

# SiliconTech

SILICON INSTITUTE OF TECHNOLOGY, BHUBANESWAR

A QUARTERLY NEWSLETTER

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## EDITORIAL

### Greetings from SiliconTech!

Electric vehicles (EVs) have emerged as a pivotal force in the worldwide pursuit of zero-emission targets and sustainable transportation. In the face of environmental challenges posed by traditional combustion engines, the ascendancy of EVs signifies a transformative shift towards cleaner and more efficient mobility. Beyond the evident environmental benefits, the widespread adoption of electric vehicles also fosters energy independence and stimulates innovation in the automotive sector.

However, the large-scale penetration of electric vehicles (EVs) on roads presents a dual landscape of challenges and opportunities for various stakeholders, including governments, industries, and consumers.



One primary challenge is the imperative need for extensive charging infrastructure to support the growing number of EVs. Another hurdle lies in the cost and efficiency of batteries. The widespread adoption of EVs has the potential to strain existing power grids. Addressing this challenge requires upgrading and expanding grid capacity to accommodate the increased demand for electricity. Despite improvements in battery technology, concerns persist regarding the limited range of EVs. Alleviating consumer apprehensions necessitates enhancing the energy density of batteries and increasing the overall range of EVs.

On the flip side, the transition to electric vehicles presents opportunities for job creation in manufacturing, research and development, and the maintenance of charging infrastructure. It will reduce dependence on fossil fuels, thereby promoting energy independence and enhancing resilience against geopolitical uncertainties in the oil market. Governments worldwide are proactively implementing incentives and policies to encourage EV adoption, ranging from subsidies and tax credits to regulations that promote the development of EV infrastructure.

Balancing these challenges and opportunities requires collaborative efforts among governments, industries, and consumers. As we embrace this transformative shift in the automotive sector, may the New Year bring continued progress and innovation towards a cleaner and greener future.

Wish you a very happy and prosperous New Year.

**Prof. (Dr.) Ramaprasad Panda**

DEAN, ADMINISTRATION AND STUDENT AFFAIRS



## SiliconTech signs MoU with the Government of Odisha to set up two Super Specialty Hospitals in Angul and Barbil

Silicon Institute of Technology, Bhubaneswar (SiliconTech) signed a Memorandum of Understanding (MoU) with the Health & Family Welfare Department, Government of Odisha on 4 October 2023 to establish two state-of-the-art super specialty hospitals in the districts of Angul and Barbil. The Government of Odisha has allocated four acres of land for each hospital, and both facilities will house 200 beds, making them multi-speciality healthcare centers. Under the terms of the MoU, the private consortium led by Silicon Institute of Technology, Bhubaneswar in partnership with Utkal Hospital Bhubaneswar, will manage these hospitals for thirty years before handing them over to the government. Chief Minister Shri Naveen Patnaik joined the MoU signing ceremony virtually. He emphasized on equitable, efficient, transparent, and time-bound healthcare to achieve its motto of 'Every life is precious'.



## SiliconTech is the first institute in Odisha to host the IIC Regional Meet in collaboration with MoE's Innovation Cell & AICTE

Silicon Institute of Technology, Bhubaneswar, collaborated with the Ministry of Education's Innovation Cell and the All-India Council for Technical Education (AICTE) to host the Institution's Innovation Council (IIC) Regional Meet on 18 December 2023. The event is part of a nationwide initiative, with the Ministry of Education's Innovation Cell and AICTE planning regional meets in 20 different cities across the country. The inauguration ceremony was graced by Dr. Raghav Prasad Dash, AICTE Advisor-1, Mr. Dipan Sahu, Assistant Innovation Director, Ministry of Education's Innovation Cell, and Prof. (Dr.) Omkar Nath Mohanty, Director of Technology & Academic Initiative at RSB MetalTech, Pune & Former Vice-Chancellor, BPUT. Mr. Sahu highlighted that the objectives of the regional meet are aligned with the vision of Viksit Bharat 2047, an initiative by our PM Shri. Narendra Modi to foster the social and economic advancement of the country. Dr. Dash accentuated the role of innovation in making our country self-reliant and independent, and Prof. Mohanty appreciated IIC's role in fostering innovation among the students.

# NEWS AND EVENTS



## NES 2023

The Department of Electronics Engineering (EE) collaborated with its industry partner Sevy Multimedia to host a 3-day Workshop on Nanotechnology and Embedded Systems (NES 2023) in hybrid mode from 30 November to 2 December 2023. The objectives of NES was to create awareness of the recent advances in solidstate devices, VLSI circuits, and embedded systems. The chief guest of the workshop was Dr. Ajit Panda, Director of VVDN Technologies and the Guest of Honor was Mr. Mrinal Das, Head of Hardware Design Group (R&D) at Synopsys. The workshop comprised of expert talks and hands-on training sessions by eminent speakers from leading semiconductor companies.



## ATAL FDP on Nanotechnology and Embedded Systems

The Department of Electronics Engineering (EE) organized an ATAL (AICTE Training and Learning) sponsored Faculty Development Program (FDP) on Nanotechnology and Embedded Systems from 18 to 23 December 2023. The FDP aimed to raise awareness of recent advances in solid-state devices, VLSI circuits, and embedded systems. Dr. Saroj Kanta Misra, our Director, inaugurated the session, with Dr. Angsuman Sarkar as the Chief Guest and Dr. Debashis De as the Guest of Honor. Keynote speakers included experts from academia and industry. Fifty seven faculty members actively participated, benefiting from hands-on training sessions and enhancing their skills in cutting-edge technologies.



## NWET 2023

The Department of Electrical and Electronics Engineering (EEE) organized the 14th National Workshop on Emerging Technologies (NWET 2023) on 16 December 2023 on 'Green Energy: The Primary Link to Modern India'. The inaugural session of NWET 2023 was graced by Shri. Bhadrash Bachubhai Mehta, Director of State Load Dispatch Centre (SLDC), Odisha Power Transmission Corporation Limited (OPTCL). The workshop comprised of expert talks by Mr. P.K. Pattanaik, Senior General Manager, OPTCL, Mr. KVS Baba, former Chief Managing Director of Power System Operation Corporation Limited (POSOCO), Mr. Gopa Kumar, Managing Director of Cape India Pvt. Ltd., Mr. Bibhu Charan Swain, Energy consultant at Powertech Solution and Mr. Raj Singh Niranjana, Managing Partner at Trans India Law Associates.



## AIPEM 2023

The Department of Electrical and Electronics Engineering (EEE) organized the 3rd All-India Power Engineers' Meet (AIPEM) SPARK Engineers' Congress Symposium on 'Emerging Technologies, Now and Next,' on 17 December 2023. The objective of this meet was to provide exposure to the well-researched views of experts in various sectors of engineering. It consisted of two panel discussions. Each session began with an expert talk which was followed by a discussion among the luminaries from industry and academia. AIPEM 2023 was convened by Dr. Ramprasad Panda, Professor, EEE, and coordinated by Dr. Tapas Kumar Maji, Assistant Professor, EEE. A total of one hundred and sixty participants including students, faculty members and industry experts attended the meet.





## ATAL FDP on AI in E-Automobile Technology

The Department of Electrical and Electronics Engineering (EEE) in collaboration with AICTE Training and Learning (ATAL) Academy Cell, New Delhi organized a Faculty Development Program (FDP) on 'Artificial Intelligence in E-Automobile Technology and its Integration with Sustainable Energy' from 6 – 11 November 2023. The objective of the FDP was to make the participants aware of the concepts of Renewable Energy and Electric Vehicle (EV) technology. A total of fifty faculty members, postgraduate students, and research scholars attended the FDP to enrich their knowledge and gain expertise in this cutting-edge technology.



## Invited Talk on 'ISRO: India's most Successful Startup'

The Institute of Electrical and Electronics Engineers (IEEE) and the Indian Society for Technical Education (ISTE) Student Chapters at SiliconTech jointly organized an expert talk on 'ISRO: India's Most Successful Startup' on 15 December 2023. The expert talk was delivered by Ms. Gita Aravamudan, writer, and journalist. Ms. Aravamudan has co-authored a book entitled 'ISRO: A Personal History' along with Mr. Ramabhadran Aravamudan. Mr. Aravamudan is an Indian space scientist and engineer associated with the Indian space program since 1962. The talk aimed to showcase ISRO's journey, highlight key milestones, and inspire an understanding of the challenges and achievements that shaped India's space program.



## Technical talk on Roles and Responsibilities of an IT Engineer

The Indian Society for Technical Education (ISTE) Student Chapter at SiliconTech organized a technical talk on 'Roles and Responsibility of an IT Engineer and Career Opportunities in the IT Sector' in the virtual mode on 11 November 2023. The talk was delivered by our alumnus Swapna Sanjog Mohanty from the CSE 2022 graduating batch. Currently, he is working as a Software Development Engineer at Amazon. He imparted invaluable insights into the roles and responsibilities of an IT Engineer and emphasized diverse career opportunities within the IT sector.



## Workshop on PSpice Software

The Department of Electrical and Electronics Engineering (EEE) and the Institute of Electrical and Electronics Engineers (IEEE) Student Chapter at SiliconTech jointly organized a one-day workshop on 'Beginner Boot Camp on PSpice Software' on 14 October 2023. The workshop provided the participants with a basic awareness of the simulation of electrical and electronic circuits using OrCAD Capture CIS PSpice simulation tools and helped them understand circuit performance using PSpice advanced analysis. The workshop was conducted by Dr. Ramaprasad Panda, Professor, Department of EEE. Dr. Panda described the installation procedure of the PSpice simulation tool and explained bias point calculation, DC sweep analysis, and AC sweep.



## TEDxSITB@Third Edition

The Industry Interface Cell (II Cell) organized the third edition of TEDxSITB on 10 December 2023 based on the theme 'Harmony in Equilibrium: Mastering the Art of Balance'. The event featured six captivating speakers who are experts in their respective fields. They were Ms. Shyama Jha, Social Entrepreneur and Founder of Millet Magic, Wow Mom Foods and Hastrang, Ms. Swati Arora, Head of Leadership Development at Tech Mahindra, Life Coach and Entrepreneur, Ms. Shrutiksha Nayak Nath, Entrepreneur & Chief Operating Officer (COO) of Threatsys Technologies and fbb Colors Miss India Finalist, Mr. Sarbajeet Mohanty, a Demonologist and Paranormal Investigator, Mr. Suraj Rikame, Actor and Theatre Artist and Ms. Anica Mann, Archaeologist, Writer, and Podcaster.



## Techtronics 2023

The Silicon Tech Circuit Club and Robotics Club, under the Student Innovation and Promotion Cell (SIPC) hosted Techtronics on 25 November 2023. Techtronics is a platform that fosters innovation, where students showcase technical prototypes (hardware and software) and engage in spirited competition with peers from diverse institutions. A total number of two hundred and fifty students participated in the event. The senior division featured twenty-one hardware teams and twenty-two software teams, while the junior division comprised of ten hardware teams and five software teams. The event was coordinated by Dr. Sudhansu Mohan Biswal, Prof. Satish Kumar Das and student volunteers from Silicon Circuit Club and Silicon Robotics Club.



## Sabda-Tattva 2023

The Meta Academics Cell at SiliconTech organized 'Sabda-Tattva 2023', the first inter-college literary fest on 24 and 25 November 2023. The fest aimed to foster the literary skills and creativity of students by organizing various competitions in writing, poetry, and debates. The event featured several competitions including Write-a-Tale, Poetic Arena, Leadership Challenge, Lok Sabha, and Parachute Drop. More than a hundred students from different institutes across the state participated in various competitions. All the winners were awarded prizes for their exemplary performance in the Literary Fest.



## Developers' Summit 2023

The Google Developer Student Club (GDSC) collaborated with the Silicon Wing of Technical and Coding Hub (SWITCH) Club to organize the 'Developers' Summit 2023' on 16 December 2023. The theme for this year's summit was 'Innovation Unleashed'. Mr. Nitish Kumar conducted a session on 'Application Development Essentials', Mr. Sovit Acharya discussed about 'Cloud, Containerization, and Docker' and Mr. Susant Rout conducted a session on 'Journey of Innovation in Programming Education'. The SWITCH club also organized 'Coding Event Extravaganza', a coding competition.



## Harry Potter Quiz 2023

Silicon Quiz Club in collaboration with the Silicon Photography Club organized the 'Harry Potter Quiz 2023' on 1 November 2023. The event educated the participants about the popular series and celebrated the beloved Harry Potter fandom. The quiz consisted of a preliminary round followed by the final round. More than fifty five teams participated in this quiz, out of which six teams made it to the finals. The winners were Rajesh Panigrahi and Purnima Mishra from the CSE 2026 graduating batch. Tatsat Mohanty (CEN, 2024) and Amlita Panda (CEN, 2025) were the runners-up.



## Apticode Quest

The Indian Society for Technical Education (ISTE) Student Chapter organized the 'Apticode Quest' on 11 November 2023 for the B.Tech. graduating batch of 2027. The event aimed to acquaint participants with coding and various coding platforms, fostering the development of their aptitude and coding skills. The participants appeared for a test that was designed to offer insights into the potential types of questions they may encounter in the future. Md Tameez Alam, Omkarnath Mohapatra, K.V. Ramana and Subhashish Praharaj from the CSE 2027 graduating batch secured the first, second, third, and fourth positions respectively in this event.



## Quizanna 2023

Silicon Quiz Club organized the 2nd edition of 'Quizanna' on 18 November 2023. The senior secondary students from different schools in Bhubaneswar and Cuttack participated in this quiz. The quiz consisted of a preliminary round followed by the final round. The winners of 'Quizanna 2023' were Sahil Jayasingh and Siddharth Kumar Jena from D.A.V. Public School, Unit 8, Bhubaneswar. The first runners-up were Tripathy Divyajyoti Senapati and Jeet Raha from D.A.V. Public School, Unit 8, Bhubaneswar. Ayeush Mohapatra and Sakya Singha Patra from D.A.V. Public School, Chandrasekharpur, were the second runners-up.



## KIITMUN 2023@Winners

SiliconTech students participated in the KIIT International Model United Nations (MUN) held from 6 to 8 October 2023 at Kalinga Institute of Industrial Technology (KIIT) University in Bhubaneswar. Our students secured key positions and won numerous prizes for their outstanding performance in the MUN. Namrata Mishra (CST, 2024) achieved the prestigious position of Director of UNESCO (United Nations Educational, Scientific, and Cultural Organization) as a part of the Executive Board of the organization. A total of 34 students from SiliconTech participated in the event and brought laurels to the institute for their remarkable achievements.





## National Energy Conservation Day 2023

The Department of Electrical and Electronics Engineering (EEE) collaborated with the Institute of Electrical and Electronics Engineers (IEEE) Silicon Student Chapter, Silicon Innovation & Promotion Cell (SIPC), and the Institution's Innovation Council (IIC) to celebrate the National Energy Conservation Day on 14 December 2023 by organizing a poster competition and a technical talk. The winner of the competition was Biswaranjan Das. The first runner-up was Silva Simran and the second runner-up was Jiban Jyoti Pal. Mr. Bibhu Charan Swain, Senior Consultant, Power Tech Consultants delivered a talk on the 'Implementation of Integrated Energy Efficiency and Demand Side Management Model in Educational Institute'.



## Talk on 'Prevention of Sexual Harassment at Workplace'

The SAGE-W cell in collaboration with the ICC cell organized an Awareness Program on 'Prevention of Sexual Harassment at Workplace' on 9 December 2023 to observe the Prevention of Sexual Harassment at Workplace week. The speaker for the event was Ms. Kanta Mohanty, Training Consultant and Career Transition Coach, Bhubaneswar. Ms. Mohanty made everyone aware of the need for regular training sessions on harassment and its consequences and ways to tackle them. She also highlighted how such situations need to be dealt with in a workplace with proper regulation of mind.



## IEEE Day 2023

The Institute of Electrical and Electronics Engineers (IEEE) Student Chapter celebrated IEEE Day on 6 October 2023 on the theme 'Technical Innovation and Science of Brain'. The distinguished speaker of the event was Dr. Ranjan Kumar Behera, Associate Professor of Electrical Engineering at IIT Patna. Dr. Behera talked about the industrial approach to Electric Vehicle (EV) integration, discussing EV design and technology, Vehicle Dynamics, Battery systems, and more. The participants also learned about manufacturing processes and casting technology for EV components, gaining a comprehensive insight into the EV industry and its practical applications.



## Field Visit to TPCODL

The Department of Electrical and Electronics Engineering (EEE) organized a field visit to Tata Power Central Odisha Distribution Limited (TPCODL), Bhubaneswar for the 7th semester EEE students on 18 November 2023. This field visit was organized under the 'train to hire' initiative of Tata Power. During this field visit, our students visited the SCADA (Supervisory Control and Data Acquisition) Centre, meter testing lab, Skill Development Centre, electric substation, and automated substation in two groups. They availed firsthand knowledge about power systems equipment, protection, and functioning of the substation.



## Blood Donation Camp

The Red Ribbon Club (RRC) collaborated with Silicon Students Council (SSC) and the National Social Service (NSS) Club to organize a Blood Donation Camp on 4 November 2023. More than a hundred students and eleven staff members volunteered to donate blood for a noble cause. A total of 105 units of blood were collected by the Red Cross team, Unit-6, Capital Hospital. All other necessary arrangements including refreshments and resting area were made keeping in mind the health and comfort of the volunteers and donors.



## Plantation Drive

The YFS Silicon Chapter organized a plantation drive on 18 November 2023 in collaboration with the team of the movie 'Ae Akasa Tale.' Odia Cine Star Miss Samarpita Dash, Notable Film Director Mr. Subhendu Biswal, and Stand-Up Comedian Extraordinaire Mr. Debarchan Mishra joined the drive and addressed the audience about the importance of conserving the environment. Approximately 100 students actively participated in the initiative to plant more than fifty trees and promote environmental sustainability.



## Indian Open Gate Ball Tournament (IOGT) 2023

The Indian Gate Ball Union (IGU) collaborated with Silicon Institute of Technology, Bhubaneswar (SiliconTech) to host the Indian Open Gate Ball Tournament (IOGT) 2023 from 26 to 27 November 2023. The tournament was inaugurated by the Chief Guest Mr. Satyabrata Sahu, IAS, Additional Chief Secretary, Government of Odisha on 26 November 2023. The inauguration ceremony was attended by Dr. Saroj Kanta Misra, our Director, and Dr. Ramaprasad Panda, Dean (Administration & Student Affairs). A total of twenty-four teams from different countries including Japan, Indonesia, Taiwan, and Thailand participated in this tournament.



## Silicon Cup 2023

SiliconTech organized 'Silicon Cup 2023', the 14th inter-college sports meet from 28 November – 1 December 2023 at SunDeck, the sports complex of the institute. The sports meet was inaugurated on 28 November 2023 in the presence of Dr. Saroj Kanta Misra, our Director, Dr. Jaideep Talukdar, our Principal, and Dr. Ramaprasad Panda, Dean of Administration & Student Affairs. External referees were invited to judge the different matches. All the matches were coordinated by Dr. Subhakanta Dash, Faculty in Charge of the Silicon Students Council, and Mr. Gyana Ranjan Biswal, Faculty Coordinator of the Silicon Sports Club. The sports meet concluded on 1 December 2023 with the prize distribution ceremony.





## Freshers' Welcome @B.Tech. 2023 Admission Batch

SiliconTech organized the Freshers' Welcome for the B.Tech. 2023 admission batch on 20 October 2023. The objective of this event was to introduce the new students to the institution, foster a sense of belongingness, and acquaint them with the campus culture. The 2nd year students welcomed the newly admitted students by conducting various fun events and competitions. The winners of different competitions were awarded prizes. The event was a huge success due to the collaborative efforts of the students and faculty members.



## Rhythmnova 2023

The Cultural Society of Silicon (CSS) organized the Annual Cultural Fest 'Rhythmnova 2023' on 2 December 2023. It was a one-day event that aimed to showcase the diverse talents and celebrate the spirit of the student community at the institute. There were around twenty performances throughout the event. The performances included a group dance, a duet song, a mono-act, and a skit. The highlight of the event was the special performances by the official dance crew and the college band, DemonDX and Samarpan respectively.



## Sangam 2023

The Cultural Society and Meta Academics Cell jointly organized 'Sangam 2023' a music fest on 25 November 2023. Students from different higher secondary schools and colleges in the state participated in this fest. The music fest consisted of various competitions in different genres like dance, song, and instrumental. A total of fifty participants took an active part in this fest. On the final day of the event, the students of the Silicon Cultural Society performed a play based on the seventh episode of the Hindi epic 'Rashmirathi'. The event concluded with the prize distribution ceremony.



## Open Mic 2023

The Meta Academics Cell organized the sixth edition of Open Mic on 29 December 2023. This event brought together bright minds and creative talents. It featured performances on poetry, stand-up comedy, and storytelling. The best performances were selected based on the scores given by the judges and audience voting. In the judge's category, Girish Bharadwaj (CST, 2025) emerged as the winner and Subhojeet Biswas (ECE, 2026) was the runner-up. In the audience's choice category, Sunil Kumar Swain (MCA) was the winner and Swati Sonalika Panda (ECE, 2026) was the runner-up.

*NOTE: For further details on any news item, visit <https://silicon.ac.in/news/>*

## EMPLOYEES IN NEWS



**Mr. Gyana Ranjan Biswal**, Assistant Professor, Electrical and Electronics (EEE), completed the 'Introduction to Internet of Things' course offered by IIT, Kharagpur on the NPTEL platform, scoring 90% marks. He earned an Elite GOLD Certificate with a Topper Badge and was placed in the Top 5% among 25880 candidates.



**Ms. Kumari Anamika**, Assistant Professor, Basic Sciences and Humanities (BSH), received the best paper presentation award for her research on 'Isolation, Identification, and Heavy Metal Toxicity Test of Microorganisms isolated from Paper, Textile, and Paint Industry Effluents' at the National Conference organized by Orissa Environmental Society, Bhubaneswar, and Environmental Science Department, Berhampur University in the 24th Odisha Bigyan 'O' Paribesh Congress.



**Dr. Pamela Chaudhury**, Senior Assistant Professor, Computer Science and Engineering (CSE), delivered a talk on 'Introduction to concepts and approaches of Artificial Intelligence' in the three-day online STTP (Short Term Training Program) on Artificial Intelligence organized by the Department of Information Technology, S.K.D.A.V Government Polytechnic, Rourkela, Odisha from 18 to 20 October 2023.



**Dr. Pradyumna Tripathy**, Associate Professor, Computer Science and Engineering (CSE), was empaneled by CBSE to act as a jury for the evaluation of projects for the Regional Round Science Exhibition held on 8 and 9 December 2023. He delivered a talk on 'Critical Thinking and Problem Solving' at Srusti Academy of Management. He was also nominated as a member of BoS for the MCA department at Srusti Academy of Management.



**Dr. Swarupa Roy**, Assistant Professor, Basic Sciences and Humanities (BSH) has completed two certification courses on Foundations of Modern Finance 1 and Mathematical Methods for Quantitative Finance, offered by MITx, the MOOC program offered by Massachusetts Institute of Technology.



Scopus/SCI Indexed journals: **6**

Conference Proceedings: **15**

Book Chapters: **2**

Patents: **1**

## **Enhancing Diabetic Retinopathy Detection Through Machine Learning with Restricted Boltzmann Machines**

Diabetes mellitus, a common metabolic problem characterized by increased blood sugar levels, can cause diabetic retinopathy, a chronic and progressive eye condition. The retina, the light-sensitive tissue at the back of the eye in charge of conveying visual information to the brain, is especially impacted by this disorder that poses a threat to eyesight. However, the traditional method of diagnosing diabetic retinopathy through retinal testing by ophthalmologists is labor-intensive and time-consuming. This research addresses these diagnostic challenges by leveraging machine learning and deep learning techniques. This work presents RBM images, and the analysis, which utilizes numerous features, aims to predict formation in images. The steps used are image acquisition, pre-processing, segmentation, and glaucoma classification. Initially, retinal fundus images are obtained from the public data source. Pre-processing is necessary to eliminate unwanted image features such as speckles, blind spots, etc. The Optic Disk (OD) and Optic Cup (OC) are performed using a Threshold U-Net. Next, the deep features such as contrast, homogeneity, mean disc, correlation, SD (standard deviation) disc, energy disc, entropy disc, entropy cup, etc., are extracted. This suggested method, which uses RBMs, not only performs better than current methods but also represents a substantial advance in the early and accurate diagnosis of diabetic retinopathy, thereby assisting in the preservation of eyesight and the efficient use of healthcare resources.

*This research is being conducted by Dr. Annapurna Mishra, Associate Professor, Electronics Engineering.*

## **Fabrication of sensors of an electronic tongue for investigation of tea quality**

The work introduces a novel paradigm for evaluating tea in terms of the compounds that contribute to its quality. Currently, the human tea-tasters assign tea scores based on which evaluation is done. The high-end instrumental methods that are used are time-consuming and expensive. The electronic tongue (E-tongue) is an electronic circuitry array of sensors used to simulate the human sense of taste. Thus, it is possible to eliminate human subjectivity and inconsistencies with this technique. The use of non-sensing elements is the main drawback of a conventional E-tongue, even though it is objective and less expensive than analytical instruments. This work proposes a potential way of fabricating the sensors to get over the restrictions of a conventional E-tongue. The fabricated sensors have high affinity and sensitivity towards the target molecule. The idea is to create imprinted cavities inside a polymer matrix that are comparable to the target molecule's orientation and form. On imbibing the sensors to the tea samples, the required voltammograms were recorded. The recorded signatures were further subjected to regression analysis for predicting the content of the respective compound. An additional step has been taken towards the development of a three-electrode cyclic-voltammetry system at a low cost.

*This research is being conducted by Dr. Debangana Das, Assistant Professor, Electronics Engineering.*



# STUDENT ACHIEVERS

## Anubhab Patnaik@Placed at RadiusAI with 24.5 LPA

RadiusAI @24.5 LPA



**Anubhab Patnaik**  
CSE 2023

Anubhab Patnaik (CSE,2023) has been placed as an SDE at RadiusAI with a package of 24.5 LPA. Prior to this, he was working with StackIt with a package of 17 LPA. He did his internship at Squibix with a monthly stipend of INR 20K during his 8th Semester under the Practice School (PS) Program. He has also developed applications and websites utilizing JavaScript, PHP, Go, ReactJs, React Native, and Firebase.

## Practice School (PS) selectees from 8th semester B.Tech. graduating batch of 2024

### PCON UTILITIES @30K



**Diptimayee Behera**  
CST 2020-24



**Sonali Pradhan**  
CSE 2020-24



**Jajati Keshari Behera**  
CSE 2020-24



**I Prasanti**  
CEN 2020-24



**Anwasha Mishra**  
CEN 2020-24



**Abhipsa Mallick**  
CEN 2020-24



**Subhankit Parida**  
CSE 2020-24

### Eximietas Design @20K



**Divyam Prakash**  
CST 2020-24



**Sadjan Satapathy**  
CST 2020-24



**Monalisa Sahu**  
CSE 2020-24



**Debasis Das**  
CSE 2020-24



**Nehal Bhuyan**  
CST 2020-24



**Ashish Kumar Nayak**  
CEN 2020-24



**Aniket Sahoo**  
CSE 2020-24

### Xeedo Technologies @20K



**Swetapadma Sahoo**  
ECE 2020-24



**Rajeshwar Prasad Panda**  
ECE 2020-24



**S Vinay**  
ECE 2020-24



**Namrata Mishra**  
CST 2020-24  
President of the  
General Assembly in  
Legatio 2023-SDG  
SUMMIT at Delhi Public  
School, Siliguri



**S. Nirlipta Nitinimagna**  
ECE 2022-26

2nd runners-up at BPUT Tech Carnival  
for Smart Home Automation Project



**Madhusmita Rout**  
ECE 2022-26



**Swati Sonalika Panda**  
ECE 2022-26

3rd prize in NALCO  
Odia elocution

# INDUSTRY INTERFACE CELL

## Placement Highlights

The placement scenario at our campus seems to be quite positive, despite being in the shadow of a tech slowdown this year. 30 companies have participated till now across various sectors like software, consulting, analytics, finance-banking, telecom, sales & core engineering. More than 14 companies have conducted drives in this October-December quarter and have selected students in the salary range of 3.6 LPA - 10 LPA. Haber Technology has offered the highest package of 10 LPA

- 161 students have received an offer greater than or equal to 4 LPA
- 42 students have received an offer greater than or equal to 6 LPA
- 30 students have been placed in the core sector
- Highest package till date is 10 LPA

Top recruiting companies include :

Accenture	CoreEL	Technology	Qvantel	Spikewell
ApMoSys	Deloitte	Incture	Rumango	Surya Digital
Argusoft	Eximietas	Kaynes Technology	Sanmina	Tata Power
CAMS	Genpact	Movidu Tech	SAP Labs	Vodafone
CGLIA	Haber	PCON UTILITIES	Sevya IT	Xeedo Technologies

## Practice School Highlights

- 132 students from the 2024 graduating batch have received Practice School (PS) offers from more than 30 companies in their 8th semester. The number is likely to increase as few of the companies are yet to complete their process.
- More than 60% of these students will receive a stipend ranging from INR 15K - 30K.
- Selected students will be joining their respective PS stations for their internship program in the 8th semester.
- Most of the students will receive their pre-placement offer after successful completion of their internship program.
- The companies who have given PS offers to our students in the 8th semester include:

ApMoSys	Glosity	Novel Telenet	Spikewell
Argusoft	Incture	PCON UTILITIES	Surya Digitech
BLYMO TECH SOLUTIONS	Innotrat Labs	PHYTEC (Embedded Domain)	Teleglobal International
Byte IQ	Kaynes Technology	PWC	Xeedo Technologies
Credore	Kristellar Aerospace	Quantumaware	ZeonAI
Cybersecurity, SDI BBSR (Deloitte)	Logile	Rumango	
Ernst & Young	Marqueesemi	Sanmina	
Eximietas Design	MoviduTech	SiliconTechLab	

## Industry Collaboration with HINDALCO for Research and Consultancy

SiliconTech took a significant stride in fostering collaboration with Hindustan Aluminium Corporation Limited (HINDALCO) Hirkud Plant. HINDALCO, a flagship company of the Aditya Birla Group, is a prominent leader in the realms of aluminum and copper industries. The Hirkud Plant boasts one of the nation's most sophisticated rolling mills. The collaboration focussed on three key areas of concern including the Electrical Power System, Rodding Plant, and Compressed Air System. Within these domains, there are a total of 14 identified problem statements. SiliconTech has meticulously crafted the Scope of Work (SoW) and corresponding commercial proposals. HINDALCO has duly accepted the proposed SoWs for the Power System & Rodding Plant. The Industry

Interface Cell (II Cell) also organized a two-day industrial visit on 18 and 19 October 2023 to delve into the intricacies of HINDALCO's cutting-edge facilities.



# ENTREPRENEURSHIP DEVELOPMENT CELL

*The ED Cell has organized several interesting events in the October-December quarter. The following is a glimpse of all the events organized by the ED Cell.*



## National Pollution Control Day 2023

The National Pollution Control Day is celebrated on 2nd December every year in India to raise awareness about the different measures to control pollution and the prevention of industrial disasters. The members of the ED cell delivered a comprehensive address to the participants, enlightening them on various measures essential for mitigating pollution. The students also shared their perspectives on how they can personally contribute to pollution reduction through minor adjustments in their daily routines.



## 'My Story' by Successful Innovator

A motivational session titled 'My Story,' featuring the accomplished innovator, Dr. Birendranath Banerjee was organized on 2 December 2023. In his talk, Dr. Banerjee, the Managing Director of inDNA Life Sciences, shared his compelling journey, focusing on the transformative potential of DNA-based diagnostics. He illustrated the vision of in DNA Life Sciences, highlighting how personalized medicine and DNA-based diagnostics empower individuals to manage their health and prevent lifestyle diseases. The session, marked by interactive Q&A discussions, sparked enthusiasm and curiosity among the audience.



## National Innovation Day 2023

A quiz was organized on 15 October 2023 on the occasion of National Innovation Day to celebrate the birthday of Dr. APJ Abdul Kalam. The event commenced with a heartfelt tribute to Dr. Kalam by narrating his inspiring journey. The quiz was conducted via Google Forms and focused on multiple-choice questions about Dr. Kalam. A total of 43 students participated. The winners were awarded prizes. This quiz not only offered an engaging platform but also served as a fitting homage to the visionary leader.



## 'My Story' by Successful Entrepreneur

An inspiring session titled 'My Story' was organized on 2 December 2023. The event featured Mr. Jayjit Dash, a successful entrepreneur who shared his remarkable journey from Silicon Valley to leaving a profound impact on healthcare and hospitality in Odisha. A Wharton MBA and IIT Kharagpur alumnus, Mr. Dash engaged the audience with his captivating narrative, shedding light on his ventures, including The BOMBAY Cafe and Restaurant, and the ASHWINI's PHARMACY chain. His pivotal role in the ASHWINI Group of Hospitals served as a testament to the transformative power of passion and dedication, illustrating how one can achieve success across diverse sectors.



# ALUMNI BUZZ



## 15th Alumni Meet

SiliconTech Alumni Association organized its 15th Alumni Meet at the institute premises on 30 December 2023. The event began with a welcome song followed by the lamp-lighting ceremony. Prof. (Dr.) Jaideep Talukdar, our Principal, delivered the welcome address. Dr. Debabrata Kar, Dean Academics, and Dr. Ramaprasad Panda, Dean Administration & Student Affairs shared some words of wisdom with our alumni. Dr. Sanjit Kumar Swain, Faculty-in-Charge of the Industry Interface Cell (II Cell) shared the progress and achievements of the institute and students

over the past years. The event also featured performances and fun activities arranged by our students. The alumni were also taken on a virtual campus tour to let them reminisce about their cherished memories. Furthermore, batch-wise group pictures were taken to capture the memories with the staff and students of SiliconTech. A total of two hundred and sixty alumni attended the alumni meet. The Silicon Alumni Association team headed by Dr. Biranchi Narayan Rath coordinated the event. The members of the Silicon Student Council and volunteers participated enthusiastically in organizing the event.



### Invited Talk by Swapna Sanjog Mohanty

Swapna Sanjog Mohanty from the CSE 2022 graduating batch delivered a technical talk on 'Roles and Responsibility of an IT Engineer and Career Opportunities in IT Sector' in the virtual mode on 11 November 2023. The invited talk was organized by the Indian Society for Technical Education (ISTE) Student Chapter at SiliconTech.

# ALUMNI IN FOCUS



## **BHABANISHANKAR MALLIK**

Technical Manager, HCL Tech  
B.Tech. (ETC) 2008-2012

Bhabanishankar is currently working as a Technical Manager at HCL Tech. His role involves helping the team with Impact Analysis on various updates and changes from Microsoft on M365 applications. With over ten years of experience in Microsoft 365 and various MS applications, he is not just a tech expert but also a great leader. His enthusiasm for learning and embracing new technologies shows his dedication to bringing innovation to the M365 field. Outside of work, he enjoys traveling, playing cricket, doing yoga and meditation, cooking, and watching web series.



## **SIBASIS SWAIN**

Principal Consultant, SAP, BIRLASOFT  
B.Tech. (EEE), 2004-2008

Sibasis is currently leading SAP S4 HANA implementations at BIRLASOFT. His job role includes business operations, solutions, and overseeing the entire project lifecycle with his team. He has more than fourteen years of experience in this field. Furthermore, he is the Founder of Kalinga Swaraj Foundation, one of the largest Odia expat organizations, connecting four lakh Odias and twenty eight thousand women worldwide. He uses his leisure time by engaging in diverse projects focusing on women empowerment, skill development, and humanitarian aid.



## **SARTHAK MOHANTY**

Business Analyst, Capgemini  
B.Tech. (CSE) 2013-2017

Sarthak is currently working as a Business Analyst at Capgemini. His role involves leading product teams to successful implementation throughout the product lifecycle and engaging stakeholders with the product. His areas of interest include equity research, macroeconomics, business analysis, product management, and fundamental analysis. He has also completed executive PGDM from XIMB, Bhubaneswar. In his leisure time, he loves to watch documentaries and read non-fiction. He is currently focused on his preparations for higher studies.



## **LIPSA MOHANTY**

Lead Consultant, Infosys  
B.Tech. (ETC) 2004-2008

Lipsa is currently working as a Lead Consultant at Infosys. She has been associated with Infosys for the last fifteen years and has worked on multiple energy and utilities projects. Presently, she is working on a modernization project for a US utility company. Lipsa started her career in Infosys in 2008 during the campus placement. She joined Infosys as a Mainframe developer and worked in niche technology for more than ten years and then moved to consultancy where her work mostly revolves around Oracle Apps. During her leisure, she loves to explore new places and try different cuisines.

## Alumni Desk

Visit our Alumni Portal at <https://alumni.silicon.ac.in/> & register yourself

E-mail: [siliconalumni@silicon.ac.in](mailto:siliconalumni@silicon.ac.in) | Contact: +91 9937289499 | Extn: 352/353/354/356/358

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