



KALINGA UNIVERSITY



NAAC
GRADE B+
Accredited University

nirf
RANKING
2023

Ranked in
Top 101-150
Universities



MINDROID

Exploring Excellence

Volume 1, Issue 2 (October 2022 - December 2022)



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INAUGURATION

of Kalinga University
IEEE Student Branch

MESSAGE FROM PRESIDENT-ELECT, IEEE COMPUTER SOCIETY



Nita Patel

P.E., PMP Sr. Director,
Engineering @ Otis President-Elect
@ IEEE Computer Society
Director, IEEE Foundation
nita.patel@ieee.org

I am extremely honoured to congratulate the Kalinga University, Naya Raipur, for launching this Digital Magazine initiative. I am pleased to see the incredible recognitions the university has already received, including accreditation by NAAC, being in the NIRF Ranking 2023 in the 101-150 band and being the ninth private university to receive the prestigious UGC 12(B) designation for research and development. Congratulations!

Additionally, I know of your volunteer work to advance women in engineering and wish you the best in continuing the work at Kalinga University. This reminds me of the power of augmenting technical learning with volunteering to improve critical business and leadership skills, such as problem solving, coaching/mentoring, and communicating effectively. In a study, How Volunteerism Shapes Professional Success, conducted by Power Skills, professionals stated they gained many leadership skills through their volunteer activities. These skills include:

Leadership
Communications
Fundraising/Resource Development
Patience
Political Astuteness
Problem-Solving

Organization/Multitasking
Finance/Budgeting/Accounting
Coaching/Mentoring
Meeting Planning
Interviewing/Hiring
Research

I know students at Kalinga University will have the opportunity for incredible technical learning augmented with opportunities for developing additional skills through volunteering. I wish you, the faculty and, most particularly, the students, the absolute best as you embark on this new endeavour. May it be a wonderful and auspicious learning journey.

Sincerely,

Nita Patel, P.E.



MESSAGE FROM IEEE R10 SECRETARY



Prof. Takako Hashimoto

IEEE R10 Secretary,
Former IEEE WIE CHAIR

IEEE WIE is here to help you succeed!

Congratulations on the establishment of the IEEE Student Branch at Kalinga University and on the successful petition for WIE AG. Today, WIE has established a stronger network, encouraged WIE affinity groups and volunteerism, and has grown to over 30,000 members and over 1,000 affinity groups. These accomplishments have been made possible by a dedicated and vibrant community of volunteers led by WIE chairs and leaders.

WIE has managed to establish its existence and goodwill worldwide, and it has also successfully grown over the years. The number of WIE members has dramatically increased, and we've globally extended our activities through conferences, workshops, forums, fund support, training, publishing, and communication to spread our mission and message to larger communities. We, WIE, are an extremely valuable science, technology, engineering, and math resource for women and girls, and we can expand our network globally.

We need to plan and extend our activities further to realise our dream of building a zero-gender-gap society, where men and women will work together hand in hand in every corner of life with equal responsibility. We need everyone's ideas and opinions for planning such activities. I would like to request that all of you participate actively to express your opinions, your ideas, and your plans for improvement and the realisation of WIE's basic mission of empowerment of women. This year will provide many opportunities as well as challenges to each of us in our volunteer, professional, and personal lives. As you take advantage of the opportunities, challenges will also come invariably with them.

Let's work together to change the world!

Sincerely,

Prof. Takako Hashimoto



ABOUT IEEE

IEEE is the world's largest technical professional organisation dedicated to advancing technology for the benefit of humanity. IEEE and its members inspire a global community through its highly cited publications, conferences, technology standards, and professional and educational activities.



ABOUT IEEE Kalinga University Student Branch (IEEE KU SB)

About IEEE Kalinga University Student Branch (IEEE KU SB) the IEEE Student Branch of Kalinga University was established on 4th April 2022. The IEEE Student Branch of Kalinga university is a part of the IEEE Madhya Pradesh Section. The Objective of IEEE KU SB is to enhance the learning experience of the student community and develop a research environment among Faculty members. The Student Branch focuses on conducting social and technical activities for students and also encourages the students to take full advantage of the benefits of IEEE membership, including scholarships, competitions, and conference grants. The Student Branch also intends to provide opportunities for students to network with peers in other institutes, academicians, professionals, engineers, and scientists through the on-campus IEEE Student Branch and the Local IEEE Section, thereby encouraging students to be a part of the global IEEE community.



LET'S HEAR FROM THEM

It's a pleasure for me to know that the IEEE KALINGA UNIVERSITY STUDENT BRANCH has progressed to publish the second edition of their magazine "MINDROID". This magazine is a valuable resource for students to enhance their technical knowledge and develop their ancillary skills. I extend my best wishes to the magazine team for all their future endeavours and hope that they continue to achieve great success. I appreciate the teamwork and coordination that went into producing this magazine and wish them all the best.



Dr. Rajeev Kumar
Chairman
Kalinga University



Dr. Sandeep Arora
Chancellor
Kalinga University

I am thrilled to be informed that the IEEE Student Branch at Kalinga University is launching the second issue of "MINDROID" magazine. This publication is a valuable resource and skill-building tool for students. I extend my best wishes to the "IEEE KU SB" for success in all their future endeavours. I also commend the team's dedication and collaboration in creating this magazine. I wish them all the best.

I firmly believe that innovation and technology have the potential to create a positive social impact, and as an Engineer/Scientist or Technologist, I find it gratifying to learn that the IEEE STUDENT BRANCH KALINGA UNIVERSITY is launching the second edition of the IEEE magazine 'MINDROID'. I am confident that this magazine will continue to contribute to shaping young minds. I offer my warmest congratulations to the IEEE KU SB for this achievement.



Dr. R. Shridhar
Vice-Chancellor
Kalinga University



LET'S HEAR FROM THEM

This momentous occasion signifies a significant achievement for our organisation and highlights our commitment to delivering valuable content to our esteemed readership. The hard work, dedication, and creativity poured into the development of this magazine have truly paid off, and I am immensely proud of each and every one of you for your contributions. I wish the team at IEEE KU SB all the best for their second edition of the "MINDROID" magazine.



Dr. Sandeep Gandhi
Registrar
Kalinga University



Dr. Vijaylaxmi Biradar
Director, IQAC
IEEE KU SB Mentor
Kalinga University

We have specific plans to take IEEE SB KU to greater heights, including increasing student activities, organising workshops, developing membership, promoting women in Engineering, and enhancing member benefits. Launching the second edition of this magazine is no small feat, and it is a testament to our collective vision, innovation, and perseverance. Through the pages of "MINDROID", we will be able to connect with our audience on a deeper level, providing them with enriching, entertaining, and informative content that aligns with their diverse interests and passions.

I would like to express my gratitude to the entire team for their unwavering commitment and tireless efforts in bringing this magazine to life. From the talented designers who have created visually stunning layouts to all the contributors who have shared their expertise and insights by sharing articles, your collective collaboration has made this magazine a true masterpiece. I hope the second edition of "MINDROID" will have a positive impact on all the readers.



Mr. Anup Kumar Jana
IEEE KU SB Counsellor
Kalinga University

IEEE ACTIVITIES

1. Attended AISYWL Congress at Pune

Date: 07th - 09th October 2022

AISYWLC is the annual flagship event of the IEEE India Council, which administers a platform to for young professionals, academicians, scholars, entrepreneurs and technocrats from divergent fields and careers to show up together and share a common podium. The event was organised at Pune. Dr. Vijayalaxmi Biradar and Mr. Paras Mani Thakur, the IEEE KU SB Chairperson, attended the event. They got full sponsorship for their travel and stay during this event.



2. IEEE Membership Awareness Program

Date: 03rd November 2022

IEEE Membership Awareness program for the First Year Student was organized on 03rd November 2022. The objective was to give the an overview to students. Benefits of becoming a member were discussed by Dr. Vijayalaxmi. A total of 52 students have attended out of which 38 students have shown their interest in taking membership.






Faculty of Technology
Organizes

IEEE MEMBERSHIP AWARENESS PROGRAM

RESOURCE PERSON



Dr. Vijayalaxmi Biradar
Director - IQAC
Kalinga University

ORGANIZING COMMITTEE MEMBERS

Mr. O. P. Dewangan IEEE KU SB Counselor	Mr. Nihal Adhikari IEEE KU SB Vice Chair	Mr. Biglit Krishna Goswami IEEE KU SB Web Master	Mr. Aditya Kumar IEEE KU SB Secretary
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3rd November 2022 09:30 AM - 11:00 AM
Seminar Hall, 2nd Floor, Main Building





KALINGA UNIVERSITY, KOTNI, NEAR MANTRALAYA, NAVA RAIPUR - 492101, CHHATTISGARH, INDIA

3. Webinar On Aerospace and Satellite

Date: 05th December 2022

A webinar on Aerospace and Satellite was conducted by IEEE KU SB. Mr. Hem Prasanth M, CEO of Aerolaunch India was invited as the speaker. The team of Aerolaunch has shown their interest in helping IEEE KU SB students make their own satellites and launch them into space. A total of 79 students have attended the session in online mode. From the webinar, students were motivated to conduct a workshop on Aeromodelling for Govt. School students.

ONLINE WEBINAR ON AEROSPACE AND SATELLITE

TOPICS TO BE DISCUSSED >>>

1. ABOUT THE WORKSHOP
2. IMPORTANCE OF,
 - FUTURE OF PICOSAT IN SPACE
 - POWER OF MICROCONTROLLER
 - BOOMING OF PYTHON
3. INTRODUCTION TO BASIC SPACE SCIENCE
4. OVERVIEW OF MICROCONTROLLERS
5. LEARNINGS FROM THE WORKSHOP
6. WORKSHOP BENEFITS FOR STUDENTS

FREE WEBINAR

Monday, 5 December, 2022
At 02:00pm
Kalinga University, Naya Raipur

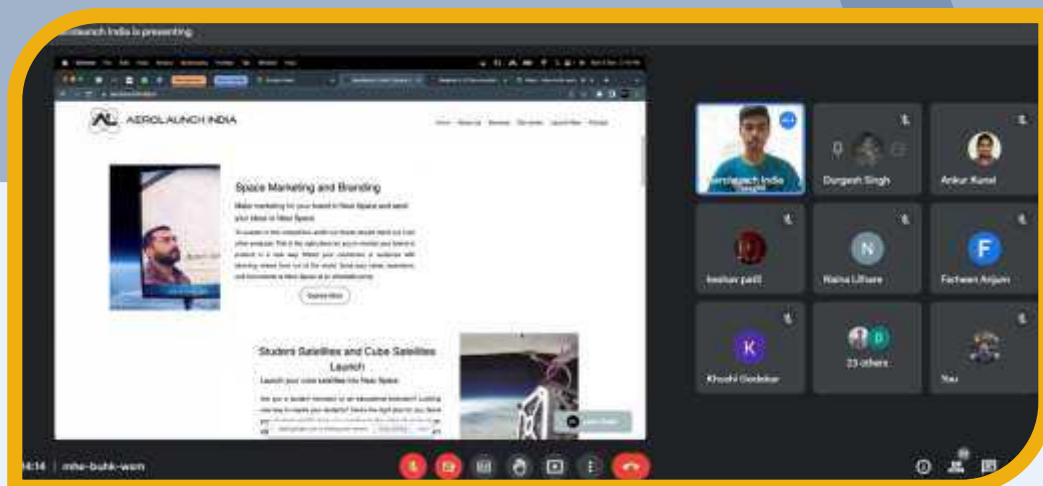
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durgashsingh2005@gmail.com
<https://meet.google.com/mhe-buhk-wsm>

Guest Speaker
Hem Prasanth, M
Co-Founder & CEO
AEROLAUNCH INDIA

KALINGA UNIVERSITY

AESS



4. IEEE MAPCON-2022

Date: 12th- 15th December 2022

MAPCON 2022 included technical sessions, poster sessions, special sessions, invited talks, workshops, tutorials, and a focused track on Young Professionals, Women in Engineering and SIGHT. Eminent professionals from International Space Agencies, Defense Establishments, National Research Organizations, Academia, and Industries came and delivered expert talks and tutorials and organised special sessions related to recent developments. Dr. Vijayalaxmi volunteered at this event and took care of the AESS stall during the event.



5. 8TH IEEE WIECON – ECE 2022

Date: 30th - 31st December, 2022

8th IEEE WIECON- ECE 2022 was organized by IEEE and the venue was IIIT Naya Raipur. Kalinga University was one of the sponsors for the conference and volunteers from IEEE KU SB have contributed in many aspects for to making the conference successful. Students not only volunteer but also learn how to handle such big events.



FACULTY ARTICLE

HOW MODERN TECHNOLOGY CAN TRANSFORM INDIAN RURAL LIFE

The 'soul and heart' of India resides in the villages. No wonder about 70 percent of India's population lives in villages. But for the last few decades, a radical transformation has been visible in the condition of Indian villages. The main credit for this rapid change goes to modern technology. In India, modern technology plays an important role in various fields of development, such as science, industry, and agriculture. The deep impact of modern technological development is visible in the life system of Indian villages. Agriculture is the backbone of the economy of Indian villages. With the help of modern technology, there has been a revolutionary change in the methods of agriculture. Realising their usefulness, farmers have started using new agricultural machines and production systems, leaving the traditional machines. With the use of modern machines like tractors, the art of agriculture has improved, and it has attained a commercial level. This has improved the standard of living of the average Indian farmer. But modern technology has also had some bad effects on the village and village life. Modern technology has increased machine-based livelihoods due to attractive salaries and other facilities; rural youth are migrating to cities. Certainly, modern technology has made a great contribution to providing a strong economic, social and political base and a new dimension to Indian villages. Today, the life of the villagers is full of new goals and new hopes. Modern technology has improved the condition of the villages, and because of that, the life of the villagers has been transformed.



Kamlesh Kumar Yadav

Assistant Professor
Faculty of Information Technology
Kalinga University

FACULTY ARTICLE

ECO-FRIENDLY HOUSE

It is growing bigger and more crucial to adopt an environmental life in the modern world. Building a sustainable and environment home is one method of doing this. An environmental home is built to consume less power and water and to produce fewer pollutants. Additionally, it encourages a healthier lifestyle by utilising recyclable and non-toxic components.

Efforts to minimise pollution are entering households as more and more customers choose environmentally friendly practices. Modern technology is being incorporated into intelligent houses to increase efficiency. Utilising recycled practices, using alternative sources, and redesigning water preservation and saving are a few of such ideas. Houses now have access to alternative energies thanks to the use of solar devices, solar-powered hot water saving, and power saving. Smart watering technologies and rainwater collection techniques both help to utilise water more efficiently.

Energy efficiency is attained by using energy-efficient appliances, windows, and insulation. Windows that are energy efficient are made to keep the house cooler in the summer and lessen heat loss in the winter. To keep a home more pleasant and save energy expenditures, insulation is employed. Lastly, power usage is decreased via energy-efficient appliances.

Eco-friendly homes utilise rainwater collecting techniques and water-saving devices to reduce their water demand. Low-flow lavatories, taps, and showers are just a few examples of water-saving equipment that can cut the consumption of water. Utilising rainwater harvesting techniques lessens the demand to access common water supplies by collecting rainfall and storing it for later usage.



Proshanta Sarkar
Assistant Professor, CS
Kalinga University

STUDENT ARTICLE

SOLAR ROADWAYS

We all know that we are in a situation where we just need to focus more on sustainable energy sources like solar energy. For this solar energy we need a lot of initial investment and obviously a great deal of land to carry on with large energy production, as in solar farms and parks.

Thanks to our inventors, an engineering couple Julian Scott and Bruce, who introduced this great idea of paving solar roadways and parking, parks, tennis, basketball courts, etc. It wasn't proposed very recently, but it's still not at all in people's vision. It's a technology that replaces all roadways, parking lots and outdoor recreation services unless we will go on wasting our precious space in asphalts and concrete just needing to get repaved and filling with potholes. These are some intelligent smart micro-processing hexagonal interlocking solar units that can be replaced at a time if damaged or malfunctioning. They're covered with new tempered glass material that's been designed and tested to meet all impact loads and traction requirements. It's clean energy, so everyone can theoretically drive an electric car with minimum pollution and the least carbon footprint. Cities would smell much healthier.

For those in the northern part of the globe, the panels use the energy they collect to power elements to keep up the surface temperature your degrees above freezing, which will melt the snow off the roads, causing traffic delays, accidents and injuries. Every panel has a series of LED lights on the circuit board that can be programmed to make landscape design warning signs for parking lot configuration unlike painting, re-painting and so on.

We can be able to enlighten the highways for improved visibility at night, and airport runways can be clearer at night with LED lights right inside the Solar landing strip surface. It would be really great to celebrate the festivals just when lightening the whole city roads with their respective lights are also sensitive so they can detect large debris or branches so they can direct a divert the ways of the vehicles heading that way its production is done mostly by recycled materials. Additionally, roadways have two channels that form cable corridors that run concurrently with roadways to carry out power through underground cables and high-speed internet through optic fibres well it can easily replace the wires and cables hanging through poles In concluding statement, this great innovation can solve the world's most expensive issue with green natural solutions. We sure can have a good green environment ahead for our children and their children as well.



Aditya Kumar

B.Tech. ME 6th Sem.,
Kalinga University

STUDENT ARTICLE

LAWS RELATED TO TECHNOLOGY

“Congratulations, You won Rs. 50,00,000 prize as a lucky winner. Follow these steps to withdraw your prize.” - This message popped up on Mr. Sahu's mobile. As a common man Mr. Sahu followed the step of withdrawing and entered his UPI PIN and lost his Rs. 25,000. This is a common incident we see in our daily lives; this is a type of social engineering attack used to scam people intentionally to steal their money, but what to do after this?

Mr. Sahu went to the police station to file a complaint that he was scammed and lost his money. The SP of that city told Mr. Sahu about “Laws related to Cybercrimes”.

There are some laws existing in order to redress this type of cybercrime in 'IT ACT 2000', but we are not aware of all these laws. Some of the common but important laws are:

Section 43 and Section 66 deal with data theft, transmission of viruses into the system, hacking, destroying data or denying access to the network, and punish the person with 3 years imprisonment or fine of up to Rs. 5 lacs or both.

Tampering with computer sources is also a punishable offence under Section 65. Section 66E mentions the punishment for violation of privacy, i.e., capturing, publishing or distributing private photos without consent, then punishment up to 3 years imprisonment or fine up to Rs. 2 lacs.

These are some sections that are necessary to be known as cybercrime is rising day by day, and unfortunately, women are being targeted for crimes like cyberstalking, cyberbullying and blackmailing through private photos. So, BE AWARE, BE SAFE.



Pranav Sahu
B.Tech. CSE 6th Sem.,
Kalinga University

STUDENT ARTICLE

ADVANCEMENT IN 6TH SENSE TECHNOLOGY

Sixth sense technology is a term that has been used to describe a range of technologies that allow people to interact with computers and other digital devices in more natural and intuitive ways. These technologies can include things like gesture control, facial recognition, and voice control, as well as more advanced technologies like augmented reality and virtual reality. We all know humans have 5 senses, so this technology treats little more than human senses; hence, it is called 6th Sense Technology. The 6th Sense Technology, also known as “Perceptual Computing,” is a field of computer science and engineering that aims to allow computers to recognise and interpret human senses, such as sight, sound, and touch. This technology has the potential to revolutionise the way we interact with computers and devices, allowing for more natural and intuitive communication.

One of the latest innovations in this field is the use of machine learning algorithms to improve the accuracy and reliability of 6th sense technology. These algorithms allow computers to learn from data and experience, which can help improve the ability of the technology to interpret and respond to human senses.

Another recent innovation is the development of “smart” sensors that can detect and interpret a wide range of sensory inputs, including temperature, humidity, pressure, and more. These sensors are being used in a variety of applications, such as healthcare, home automation, and industrial control, to provide real-time data and feedback to users. Other notable innovations in 6th sense technology include the use of virtual and augmented reality (VR and AR) to enhance the user experience and the integration of this technology into wearable devices such as smart glasses and smartwatches.

Overall, 6th sense technology is an exciting and rapidly evolving field that has the potential to change the way we interact with the world around us.



Harshvardhan Tripathi

IEEE SB Chair,
B.Tech. 3rd Sem.,
Acropolis Institute, Indore

STUDENT ARTICLE

REVOLUTIONISING HUMAN-MACHINE INTERACTION: THE FUTURE OF CHATGPT TECHNOLOGY

CHATGPT, or “Chatbot Generative Pre-training Transformer” is a new and exciting technology that is set to revolutionise the way we interact with machines. Using advanced natural language processing (NLP) techniques, CHATGPT is able to understand and respond to human language in a much more natural and intuitive way.

One of the key benefits of CHATGPT is its ability to generate human-like text. This allows it to understand the context of a conversation and respond with appropriate and relevant information. This makes it a powerful tool for customer service, sales, and other applications where natural language communication is important.

In the future, CHATGPT is expected to become an integral part of our daily lives, making it easier for us to interact with machines and access information. It could be used for various sectors like healthcare, finance, retail, and even for personal use like virtual assistants and voice assistants.

Overall, CHATGPT is a promising technology that has the potential to greatly improve human-machine interactions and make our lives easier in many ways. As this technology continues to evolve, we can expect it to become an essential part of our daily lives.



Kunal

BE CSE, 4th Sem.
Chandigarh University,
Mohali

IEEE KU SB OFFICIAL VOLUNTEERS



Dr. Vijayalaxmi Biradar
MENTOR, IEEE KU SB



Mr. Anup Kumar Jana
COUNSELLOR, IEEE KU SB



Mr. Sarat Ch Mohanty
AESS ADVISOR, IEEE KU SB



Mr. Harsha Prasad Sah
DESIGNER AND EDITOR, MINDROID



Mr. Parash Mani Thakur
CHAIRPERSON, IEEE KU SB



Mr. Gopal Prasad Patel
OFFICE ASSISTANT



Mr. Nehal Adhikari
VICE CHAIRPERSON, IEEE KU SB



Mr. Ashwan Kumar Sahu
OFFICE ASSISTANT



Mr. Durgesh Kumar Singh
WEB MASTER, IEEE KU SB



Mr. Bigit Krishna Goswami
WEB MASTER, IEEE KU SB



Mr. Jivan Jyoti
SECRETARY, IEEE KU SB



Mr. Akash Kumar Sharma
TREASURER, IEEE KU SB



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CONTACT IEEE KU SB

IEEE KU SB, ROOM NO. OBGF 02, KALINGA UNIVERSITY, NAYA RAIPUR - 492101, CHHATTISGARH, INDIA

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