PRELUDE

IN-HOUSE NEWS LETTER
FROM THE DEPARTMENT OF
ELECRONICS & COMMUNICATION ENGINEERING

JIS COLLEGE OF ENGINEERING

(An Autonomous Institute)

BLOCK A, PHASE-III, PS-KALYANI, DIST-NADIA, PIN-741235

Editors

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JISTECH 2K23

Like every year, JISTECH 2K23 was organised by JIS College of Engineering on 24th and 25th November. Three application based project was recognized by the judges.

First Position: Project ID: ECE10	Second Position: Project ID: ECE05	Third Position: Project ID: ECE06
		

Team Name:	Team Drone	Project ID	ECE10
Team Member's Name:	Krishnendu Mondal	Akash Biswas	Sneha Singh
	Siddharth Chakraverty	Afrin Begam	Saptarshi Mondal
Mentor's Name:	Anirban Ghosal		
Project Title/IDEA:	Stable flight technology for drone for Spying / Disaster Management / Flower Dropping / Flag Carrying.		
Description	This drone project focuses on employing drones for environmental conservation to design, build, and deploy drones equipped with cameras, sensors, and GPS technology for data collection in diverse ecosystems. This data aids scientific research and conservation efforts, including tracking wildlife and assessing environmental changes.This project offers us practical experience in drone technology, and environmental science while contributing to valuable research and conservation initiatives. It epitomizes experiential learning and fosters environmental responsibility.		

Team Name:	SEVENRISHI TECH	**Project ID**	**ECE05**
Team Member's Name:	Saptarshi Mondal	Anindita Sarkar	Nilimesh Pal
	Sayani Pal	Priyanshu Bhattacharya	
Mentor's Name:	Anirban Ghosal		
Project Title/IDEA:	**Sight Sense**		
Description	We have developed a device called SIGHT SENSE for the people who are blind or visually impaired. If there is any object or something in front of them within 6 meters, this device informs the user about the object by earphone or speaker. Our device can also measure the distance between the object and the user and tell the distance to the user. For example, if a blind person is in front of a car, this device can warn him/her in advance by informing him of the car and its distance by a voice speech.		

Team Name:	**Team Solar**	**Project ID**	**ECE06**
Team Member's Name:	Shailendra Kumar Chauhan	Suvrajit Das	Shreyan Nandy
	Tirthendu Mondal	Sruti Jha	Saheli Mete
Mentor's Name:	Dr. Madhura Chakraborty		
Project Title/IDEA:	**PORTABLE SOLAR INVERTER**		
Description	An inverter is a power electronic device or circuitry that changes Direct Current (DC) to Alternating Current (AC). Basically after hearing the name of inverter we assume it to be very costly and not a onetime investment as there is also charging cost. As well as we cannot move it easily anywhere. So here we come with an idea of solar powered mini portable inverter which is cost effective as well as one time investment. It also has an automated solar tracking system which increases the efficiency of this device as the solar panel move towards the direction of maximum solar intensity. Our main aim is to provide the basic facilities to a person during power cut. It is especially designed for students and the people who cannot afford a inverter at such a high price.		

Title of event- One-Day Skill Development Program on Higher Studies Awareness Session for 2nd and 3rd year student of ECE

Date: 20/10/2023
Venue of the event: R325

Brief Report: On September 20, 2023, the Department of Electronics and Communication Engineering (ECE) at JIS College of Engineering (JISCE) organized a one-day skill development program focused on "Higher Studies Awareness" for 2nd and 3rd year students in association with IEI, Kolkata division. The session aimed to provide valuable guidance on the various higher education opportunities available, both in India and abroad, helping students make informed decisions about their academic and professional futures. Around 100 ECE students attended the event, eager to explore their options after completing their undergraduate degrees. The program commenced with a warm welcome by the Head of the ECE Department, who highlighted the importance of higher education in today's competitive world. The session was divided into several modules, each focusing on different aspects of higher studies, ranging from the importance of pursuing postgraduate degrees to the steps involved in securing admissions to premier institutions. The first speaker, Mr. Asim Roy, life member of IEI student chapter Kolkata division, a faculty member with vast experience in guiding students through postgraduate admissions, gave a detailed presentation on the various postgraduate programs available in India, including M.Tech, MBA, and MS. She discussed the admission process for top institutes like IITs, NITs, and IIMs, focusing on entrance exams such as GATE, CAT, and GRE. The speaker also shared information on scholarships, financial aid, and government initiatives to support students pursuing higher studies. The second session featured an industry expert who addressed opportunities for pursuing higher education abroad. He spoke about the procedures for applying to universities in countries like the USA, UK, Germany, and Australia. The speaker covered topics such as the importance of a strong Statement of Purpose (SOP), Letters of Recommendation (LORs), and standardized tests like GRE, TOEFL, and IELTS. He also discussed the benefits of pursuing specialized programs like MS in Electronics and Communication, AI, Robotics, and related fields. An interactive Q&A session followed, where students inquired about specific courses, institutions, and career prospects after completing their higher studies. Faculty members and industry experts provided personalized advice and encouraged students to carefully assess their strengths, interests, and goals when making decisions about their future studies. The program concluded with a motivational talk by a former student of JISCE, who is currently pursuing a master's degree at a reputed international university. He shared his journey and the importance of planning, dedication, and persistence in achieving academic success.

Picture of the event:

Title of event- Alumni Connect Session: "Transformation, journey from a fresher to a professional in IT industry".

Date: 2/11/2023
Venue of the event: B. C. Roy Auditorium

Brief Report: On November 2, 2023, the Department of Electronics and Communication Engineering (ECE) at JIS College of Engineering (JISCE) organized an engaging Alumni Connect session titled "Transformation, Journey from a Fresher to a Professional in the IT Industry." The session was conducted by Sourav Mukherjee, a 2013 alumnus of the ECE department, who is currently a Functional Consultant at Tata Consultancy Services (TCS), based in Melbourne, Australia. The event was attended by 40 eager students from the 2nd and 3rd year of the ECE department. The session aimed to provide valuable insights into the professional journey from being a fresher to becoming a seasoned IT industry professional. Sourav Mukherjee shared his personal experiences, growth trajectory, and challenges he faced in transitioning from college life to the corporate world. The event began with a warm welcome by the Head of the ECE Department, who emphasized the importance of alumni engagement in shaping the aspirations of current students. Sourav Mukherjee then took the stage, where he started by reminiscing about his time at JISCE and how the foundational knowledge he gained during his ECE studies played a crucial role in his professional career. He explained the importance of developing both technical and soft skills, such as problem-solving, communication, and adaptability, which are vital for succeeding in the IT industry. Sourav stressed that while the transition from an engineering discipline like ECE to the IT sector may seem challenging, the analytical mindset and technical foundation of ECE students provide a strong advantage in fields like software development, consulting, and functional analysis. Sourav also shared insights into his role as a Functional Consultant at TCS, describing how he works with clients to identify business requirements, develop solutions, and implement them using technology. He provided practical advice on how to navigate the corporate culture, build professional relationships, and keep learning to stay relevant in the ever-evolving IT sector. The session concluded with an interactive Q&A segment, where students asked questions ranging from how to prepare for placements to how to balance technical knowledge with industry-specific skills. Mr. Sourav encouraged students to continuously upgrade their knowledge, embrace challenges, and remain curious about new technologies and industry trends. The session ended with vote of thanks by professor Indranath Sarkar, ECE and Rupasri Barik, co-ordinator of IEI student chapter and both of them explained the activity so far of IEI student chapter of JISCE and ECE in front of audience.

Picture of the event:

Title of event: Two days' Workshop on COMSOL Metaphysics Software including Semiconductor & RF

Date: 17/01/2024 and 18/01/2024
Venue of the event: VLSI Lab

Brief Report: On January 17 and 18, 2024, the Department of Electronics and Communication Engineering (ECE) at JIS College of Engineering (JISCE) hosted a two-day workshop on COMSOL Multiphysics Software, focusing on Semiconductor and RF applications in association with ISTE student chapter. The workshop was conducted by Mr. Rahul Rajak, an Engineer from Trident Techlabs Ltd., and attracted approximately 70 enthusiastic students from the ECE department. The event took place in the VLSI Lab, which was equipped with the necessary tools and resources to facilitate an engaging learning experience. The workshop aimed to provide participants with a comprehensive understanding of the COMSOL Multiphysics Software, which is widely used for simulating and analyzing complex physical phenomena in various engineering fields, particularly in semiconductor devices and radio frequency applications. The workshop commenced with an introductory session where Mr. Rajak outlined the objectives and significance of using COMSOL for multiphysics simulations.

He emphasized the importance of simulation tools in modern engineering practices, highlighting how they can improve design processes and reduce time-to-market for new technologies. Participants were given hands-on training in utilizing COMSOL Multiphysics for modeling semiconductor devices, including diodes, transistors, and photovoltaic cells. Mr. Rajak provided step-by-step guidance on setting up simulations, defining geometries, assigning material properties, and interpreting results. Students learned to apply boundary conditions and meshing techniques essential for accurate simulations.

The second day of the workshop focused on RF applications, where students explored how to simulate RF circuits, antennas, and electromagnetic fields using COMSOL. Mr. Rajak demonstrated various features of the software, such as parametric studies and optimization techniques, allowing students to explore the performance of their designs under different scenarios. Throughout the workshop, participants engaged in interactive discussions, raising questions and sharing their insights. By the end of the event, students had developed practical skills in using COMSOL for their academic projects and future research endeavors.

Picture of the event:

Two days Workshop on COMSOL Multi physics Software including Semiconductor & RF

Title of event: Two days Workshop on Introduction to Microcontrollers, Arduino, Robotics, IoT with Practical Projects for industrial purpose

Date: 04/03/2024 and 05/03/2024
Venue of the event: VLSI Lab

Brief Report: The Department of Electronics and Communication Engineering (ECE) at JIS College of Engineering (JISCE) organized a two-day workshop titled "Introduction to Microcontrollers, Arduino, Robotics, IoT with Practical Projects for Industrial Purpose" on March 4 and 5, 2024. Conducted by FITAS Technologies Pvt. Ltd., the workshop aimed to provide hands-on experience and insights into the practical applications of microcontrollers, Arduino, and IoT technologies for 40 ECE students.

The workshop commenced in the VLSI Lab, which was equipped with necessary tools and resources to facilitate an interactive learning environment. The facilitators from FITAS Technologies began the session with an introduction to microcontrollers, discussing their significance in modern electronics and automation. Students were introduced to various types of microcontrollers, their architecture, and programming basics, setting a solid foundation for the subsequent practical activities.

On the first day, the focus was primarily on Arduino, where participants learned about its components and how to set up the development environment. The hands-on projects included building simple circuits and programming the Arduino to perform specific tasks, such as controlling LEDs and sensors. The practical approach allowed students to apply theoretical concepts in real-world scenarios, enhancing their problem-solving and critical thinking skills.

The second day shifted towards robotics and IoT applications. Students were introduced to the principles of robotics, including sensors, actuators, and control systems. They participated in building a basic robotic arm and programming it using Arduino. Additionally, the session explored IoT concepts, where students learned to connect their projects to the internet, enabling them to monitor and control devices remotely. The instructors provided insights into the industrial applications of these technologies, emphasizing the relevance of microcontrollers and IoT in various sectors.

Throughout the workshop which was organized in association with IQAC, Idea Lab and ISTE student chapter of JISCE, students were encouraged to collaborate, share ideas, and troubleshoot problems together, fostering a spirit of teamwork and innovation. The event concluded with a showcase of projects developed by the students, demonstrating their newfound skills and creativity.

Picture of the event: