional performance propelled them to an impressive ranking.

Navigating the challenges of the competition with finesse, our micro model took flight, showcasing not only aerodynamic prowess but also the meticulous craftsmanship that went into its creation. The competition, known for its rigorous evaluation and keen scrutiny, saw our team's efforts paying off as they secured a commendable position among fierce contenders.

The journey was marked by tireless dedication, countless hours of design refinement, and a commitment to pushing the boundaries of aeromodelling. The competition brought together some of the brightest minds in the field, making the achievement even more remarkable.

The SAE DDC has not only been a platform for showcasing innovation but also a celebration of the relentless pursuit of excellence in the skies.

ASME

MR. LAYATITDEV DAS
(FACULTY ADVISOR)

DR. KIRAN KUMAR EKKA
(FACULTY ADVISOR)

CHINMAYA LENKA
(CO-ORDINATOR)

ASME
SETTING THE STANDARD
VSSUT STUDENT SECTION

ASME

AMERICAN SOCIETY OF MECHANICAL ENGINEERS

ABOUT ASME

The ASME Club, an acronym for the American Society of Mechanical Engineers, stands as a dynamic intersection for mechanical engineering fanatics committed to fostering a community of collaboration and innovation, the club serves as a platform for students and professionals alike to connect and thrive. Through regular meetings, workshops, and events, the ASME Club develops an environment where members can share opinions, engage in projects, and create everlasting connections. Emphasizing professional development, the club furnishes valuable insights through guest lectures, seminars, and industry visits, assuring constituents stay alongside the latest advancements in mechanical engineering.

The ASME Club's commitment extends to practical learning, offering hands-on experience through workshops and projects. Participation in engineering contests showcases the mastery and skills of its fellows on a broader stage, enhancing their problem-solving capacities.

Beyond its internal focus, the ASME Club actively contributes to the community by organizing outreach programs to promote STEM education. By inspiring the next era of engineers, the club plays a vital role in shaping the future of the field. In essence , the ASME

Club is a vibrant community that not only nurtures the growth of its constituents in mechanical engineering but also contributes to the broader societal advancement of science and technology.

SMART INDIA HACKATHON

Veer Surendra Sai University of Technology student cell of ASME is an active technical society with numerous achievements. During the previous semester, the Smart India Hackathon was organized at the Veer Surendra Sai University of Technology. In that competition, 5 groups of students from the ASME STUDENT SECTION of VSSUT participated and all 5 groups were selected in the preliminary round. One group (Team ANUSANDHAN) was selected for the final round and participated in the SIH organized in Hyderabad. All the five projects were innovative and extraordinary.

The team ANUSANDHAN led by Jyoti Ranjan Sahoo addressed the problem statement- underwater visualization of cultural and historical structures like Dwaraka, Mahabalipuram, and Ram Setu under the theme Heritage and Culture. A remotely operated underwater vehicle was proposed to capture the footage of archaeological sites.

The team WELLNESS WORDSMITHS led by K. Anish worked under the theme of review websites for medical students and proposed their solution to formulate a standard medical guide to help medical students and introduced book evaluation criteria, a database of medical books, user ratings and reviews, and search and comparison.

The team MOISTURE SMART CREW under the leadership of Kunima Das worked under the theme WATER CONSERVATION FOR A BETTER TOMORROW and proposed automatic regulation of valves for the release of water required based upon soil moisture availability by using artificial intelligence, in a piped and micro irrigation network of irrigation system, to reduce water waste, improve crop yields, reduce labor cost, improves crop quality and increase farm profitability.

The team BLAZE N' LIGHTS chose SMART AUTOMATION and proposed an AUTOMATED PUBLIC LIGHTNING SYSTEM under the team leader Saroj Kumar Patro, to increase energy efficiency, reduce cost, detect damaged lights, and put an environmental impact by reducing energy consumption.

The team HIGHFLYER VEERS led by DHRITISH KUMAR BEHERA worked to develop a small-scale wind energy device and started with rotary kite turbines as they are more efficient, cost-effective, and unconventional wind turbines, with cheaper installation and construction rates. It will help in revolutionizing the method of tapping sustainable energy.

The team WALL-E which was by SUCHARITA PRADHAN worked on the research and development of a smart glass cleaning robot that can climb up the walls in a very convenient manner, it can also carry liquid cleaners. It could be very helpful in developing cities that have huge glass infrastructures which makes it difficult and dangerous to clean by manpower.

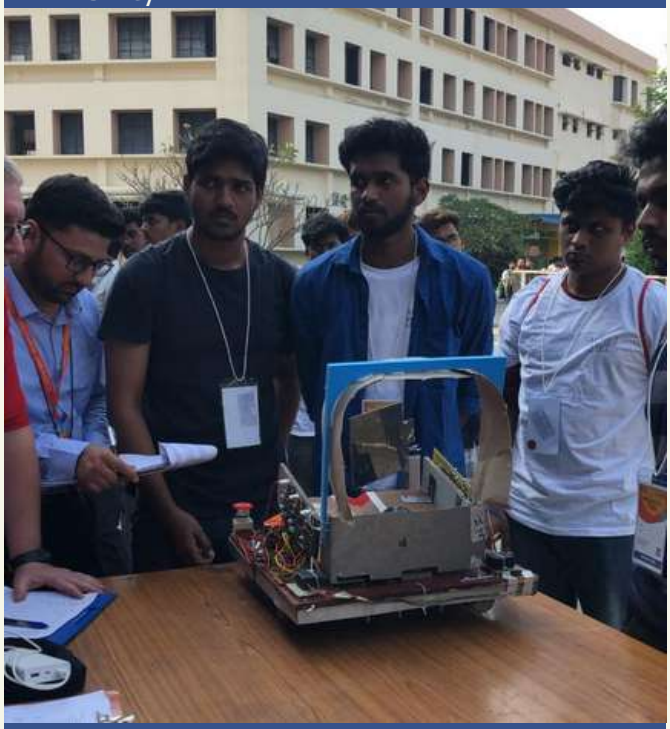
ASME E – FEST

Explore the heartbeat of the digital terrain at Digital E-Fests. Immerse yourself in the latest hiring and tech trends, gaining invaluable insights from seasoned professionals. These digital gatherings transcend ancestral boundaries, offering a virtual platform to navigate your engineering aspirations. Stay ahead of industry developments practising experts share their wealth of knowledge, providing a compass for your career path. Digital E-Fest Careers is your compass, addressing career anxiety with precision. Whether you're charting a course in software development, electrical engineering, or any other field, seasoned mentors guide you toward a glorious destination.

ASME E-Fests are annual events organized by the American Society of Mechanical Engineers (ASME). They are global engineering festivals for college students. These festivals provide exciting competitions, Skill-building Workshops, and network opportunities for engineering Students. E-Fests aim to inspire innovation, foster collaboration and enhance technical skills among participants. The exciting competitions are design robots, race 3D- Printed Cars i.e, HPVC and Present research. The events include Keynote Speakers, technical sessions, and career development sessions. There are two formats i.e. participate in E-Fest Digital, a virtual event, or ASME EFX, smaller in-person events hosted by local ASME Sections. ASME E-Fest Contributes to the Professional development of aspiring engineers by offering a dynamic environment for learning and Connecting with industry professionals.

ELECTRIC HUMAN-POWERED VEHICLE:

The E-Human Powered Vehicle Challenge, or E-HPVC, is a thrilling competition that pushes the limits of environmentally friendly transportation. Participants design and build human-powered vehicles integrated with electric technology, focusing on innovation and efficiency. This challenge encourages creativity in engineering, combining human effort with cutting-edge electronic systems to create environmentally friendly and energy-efficient vehicles. Teams compete in a friendly yet competitive atmosphere, showcasing advancements in green transportation. The e-Human Powered Vehicle Challenge not only challenges engineering prowess but also promotes sustainable solutions, fostering a community dedicated to shaping the future of eco-friendly mobility.



STUDENT DESIGN COMPETITION

The 2024 Student Design Competition (SDC) Presents the challenges to design and build a remote-controlled robot to conquer a 9-hole mind golf course. In this Project, the Robot must fit in the remote-controlled robot within a 50 cm Cube. Navigate a 9-hole Course in 10 minutes, conquering obstacles with up to 5 strokes each. The robot navigates between tees and positions itself for each shot. Also remember that rechargeable batteries, proper design, and bonus points for pre-comp videos showcasing that robot's genius. The spirit of the game is sportsmanship and fair play reigns supreme. The goal is to build a robot that plays mini-golf autonomously and skillfully.

IAM3D DRONE

ASME is currently working on several projects and extending the field of research in several domains including electronics, structural, and programming. These are the mediums of acquiring practical knowledge and experiencing teamwork, management, and manufacturing processes. One such important and exciting project that ASME will work on is I AM 3D DRONE. This project is both interesting and challenging as well. Our motive is to make a drone that can be used in several sectors and can help in reducing human efforts. It will have several other features such as a wireless camera system, highly efficient propellers, and many more. The entire designing, circuiting, and drone programming will be done by students and the parts will be done by 3D printers. This programmable drone can be used in several activities such as small delivery of products, aerial image analysis, and video making. The main objective behind this project is to learn designing, circuiting, 3D printing, and extended programming and carry out vast research on these topics, as well as search for solutions to several problems that can be solved by this drone.

E-CELL

MRS. PRANGYA MOHANTY
(FACULTY ADVISOR)

DR. DEBIDASI MOHANTY
(FACULTY ADVISOR)

SHRADHA MOHAPATRA
(CO-ORDINATOR)

ANSHU AGRAWAL
(CO-ORDINATOR)

E-CELL

Entrepreneurship Development Program

FINANCIAL AWARENESS WEBINAR

In a recent online talk, Sunidhi Rathore, a well-known Financial Research Analyst, skillfully explained financial stuff. It was interesting as she simplified tricky money concepts, making the session an eye-opener. Practical examples and real-life stories helped us understand, giving us the knowledge to make smart money choices. We also learned useful tips on starting businesses, getting funds, and planning our financial future. The session helped us to know about budgeting, financial planning, nd investment strategies. It was an inspiring session that helped us boost our confidence in handling money matters.

STARTUP SYNERGY

Startup Synergy welcomed two exceptional guests: Mr. Sourav Prakash Roul and Mr. Samar Pratap Nayak. Their talks, "One Night's Fight, a Future So Bright" and "Life's Journey Isn't Linear," captivated the audience with journeys of resilience and triumph. Mr. Roul showed how losses fuel success, while Mr. Nayak demonstrated the power of unwavering determination. Both shared their inspiring stories, overcame challenges, and offered invaluable guidance to aspiring entrepreneurs, lighting the way for their own ventures.

STARTUP YATRA

The Startup Odisha Yatra Truck made a significant impact during its visit to our university on September 30th, 2023. The event provided students with a remarkable opportunity to pitch their pioneering ideas and present innovative business models, leaving a lasting imprint on entrepreneurship. Participants showcased their creativity and gained valuable insights into refining their business strategies, contributing to a vibrant culture of innovation at
our university. The event catalyzed students to engage with entrepreneurship, refine their pitches, and foster a spirit of innovation. The students got a chance to help their ideas reach their potential. The event inspired students and improved their business skills, paving the way for ongoing entrepreneurial success in our university community.

SWABALAMBI BHARAT

On October 6th, E-Cell, VSSUT, organized the Swablambi Bharat Abhiyan, an event aimed at fostering awareness about self-employment among students. Mr. Annada Sankar Panigrahi, the main speaker, emphasized the importance of entrepreneurship, addressing the challenge of a growing youth population seeking jobs rather than creating them.

Drawing inspiration from figures like Bill Gates and Steve Jobs, he urged a shift in mindset and highlighted the backward mentality hindering progress. Dr. Prakash Kumar Deebta, the second guest of honor and director of Life Care Hospital Sambalpur, shared insights from his field. The event successfully motivated the audience, concluding with the felicitation of the guests, leaving a lasting impact on the youth and encouraging them to take risks for the nation's advancement.

SENSITIZATION CAMP

Boeing India, in collaboration with KIIT TBI and E-Cell, VSSUT, hosted a groundbreaking SENSITIZATION CAMP on October 6th, 2023, at the E-Learning Centre. The event welcomed all the students with innovative ideas and early-stage startups to refine their pitches. It provided a chance to win a grand prize of INR 10,00,000/-. The constant ongoing support offered by Boeing and the Incubator, fostering a culture of innovation, risk-taking, and entrepreneurship among participants, sets this initiative apart from others. It helps the entrepreneurial spirit to grow among the youth. Beyond immediate rewards, the impact extends to contributing to the broader ecosystem of technological and entrepreneurial advancement, making the SENSITIZATION CAMP a pivotal platform for positive transformations and future-shaping innovations.

START-UP BOOTCAMP

The Startup-Bootcamp organized by Start-up Odisha aimed at promoting entrepreneurship and enhancing public understanding of the current startup landscape. It featured a truly exceptional Design Thinking session led by Mr. Roshan Panigrahi, Assistant Manager at AIC-Nalanda. His session encouraged students to approach their entrepreneurial endeavors with the utmost deliberation and thoughtfulness. Recognizing that every entrepreneur faces challenges, Mr. Adarsh Das, Assistant Manager at AIC-Nalanda, provided invaluable advice on the dos and don'ts of startups. The students were truly motivated and inspired by Pratik Agarwal, the visionary founder of BigetBiz, a remarkable social networking platform and digital marketing company hailing from Sambalpur. This event was a remarkable opportunity for aspiring entrepreneurs to gain insights and fuel their entrepreneurial spirits.

ENIGMA

PROF. SURESH SRICHANDAN
(FACULTY ADVISOR)

PROF. ALINA MISHRA
(FACULTY ADVISOR)

ANANYA MOHAPATRA
(CO-ORDINATOR)

PRERIT AGRAWAL
(CO-ORDINATOR)

ICPC INFO SESSION

Enigma, the official web and coding club of Veer Surendra Sai University of Technology, organized an info session on the ICPC contest on the evening of 9th October 2023. To inform the students about the coding fest and guide freshers toward coding, this event was made successful by the organizers and the guests.

The hosts for the event made the evening beautiful and knowledgeable for the audience. They shared information about the ICPC contest, its history, rules and regulations, and the structure of the competition. The faculty advisor of Enigma, Dr. Santosh Kumar Majhi sir, and the ICPC coordinator of VSSUT, Dr. Satyaprakash Sahoo sir, along with the special guest Mr. Suresh Kumar Srichandan sir, graced the event with their presence and solved the doubts of the students, regarding ICPC. Dr. Satyaprakash Sahoo sir, shared valuable insights about the competition and lightened up the event. The previous regional qualifiers from our university VSSUT, Nikhil Kumar Sahu and Manas Kumar Panda shared their experiences about the competition, how they practiced for the contest, and how they qualified for the regional round. They also solved the doubts of the audience regarding programming and problem-solving. One of the reasons behind this successful event was the amazing audience. They interacted with the guests and showed great anticipation for coding and the ICPC contest. In the end, the coordinator of Enigma, Ishita Satpathy delighted the event with a vote of thanks and glittered the event. The event was successfully conducted with the enthusiasm of the members of Enigma and all the freshers.

ETH ABU DHABI

Ankush Behera won a bounty of USDC 140 by this project DLaunchpad: “Trust” based Launchpad. This hackathon was organized by ETH Abu Dhabi. DLaunchpad is based on BlockScout technology. Ankush used technologies like - Solidity, Dart, Flutter, Chainlink & Chainide. Dlaunchpad is a platform that solves the problem of funding and supporting innovative projects in the crypto space while ensuring trust, transparency, and accessibility for all users. Dlaunchpad uses TRST tokens to fund innovative projects in the crypto space. It distributes tokens based on the amount of crypto assets users own using Blockscout APIs and ChainIDE.

GDSC VSSUT

PROF. HARISH KUMAR SAHU
(FACULTY ADVISOR)

ANKITA PANDA
(GDSC VSSUT LEAD)

Google Developer Student Clubs
Veer Surendera Sai University of Technology

GDSC VSSUT

Google Developer Student Clubs, VSSUT

API GATEWAY WORKSHOP:

Sanjib Parida, CTO of IServeU, used an illustration of an Amazon app to discuss API Gateways during a recent lecture held at the E-Learning Center. He demonstrated API Gateways as central hubs where various microservices, akin to Amazon Pay, top product listings, and Prime Video, converge seamlessly into a unified interface. Highlighting their role in swift error detection, he noted that API Gateways serve as centralized entry points. Error-checking and monitoring of all requests going through the gateway is done in one place. This seminar offered valuable insights into API Gateways, making them accessible to both tech experts and newcomers, underscoring their significance in complex digital ecosystems.

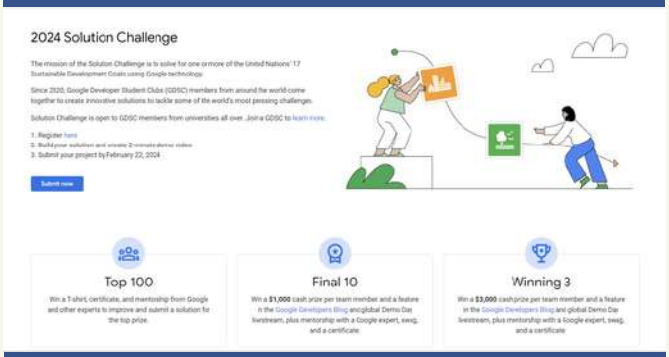
GDSC VSSUT INFORMATION SESSION:

The GDSC VSSUT Info Session 2023 was an informative and thrilling event that left the guests buzzing with excitement. Respected and distinguished dignitaries interacted throughout the session, including Vice Chancellor Dr. Bansidhar Majhi. The occasion showcased GDSC as a vibrant group of digital pioneers. A dynamic quiz added a fun element, while former GDSC leader Rajat Kumar Nayak motivated participants with his life experiences. The future vision was announced by the current GDSC leader, Ankita Panda. A vote of appreciation and a call for social media connectivity marked the end of the successful event.

ANDROID WORKSHOP

A great Android Study Jams workshop was arranged by GDSC VSSUT, with an emphasis on practical learning in Android development. The primary objectives were to give comprehensive information on Kotlin and Android Studio basics. The workshop facilitated networking, and guided project development, fostering collaboration among participants, mentors, and organizers. The workshop proved to be a

resounding success, accomplishing its goal of providing a practical learning experience in Android development.



UPCOMING– SOLUTION CHALLENGE WORKSHOP:

-GDSC VSSUT will be organizing a Solution Challenge Hackathon.

-The challenge will feature problem statements aligned with the United Nations' 17 Sustainable Development Goals.

- Participants can form teams of a maximum of 4 members and provide solutions to one of the problem statements.

- Teams will be tasked with devising innovative solutions utilizing Google technologies to address specific sustainable development goals.

IEEE

PROF. HARISH KUMAR SAHU
(FACULTY ADVISOR)

SOUMENDRA PRIYADARSHAN
(CHAIRPERSON)

PAPER PRESENTATION

The paper presentation was conducted in offline mode among our IEEE VSSUT Student Branch members. This event continued 1 week from 21st Aug to 28th Aug 2023 aiming to provide a platform for participants to present their research and innovative ideas in various domains of technology and engineering.

SEMINAR ON "TIME SERIES FORECASTING USING OPTIMIZED DEEP LEARNING AND HYBRID MODELS"

On September 30, 2023, an insightful seminar was conducted on the occasion of IEEE Day at the E Learning Centre by the IEEE VSSUT Student Branch. The seminar on the topic of "Time Series Forecasting using Optimized Deep Learning and Hybrid Models" was led by Dr. Sibarama Panigrahi, Assistant Professor at NIT Rourkela and a renowned expert in the field of machine learning, deep learning, and time series forecasting.

TECHTRIVIA - TECHNICAL QUIZ COMPETITION

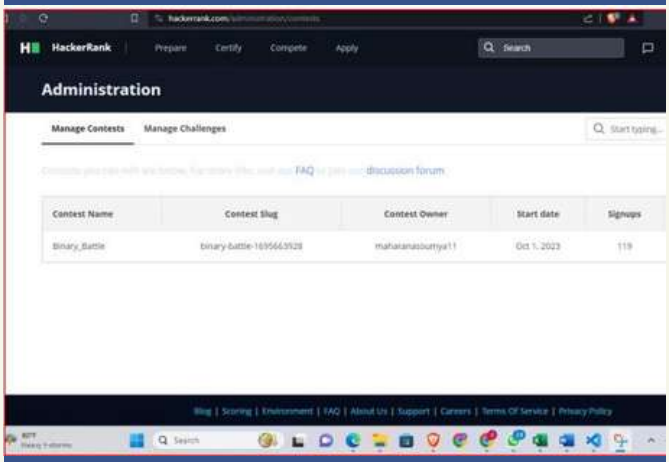
On September 30, 2023, in celebration of IEEE Day, an engaging technical quiz event "Techtrivia" was organized at the E Learning Centre by the IEEE VSSUT Student Branch. With mind breaking and brain challenging questions, this event was conducted to enhance the technical knowledge of the participants, while experiencing the thrill and competitive spirit of quizzes.

SPARKATHON

From September 28th to October 4th, 2023, the IEEE VSSUT Student Branch conducted "Sparkathon" an online event for fostering innovation and encouraging participants to present novel ideas to solve pressing issues. This event aimed to engage participants in addressing critical societal challenges through innovative technological solutions.

BINARY BATTLE - CODING COMPETITION

On 1st October 2023, a coding contest titled "Binary Battle" was organized in the celebration of IEEE Day by the IEEE VSSUT Student Branch in online mode. The contest aimed to develop a competitive environment for participants to showcase their coding skills and problem solving abilities.



ONLINE SYMPOSIUM OF PROBLEM SOLVING HACKATHON

The flagship event of IEEE VSSUT, the Hackathon event, “Symposium” was conducted in online mode in celebration of IEEE Day, by the IEEE VSSUT Student Branch. This event took two days from October 4th to October 5th, 2023 aiming to provide a platform for participants to present their research and innovative ideas in various domains of technology and engineering for solving real world issues.

ARTOPIA - CREATIVE PAINTING COMPETITION

On 4th October 2023, “Artopia”, an art contest held as part of the IEEE Day celebrations conducted by the IEEE VSSUT Student Branch. This event provided a creative platform for participants to showcase their artistic talents. The event aimed to merge technology and art, providing an imaginative exploration of the technology.

WEBINAR

WEBINAR on "How to start research work as an undergraduate student" The IEEE VSSUT Student Branch successfully organized a webinar on October 26, 2023, titled "How to Start a Research Work as an Undergraduate." The event aimed to provide valuable insights into initiating research endeavors as an undergraduate student, featuring a distinguished guest speaker, Dr. Aditya Kumar Sahu. The webinar featured Dr. Sahu, an esteemed professor at Amrita Vishwa Vidyapeetham, School of Computing, Amaravati, and one of the top 2% of scientists globally according to Stanford University. Dr. Sahu shared his wealth of experience and knowledge, guiding participants on various aspects of starting research work as an undergraduate student.

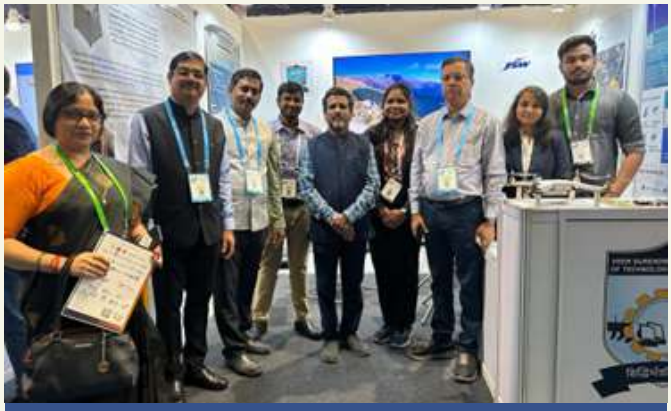
ACHIEVEMENTS

On 8th October 2023, our IEEE members’ Team Quasar had participated in Paper Presentation Competition of NSSC 2023
held in IIT--KGP from 6th to 8th October 2023, and secured the 2nd position, marking an outstanding accomplishment.

IIC

DR. GYAN RANJAN BISWAL
(FACULTY ADVISOR)

DEBANKAR SHUBHRAM
(CO-ORDINATOR)



REGIONAL MEET

A team comprised of Sandip Kumar Mohanty, Sandip Kumar Swain, and Ishant Kumar Nayak from the 2nd year of Idea Innovation Cell achieved the overall 2nd position at The Regional Meet 2023 organized by the Institution Innovation Council in Bhubaneswar with their first-ever student-made satellite launching vehicle, VSLV, and other innovative projects. Their success showcases the institution's commitment to fostering excellence and innovation among its students. Congratulations to the team on their exceptional achievement!

INDIA MOBILE CONGRESS

Our participation in the India Mobile Congress (IMC) at Pragati Maidan, New Delhi, was a resounding success. Our team, including faculty members Dr. Harish Kumar Sahoo, Dr. Diptimayee Konhar, and Dr. Anand Kumar Behera, along with our enthusiastic students Subhransu Ranjan Das of the Final year, Debankar Shubhram, Pallabi Paramita Nayak, and Sai Nandini of the 3rd year, represented VSSUT, Burla, at Booth No. 2.121E and connected with brilliant minds shaping the future of mobile technology and innovation. Anticipating over 100,000 participants, 1,300 delegates, 400 speakers, 225 exhibitors, and 400 startups, this year's IMC 2023 promises to be a global gathering with representation from 31 countries. We look forward to the continued growth and success that this experience has paved the way for in the dynamic world of mobile technology.

IIM SAMBALPUR SHOWCASE OF VSLV

Our esteemed Education Minister, Shri Dharmendra Pradhan, visited Sambalpur University to address the sixth National Educational Policy 2020. Our third-year students named Ashish Kumar Patro and Sohbit Kumar Pradhan from the Idea Innovation Cell presented the VSLV.

The young innovators had a productive interaction with him. To their surprise, he was already familiar with the project and appreciated their efforts, praised them, and offered good wishes for future ventures. Various other dignitaries were also present, who were impressed with the project's idea and plans.

NIT ROURKELA AEROPRIX

Team Technovate of Idea Innovation Cell achieved remarkable success in the Aeroprix event held at NIT, Rourkela, securing the second runner-up position. The team comprised Mahanayak Chandragupta, Amritanshu Nanda, Subhajeet Behera, Shubhashree Behera, and Satyam Rai from the 2nd year, who thrillingly showcased their technical innovation. Looking ahead, they are focused on advancing their RC plane, incorporating cutting-edge technologies to elevate their pursuit of technological excellence to new heights. The team competed, leaving a trail of inspiring performances that highlighted their dedication and expertise.

UTKAL FAB FEST

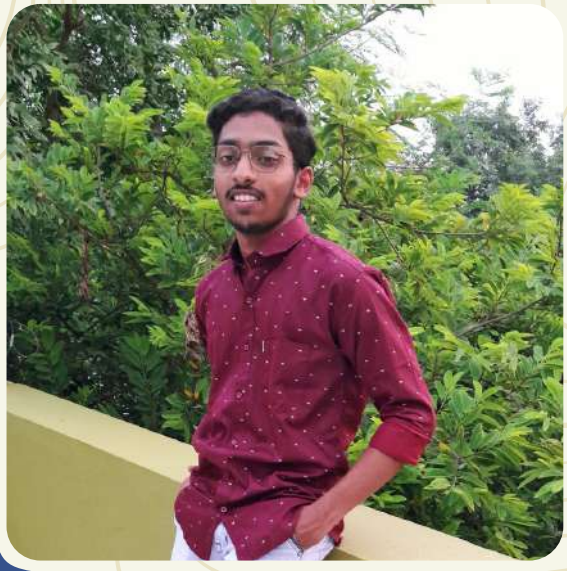
Five students named Sandip Kumar Mohanty, Jyoti Ranjan Sahoo, Shubhashree Behera, Adyasha Rout, and Amritanshu Nanda from the 2nd year of the Young Tinker Space Academy of Veer Surendra Sai University of Technology (VSSUT), Burla, had the privilege of showcasing their projects at Utkal Fab Fest 2023. This event was held at O-Hub in Bhubaneswar on November 28, 2023. The Young Tinker Foundation, recognizing their exceptional talent, handpicked a delegation of five students to represent them at Utkal Fabfest. This remarkable initiative was organized by Startup Odisha, under the esteemed patronage of the Government of Odisha.

SMART INDIA HACKATHON

The team, consisting of Manash Singh and Soham Ghosh from the final year, and Mahanayak Chandragupta, Aditya Kumar, Satyam Rai, and Satviki Pradhan from the 2nd year, participated in the prestigious Smart India Hackathon (SIH). Their innovative project captivated the judges' attention as they developed a cutting-edge LLM-based model capable of generating human-like responses to natural inputs. Throughout the event, the team showcased their skills and expertise, leaving a lasting impression on the judges. Their project truly demonstrated their technical prowess.

VSSSIC

PROF. HARISH KUMAR SAHU
(FACULTY ADVISOR)



RUDRA NARAYAN SUBUDHI
(CO-ORDINATOR)

VSSSIC

Veer Surendra Sai Space Innovation Cell

ABOUT VSSIC

ISRO has partnered with Veer Surendra Sai University of Technology (VSSUT) in Odisha to establish the Veer Surendra Sai Space Innovation Centre (VSSSIC), aimed at enhancing space technology research and development in both academia and industry. The VSSUT Satellite Launching Vehicle (VSLV), a student-led initiative, is dedicated to creating an Indigenous Sounding Rocket and PicoSAT through ten missions, providing valuable hands-on experience in various aspects of rocket science. Operating under the guidance of VSSSIC at Veer Surendra Sai University of Technology in Burla, VSLV is India's inaugural Indigenous Multipurpose Reusable Student Rocketry Project, showcasing seven years of dedicated progress in the field of space innovation.

WORLD SPACE WEEK

The VSSSIC (Veer Surendra Sai Space Innovation Center) at VSSUT Burla displayed exceptional technical expertise and unwavering commitment to the world of space during World Space Week, hosted at Shree Jagannath Sanskrit University, Puri. This event provided an opportunity to engage in meaningful interactions with Shri Prof. Ganeshi Lal, the distinguished Governor of Odisha.

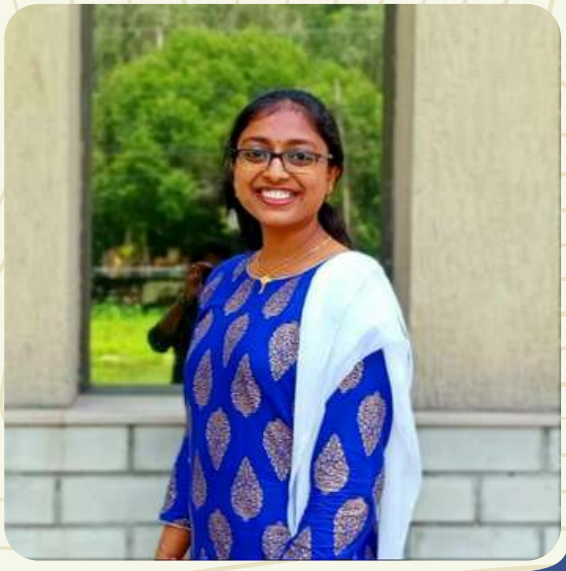
Additionally, the honorable Home Minister of Odisha, Shri Tushar Kanti Behera, graced the occasion. During these interactions, the team showcased their prowess and gleaned invaluable insights into the field of space from the esteemed dignitaries, helping them enhance their knowledge and expertise in the limitless domain of space.

ROBOTICS

MR. DHARAMVIR KUMAR
(FACULTY ADVISOR)

DR. SAKAMBHARI MAHAPATRA
(FACULTY ADVISOR)

PRASENJIT PANDA
(CO-ORDINATOR)



ASWATHI M
(CO-ORDINATOR)

ROBOTICS

Robotics Society

DRONE DYNAMICS – SEMINAR ON DRONES

Robotics Society , VSSUT was elated to host a seminar on the subject of drones in collaboration with Aerorovers. The seminar took place on 7th of October,2023 at Sri Visveswaraya Auditorium from 3pm to 6pm. The seminar's main goals were to inform and enlighten participants about the most recent developments in drone technology. The evening was lit up with the mesmerizing dance of drones and an enlightening seminar on the limitless possibilities of these aerial wonders by none other than Mr. Jajati Mohanty Sir, the brilliant mind behind Aerorovers. From breathtaking aerial formations to the endless applications of drones, this event left us in awe!

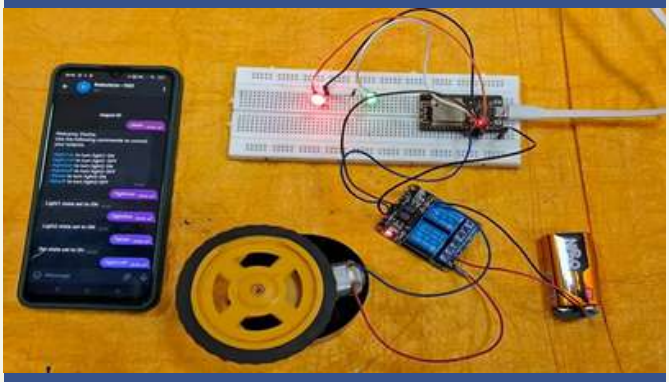
FINALISTS AT SMART INDIA HACKATHON

Team " Tech Titans" and Team "Divide N Conquer" from Robotics Society, VSSUT tackled the challenge presented by PS code SIH1335 and PS code SIH1414 . They had currently work on the prototype at a 5 day Hackathon from 19-23 December , 2023. Team " Tech Titans" tackled the challenge presented by PS code SIH1335, addressing the difficulty in operating heavy machinery during rainy seasons, marked by extremely poor visibility conditions,

whereas Team "Divide n Conquer" showcased their idea through their innovative solution for PS no: SIH1414, addressing the challenge with a Drone-based Intelligent Magnetic Sensing System and Metallic Anomaly Detection System.

Participating in the Smart India Hackathon 2023 was an amazing and unforgettable experience for us. We took up the challenge of solving a real-world problem proposed by the Ministry of Defence: to build a drone based intelligent magnetic sensing system and metallic anomalies detection system. The hackathon spanned over five days, in which we poured our creativity and passion into developing our innovative solution. We were fortunate to have mentors who guided us and supported us throughout the process. They were very kind and helpful, and they treated us like a team, regardless of our college affiliations. Our nodal center was the National Institute of Engineering, Mysore, where the event was well organized and the volunteers were warm and helpful. We also had the chance

to interact with many industrial specialists and gain insights from their expertise. Some of them were our mentors as well. Overall, it was a great exposure and a valuable learning experience for us. We are proud of our achievement and grateful for this opportunity.



ROBOTICS 360 : TELEGRAMBOT-BASED HOME AUTOMATION SYSTEM

Introducing the latest innovation in home automation – a seamlessly integrated system that lets you effortlessly control your fans and lights through a Telegram bot named "Robotics 360." This cutting-edge solution utilizes the capabilities of an ESP32 microcontroller, connecting to the Telegram server to execute commands based on user messages. The setup involves creating a personalized chatbot using the "BotFather" bot on Telegram, generating a unique bot token and chat ID for user connectivity. The code, intelligently designed with libraries for WiFi, Telegram bot, and JSON parsing, defines constants for credentials and pin numbers for LEDs and a fan. The NewMessagesHandle function ensures security by authorizing chat IDs and processes recognized commands, allowing users to control their smart home devices with simple messages like "/light1on" or inquire about the state of LEDs. The main loop function efficiently checks for incoming messages, maintaining a balanced execution frequency to avoid overloading. By replacing the provided credentials with their own, users can seamlessly configure the system to suit their preferences. Elevate your home automation experience with the power of Robotics 360 – where convenience meets technology.

FACE MASK DETECTION : AI-POWERED MASK SURVEILLANCE MODEL

During the COVID-19 outbreak in India, the government has implemented strict social restrictions to combat the virus. With a rise in cases, there's a push for widespread mask usage in line with WHO guidelines. To aid this effort, the Robotics Society developed a sophisticated Deep Learning model for Face Mask Detection. This model identifies if individuals in images or videos are wearing masks correctly. It's based on the YOLOv7 Deep Learning model trained with Python, and its performance is evaluated for accuracy. By integrating this technology into security and surveillance systems, it can swiftly detect and flag instances of non-compliance with mask-wearing rules. This enables proactive measures to reinforce safety protocols and ensure adherence to regulations, effectively safeguarding public health.

SHAWN : SYSTEMATIC HYDRATION & APPLICATION BASED WATERING NETWORK

The SHAWN is an IoT-based multifunctional system, with mobile phone-based surveillance as its main feature. Developed by the Robotics Society, this valuable system addresses common issues faced by gardeners and horticulture farmers. It enables remote observation of soil humidity and moisture content, allowing users to water plants with a single switch on the mobile

Additionally, it features an alarm system for detecting movement by insects and bees. The system is cost-effective, utilizing a microprocessor and proximate sensors as its components. The Robotics Society is currently working on an updated version tailored for use in large agricultural firms.

MASTERING CONTROL : THE POWER OF PID SYSTEMS

In the dynamic realm of control systems, Proportional-Integral-Derivative (PID) systems stand as stalwarts, seamlessly regulating processes across various industries. From temperature control in industrial furnaces to stabilizing drone flight, PID systems offer a versatile solution.

The PID algorithm incorporates three components—Proportional for immediate response, Integral for accumulated error correction, and Derivative for anticipating future trends. This triad ensures precise and stable control, enhancing efficiency and minimizing oscillations.

One compelling example of PID mastery is the control of an Seesaw with a Ball, a classic problem in control theory. By finely tuning the PID parameters, we can balance the ball in any position despite external disturbances, showcasing the system's adaptability.

PID systems, with their prowess in maintaining stability and accuracy, continue to revolutionize automation, robotics, and beyond, playing a pivotal role in the evolution of smart and responsive technologies.

FUTURE PROJECTS -

Four-Legged Robot

VSSUT Robotics Society, inspired by Boston Dynamics' Spot, is developing a four-legged robot, envisioning a future where robotics seamlessly integrates into various industries to boost efficiency, safety, and productivity. This highly versatile "4-legged bot" mimics animal-like movement, enabling it to navigate diverse terrains, making it ideal for tasks like inspecting hazardous environments, patrolling for security threats, and even handling remote operations. Equipped with sensors and cameras, the bot excels in data collection, while its mobility and terrain navigation make it perfect for security and surveillance. Additionally, its ability for remote operation proves valuable in risky situations, and its proficiency in payload transportation facilitates logistics across industries. Beyond its practical applications, the bot serves as a platform for research and development

Smart Waiter

Born from pandemic needs, our Smart Waiter Robot brings contactless food delivery to restaurants of all sizes. Using sensors and AI, it navigates safely, delivering meals efficiently. Customers order and track through a website or app, while waitstaff leverage it for order management and menu updates. This system integrates seamlessly with existing POS, personalizes recommendations, and optimizes operations. It even paves the way for future door-to-door delivery. Smart Waiter represents a leap forward in safe, efficient, and personalized dining experiences, evolving with technology to shape the future of restaurants.

TEAM OF SUSTAINABILITY

DR. SASMITA BEHERA
(FACULTY ADVISOR)

DR. SANTI BEHERA
(FACULTY ADVISOR)

BAIBHAV RAJ MAHARANA
(CO-ORDINATOR)

TEAM OF SUSTAINABILITY

TEAM OF SUSTAINABILITY

ABOUT TEAM OF SUSTAINABILITY:

In the rapidly changing field of technology, the Team of Sustainability is situated at the nexus of advancement and innovation. This study examines the workings of modern technological society, highlighting its critical role in determining the course of the future and tackling the obstacles that lie ahead. Enthusiasts dedicated to building an innovative and cooperative society, the society provides a forum for professionals and students to interact and prosper. Through consistent meetings, workshops, and activities, the Team of Sustainability fosters an atmosphere in which participants may exchange ideas, work on projects, and establish enduring relationships. At the vanguard of innovation, the Team of Sustainability is committed to leveraging cutting-edge technology to enable sustainability. By utilizing automation, CAD/CAM, and artificial intelligence to their fullest capacity, society hopes to revolutionize industry norms and have a positive impact on a more sustainable and environmentally friendly future. Our joint efforts center on maximizing the potential of these cutting-edge instruments to increase productivity, reduce environmental effects, and clear the path for a technologically sophisticated and sustainable future.

WASTE SEGREGATION SYSTEM WITH INTELLIGENT GARBAGE DETECTION

The creation of a state-of-the-art waste segregation system is described in this project report, which also highlights how it might transform waste management techniques for a sustainable future. The implementation of an advanced waste separation system using conveyor belts, motors, and a variety of sensors, such as color, weight, infrared, and metal detectors, is described in this project. The system combines machine learning mode accurate waste identification with data processing, motor control, and intelligent decision-making via a microcontroller or PLC. These models direct the diversion mechanism, which effectively directs waste items into separate bins. Real-time monitoring and intervention are made possible via a user interface, and ongoing monitoring and routine maintenance procedures guarantee optimal system performance. Safety features are included to guarantee operator well-being and prevent jams, discerning, segregation, and managing various types of vessels is made comprehensive by the system's adaptability, scalability, and integration with a garbage detection project.

PAPER FUSION: MERGING IDEAS TO FORGE A NEW FRONTIER IN RESEARCH

Currently, the Team of Sustainability is engaged in multiple projects aimed at expanding research in various fields. These are the ways to gain real-world experience in management, teamwork, and manufacturing procedures. One of the thrilling projects is that of Paper Fusion. Through waste paper recycling, workshops, and training on hand-made papermaking, this initiative seeks to strengthen Self Help groups (SHGs) and encourage sustainable behaviors both inside and outside of our university. This process involves gathering waste paper, such as used and y-waste papers from our university, processing pulp with wet grinders, and creating sheets of paper with the right strength and thickness using drying mats, solar dryers, strainer trays, and other tools. With the help of neighborhood SelfHelp Groups, our institution is expanding waste paper recycling and handcrafted paper production, which offers a special .

VEERRACERSS ELECTRIC

DR.SWAGATIKA MISHRA
(FACULTY ADVISOR)

MR. DEBASISH TRIPATHY
(FACULTY ADVISOR)

SATYABRATA SAHOO
(CAPTAIN)

ABHISHEK SABAT
(VICE-CAPTAIN)

VEERRACERS ELECTRIC

SOCIETY OF AUTOMATIVE ENGINEERS

ABOUT VEERRACERS ELECTRIC:

Veerracerss Electric is a student formula team from Veer Surendra Sai University of Technology in Burla. The team designs and builds F3 prototype racing cars.

FORMULA IMPERIAL 2023

TOur team participated in the Formula Imperial event in October 2023 and achieved various remarkable accomplishments. Initially, the team underwent documentation checks and a design report round, which the judges permitted us to carry forward.

Following this, our team participated in different online interviews and discussions with various teams on online platforms, where our efforts were appreciated. In the design and presentation round, our design was verified, and in the safety equipment round, insulation and the first aid box were examined thoroughly. The volunteers there pointed out our faulty points, which we corrected within 2 days with our meticulous efforts and also followed the suggestions made.

Eventually, it was our showdown, which was a big day for all of us - the endurance test. Our team members were nervous and excited to represent their backbreaking work finally. We became Eastern India's first university to take an in-house manufactured EV to BIC. We bagged the 1st position in the endurance round in the EV category and secured AIR 3 overall, which was indeed a huge achievement for our team as it was our 1st generation EV.

On the return day, all our team members had glory in their eyes as our sleepless nights paid off. Throughout the event, we were financially supported by our sponsors KTM and Amec Foster Wheeler, which was vital for this achievement. Also, the tools provided by Crosshead Engineering were an immense help for us. With the support of our friends and well-wishers, our team aims to repeat our success streak by manufacturing a better and more efficient racing car with proper research and introducing some innovative and better features.

At the core of our vision is the belief that transportation should not be a barrier to education. Recognizing the unique challenges faced by female and handicapped students in commuting between the hostel and college, we envisioned a solution that goes beyond conventional means. Our upcoming project, the E-Shuttle, represents our commitment to breaking down barriers, promoting equality, and ensuring that every student has equal access to education and campus life.

UPCOMING– E-SHUTTLE

The E-Shuttle is a state-of-the-art electric vehicle designed with a seating capacity of 8 to 10 individuals, providing a safe and comfortable mode of transportation. Equipped with features to accommodate the needs of handicapped students, such as wheelchair accessibility and user-friendly controls, the shuttle aims to empower every student to navigate our campus with ease.

This sustainable and eco-friendly initiative not only addresses the transportation needs of our community but also aligns with our dedication to environmental responsibility. By opting for an electric vehicle, we contribute to reducing our carbon footprint and creating a cleaner, greener campus.

The success of this project relies on the support and collaboration of our entire college community.

We encourage students, faculty, and staff to actively engage in this initiative by providing feedback, suggestions, and support. Together, we can make the E-Shuttle a symbol of our commitment to inclusivity and accessibility.

UPCOMING– FORMULA IMPERIAL 2024

Our aim and objective are to win the FORMULA IMPERIAL 2024 and to repeat our success streak by manufacturing a better and more efficient electric racing car with proper research and providing the car with some uniquely innovative and better features.

VEERSS RACING

DR. SUNITASINGH NAIK
(FACULTY ADVISOR)

MR. SAMBEET KUMAR SAHU
(FACULTY ADVISOR)

DILU NAHAK
(CAPTAIN)

ASHISH SAMAL
(VICE-CAPTAIN)

VEERSS RACING

SOCIETY OF AUTOMATIVE ENGINEERS

IOKE-IX (2020-2021)

IOKE-IX, the all-terrain vehicle (ATV) from our university achieved glorious success in the Baja SAE India competition in Chitkara University, Punjab.
The vehicle was successful in showcasing exceptional design and engineering, earning 1st rank in design presentation. Its robust suspension and drivetrain systems allowed it to conquer all the off-road tracks.

The team's execution in design, fabrication, and testing resulted in an outstanding overall performance, showcasing their technical skills. This achievement highlighted the team's excellence in innovation and practical engineering in the challenging Baja SAE India competition.

1. It also ranked first in the Go-green event, and first in CAE(Computer-aided engineering)Evaluation.
2. It was the lightest vehicle at the event with only 133 kg. It was also awarded third prize in cost evaluation, which brought laurels to our university with a cash prize of 1.5 lakh.

IOKE-X (E-IOKE-1) 2022-2023

Being the first ever electronic vehicle that represented our University in Baja SAE-2023 in Chitkara University, Baddi, Himachal Pradesh, the vehicle displayed exceptional mechanical design and construction, passing the technical inspection with flying colors, showcasing the team's strong engineering and management skills.

1. Despite not being able to participate in the endurance event, the electric vehicle demonstrated cutting-edge innovation in its electrical parts, which could potentially pave the way for future competition success.
2. The vehicle has excelled in its weight reduction strategies, making it agile and efficient, with only 217 kgs. The achievement in passing mechanical inspection highlights strong teamwork and collaboration within the project, as it is often a challenging aspect of the competition.
3. IOKE-10 achieved 5th rank in the Go-Green event.

We are currently working on 4-wheel-drive vehicles. They will be frequently combined with locked differentials for best off-road efficiency.

MISCELLANEOUS

SMART INDIA HACKATHON

The Smart India Hackathon (SIH) has emerged as a beacon of innovation, fostering collaboration and creativity among the brightest minds in India. This nationwide initiative, organized by the government of India, aims to solve real-world problems faced by various sectors through technological solutions.

SIH brings together students, industry experts, and government officials on a single platform, encouraging interdisciplinary collaboration. Teams comprising students from diverse backgrounds, including engineering, computer science, and business, collaborate intensively to develop innovative solutions within a constrained timeframe.

In the first week of October, Veer Surendra Sai University of Technology was covered under the spell of the Smart India Hackathon. Each student was hyped up to provide their unique and sophisticated solutions to the existing challenges provided to them. With a wide range of hardware and software related problems in the competent hands of our students, it was proud to see more than a hundred teams present their unique and potential ideas.

Out of all the competent teams, fee even qualified to participate in the final round at various locations, making our college beam with pride and delight

With a promising future for all those tech-savvys in out college we hope to see better results in the coming age