# ECHO (VOL – 5) 2022

# NEWS LETTER FROM THE DEPARTMENT OF

#### **ELECTRONICS & COMMUNICATION ENGINEERING**



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AFFILIATED TO MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY WEST BENGAL, WBSCTVESD AND APPROVED BY AICTE

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About the founder of JIS Group, our beloved BABUJI, Late SARDAR JODH SINGH JI (1920 - 2018), the founder of JIS Group also an educational visionary, an inspiring leader and a true humanist. His never ending drive to excellence, determination and commitment to JIS Group is the standard that will inspire and stay with us as we honour the legacy he created over the last 66 years. Babuji will be remembered for his energetic innovative ideas and childlike enthusiasm and his pioneering role in helping in the path of removing illiteracy by the JIS Group Educational Initiatives.

## FROM MANAGING DIRECTOR'S DESK



The main focus of our group is to empower students with sound knowledge, wisdom, experience and training both in the academic level of Engineering and Technology in the highly competitive global industrial market. Adequate care is taken to give every student an enjoyable, well-rounded and secure educational environment. Help and care is always at hand for the students. Publishing departmental newsletter indicates a continuous growth of not only the department but also the faculty and students.

I wish the best for all our students, and the members of the college who reiterate their aims at providing the best in academic and extra-curricular fields on excellent lines.

Sardar Taranjit Singh

#### FROM PRINCIPAL'S DESK



"A beautiful life does not just happen; it's built daily by prayer, humility, sacrifice and hardwork".

I am glad to convey my best wishes and message through this newsletter during this crisis period when everyone is fighting hard to combat with COVID19, to all faculties, staff and students of Department of Electronics & Communication Engineering.

Dear Students, if you are determined to work hard to achieve your goal, nothing in this world can deter you from achieving your goal. However, if at the outset you fail to get your goal, figure out whether something change needed in your set goal as per your potential.

Again work with great vigor you will definitely achieve your goal. If you have set your goal, strive hard to achieve it and the success will be yours. Taking excuse for not doing things is very easy, equally easy is finding reasons, ways and means for doing it. Your enthusiasm, support and cooperation during this crisis period are appreciable. Covid-19 has given us many reasons to look into the other side of the table. Mother Earth, Nature, Plants, Animals and Birds are demanding many things from the Human being. It's right time to understand the need of the day. Education and learning can't be stopped. Love, affection, respect, kindness, desire, positive attitude and optimistic approach can't be locked down.

Try to develop positive mindset and attitude, so that a value based success and goal can be achieved.

A quotation for all my budding technocrats:

"There is a great difference between worry and the concern, a worried person sees a problem and concerned person solves a problem."

Till next newsletter all the best!

Dr. Saradindu Panda

Principal of Dr. Sudhir Chandra Sur Institute of Technology and Sports
Complex

#### FROM HOD's DESK



I am delighted to introduce our current edition of the newsletter 'ECHO' as a forerunner of departmental activities. This issue contains records of notable achievements by Faculties, Students, Placement Data, Departmental Academics and Extra Academic Events, Students 'Technical Write up and others. This newsletter basically captures the Energy and Enthusiasm of all stakeholders who wish to contribute for some bigger cause of the department. It is always good to see the students& faculties bring out their creativity and hidden talents in any form. I do hope that the newsletter will encourage all students and faculties to use it as a

platform to showcase their intellectual diversity. I also welcome the readers of 'ECHO', who are my colleagues, students & peers from other department of DSCSDEC and invite their critical comments or usable suggestions for the forthcoming editions. I gainfully recognize the patronage and support received from the Principal, DSCSDEC and management of JIS group for any and all such kind of activities and expect similar support in all future endeavors.

Dr. Abhigyan Ganguly (HOD)

Dept. of Electronics & Communication Engineering

Dr. Sudhir Chandra Sur Institute of Technology and Sports Complex

#### **Departmental Vision**

To create an educational environment to mold the students to meet the modern Electronics & Communication industry's challenges through state-of-the-art technical knowledge and innovative approaches. Our fundamental tenets are quality, equity, morality, environmental sustainability, energy-saving, and a strong dedication to the cause of technical education and service.

### **Departmental Mission**

M1: To provide State-of-Art Technical Education.

M2: To conduct research and innovation that will result in the manifestation of knowledge intellectual property.

M3: To instil in students a sense of professional ethics and societal responsibility.

M4: To inculcate teamwork and leadership skills in students to be industry-ready and employable.

M5: To assist graduates in becoming an entrepreneur.

## **Program Educational Objectives**

PEO1: Knowledge of Basic Engineering Sciences: To demonstrate professional accomplishment in industry and academic organizations by demonstrating competence in mathematics, engineering fundamentals, electronics and communication engineering, and related subjects.

PEO2: Engineering Design Skills: To provide the students with the required problem-solving abilities for general engineering design practice.

PEO3: Problem Solving Ability: To develop engineering graduates who can solve problems and go onto advanced study and research in various fields.

PEO4: Programming Skills: Expertising the computer programming skills in writing, testing and maintaining the programs for transforming every student to find employment in the field of Electronics, Science & Technology.

PEO5: Technical Dexterity: To provide the knowledge of designing, building, and testing electronic systems for given specifications using hardware and software techniques in contemporary research and current industry trends.

PEO6: Professional Competence: To implant professional and ethical mindset, strong communication skills, teamwork skills, leadership traits, management abilities in the students for a successful professional career and societal needs.

# **Departmental News:**

Department of Electronics & Communication Engineering, SurTech is delighted to receive **Special Award**, from **Nikhil Bharat Shiksha Parisad** for our excellent overall performance in 2022, from the hands of none other than **Padmashree Prof.** (**Dr.**) **Ajoy Roy** 



Mr. Anirbit Sengupta of the Department of ECE was awarded as the "Most Promising Educator" by S. Asian Chamber of Scientific Research and Development. He has also been certified for his academic contributions by Nikhil Bharati Shiksha Parisad.



➤ 21 Students of ECE Department has registered in IETE- ISF.





Mrs. Annanya Banerjee and Mrs. Debasmita Manna, Faculty of the department of ECE received the JIS Innovation award for their contribution in academics.





Mr. Mayukh Bairagi, Teaching Assistant, Dept. of ECE, has been awarded with JIS SAMMAN
 2022 in the category Best Video Demo Lecture



➤ 2022 passout ECE students Ankush Sharma and Chiranjeet Das received Best paper Award for Track IV in the International Conference on Analytical and ComputationalElectronics (ICACE-2022), held on 28-29 September, 2022 for the paper "Solar Bag" under the guidance of Prof. Debasmita Manna, Asst. Prof. ECE.





## STUDENT ACHIEVEMENTS

- ➤ All second and third year students have successfully completed a minimum of one COURSERA course as part of their MOOCS.
- Among the final year students, till date about 75% students from 2022 pass out batch, and more than 40% of students from 2023 pass out batch, have already received job offers from MNCs like Hexaware, Amazon, TCS, Capgemini, Tech Mahindra. Among these students, many of them have landed *multiple job offers* too.

Besides swooping in campusing job interviews students, have also published their research papers in reputed international conferences and proceedings.

## **Student Publications:**

Nam e of the Dept.	Name of Students & Semester	Name of the faculty coordinator	Type of publication	Title of the paper	National/ Internatio nal	Date of Publicati on	ISSN / ISBN No.	Whet her peer review
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ECE	Mrittika Ghosh, Ankan Ghosh, Aditi Bhattacharya, Abir Kapat, Soumyadeep Mandal, Sambit Prasad (2022 Pass out)	Ananya Banerjee	Conference (ISDCS 2022, 29-31 March 2022, IIEST Kolkata)	Smart Device and Mobile Application For Remote Health Monitoring and Alarming	International	29-31 March 2022	Proceedings to be published in LNEE Springer	Yes
ECE	Stuti Dey, Swarnava Kundu	Anirbit Sengupta, Dr. Abhigyan Ganguly,	Conference (2 <sup>nd</sup> Mediterranean Scientific Research And Innovation Congress, Turkey)	Design Of In System Programming Application For Microcontroller Using Rs232 Protocol	International	30-31 July, 2022	ISBN: 978- 625-8323- 98-6	
ECE	Swarnava Kundu (8 <sup>th</sup> Sem)	Anirbit Sengupta, Somnath Dasgupta	Conference (3 <sup>rd</sup> Mediterranean Scientific Research And Innovation Congress, Turkey)	An intensive overview on contemporary cyber-attacks and security model	International	Nov. 2022	ISBN: 978- 625-6380- 20-2	Yes
ECE	Sumit Saha (2021 Pass out)	Debasmita Manna	International Conference On Interdisciplinar y Research in Technology & Management (IRTM 2022)	Analysis of Railroad Track Crack Detection using Computer Vision Analysis of Railroad Track Crack Detection using Computer Vision	International	16 <sup>th</sup> June,2022	ISBN-978- 1-6654- 7886-1	Yes
ECE	Ankush Sharma, Chiranjeet Das (2022Pass out)	Debasmita Manna	International Conference on Analytical and ComputationalE lectronics (ICACE-2022)	Solar Bag	International	28-29 September , 2022	Proceedings to be published	Yes

## **FACULTY ACHIEVEMENTS**

# **List of Faculty Publications:**

## **Journals:**

Name of the faculty	Title of the Paper	Name of the Journal	Google Scholar h- Index	Whether Elsevier / Web of Science	Imp act fact or	Indexed in Scopus/ Thompson s & Reuters	Date/ Month of Public ation	Link of the journal in Scopus/Thom psons & Reuters index
Dr. Abhigyan Ganguly (Primary Author)	Copper Ion Irradiated SnO <sub>2</sub> Quantum Dots for Higher Electroluminescence in Nano Light Emitting Device	IEEE Sensors Letters (Vol.6, Issue: 10)	5	Web of Science	-	Scopus/ ESCI	Sept. 2022.	DOI: 10.1109/ LSENS.2022.3 210107
Dr. Abhigyan Ganguly (Primary Author)	Swift Heavy ion Irradiated SnO2 Quantum Dot based Light Emitting device	Optoelec. And Adv. MatRapid Communications (Vol.15, N0-3-4)	5	Web of Science	0.55	SCIE/ Scopus	Nov- Dec 2022	https://oam-rc.inoe.ro/artic les/copper- doped-zns- quantum-dot- as-sensitizer- in-solar-cell/

**Book Chapters and Magazines:** 

Name of the faculty	Type of Publication (Book Chapter/ Magazine)	Title of the Paper	Name of the Book/ Magazine	Impact factor	Indexed in Scopus/ Thompsons & Reuters	Date/ Month	ISBN No.
Dr. Abhigyan Ganguly (Primary Author)	Book Chapter	Nano-Material Based Sensitized Solar Cells	LNEE Springer (vol 850, pp 129- 146)	-	Scopus	Jan. 2022	978-981-16- 9124-9
Dr. Abhigyan Ganguly (Primary Author)	Book Chapter	IR-LED using Electroluminisecence in PbS quantum dots	LNEE Springer	-	Scopus	Accepted	
Dr. Sangeeta Jana Mukhopa dhyay (Primary Author)	Book Chapter	Noise Performance of IMPATT Diode Oscillator at Different mm- wave Frequencies	Millimeter- wave,Infrared and Terahertz Technologies Springer, (LNEE volume 953, pp 101- 109)	-	Scopus	Published	978-981-19- 6301-8

Dr.	Book Chapter							
Sangeeta				Semiconductor:				
Jana		Trends	and	Materials, Devices				
Mukhopa		Challenges in	V/I CI	and Circuits by CRC		Scopus	Published	97810033113
dhyay		fabrication		Press, Taylor & Francis	-	Scopus	rublished	79
(Co-		Technology		Talicis				
Author)								

# **Conferences:**

Name of the faculty	Title of the Paper	Name of the Conference	National/ Internati onal	Date/ Month	Hosting Institute
Dr. Abhigyan Ganguly (Primary Author)	IR-LED using Electroluminisecence in PbS quantum dots	ISDCS 2022	Internatio nal	29-31 March 2022	IIEST Shibpur, Kolkata
	Smart Device and Mobile Application For Remote Health Monitoring and Alarming	ISDCS 2022	Internatio nal	29-31 March 2022	IIEST Shibpur, Kolkata

## **Patents:**

Sl. No	Patent Applicati on No.	Status of Patent (Published / Granted)	Inventor/s Name	Title of the Patent	Applicant /s Name	Patent Filed Date (DD/MM/ YYYY)	Patent Published Date / Granted Date (DD/MM/ YYYY)	Patent Publicati on Number / Patent Granted Number
1	20221103 0649	Published	Anirbit Sengupta	"AI- Driven Automated Disinfection Vechile System Based on Machine Learning and Swarm Intelligence"	Anirbit Sengupta	28/05/2022	03/062022	22/2022
2	364978- 001	Published	Anirbit Sengupta	"Lightweight Payload Battery Driven Vehicle"	Anirbit Sengupta	29/05/2022	29/07/2022	

3	20224104 2430	Published	Abhigyan Ganguly	"'AN INTELLIGENT SYSTEM AND A METHOD FOR MONITORING LAUNDRY MACHINE OPERATIONS USING MACHINE LEARNING FOR ANALYSIS OF ACOUSTIC TRANSDUCER SIGNAL INFORMATION"	Abhigyan Ganguly	25/07/2022	29/07/2022	30/2022
5	20223106 2750	Published	Somnath DasGupta	DEVELOPMENT OF A SMART VEHICLE HORN MANAGEMENT SYSTEM BASED ON ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING FOR NOISE POLLUTION CONTROL	Somnath DasGupta	3/11/2022	9/20/2022	
7	20202210 425	Granted	Anirbit Sengupta	Artificial Intelligence Based Digital credit System and personalized Assistance ( German Utility Patent)	Anirbit Sengupta	22.07.2022		20202210 4243
8	20223105 3151	Published	Anirbit Sengupta, Dr. Shefalika Ghosh Samaddar et.al	Wearable Gardening Assistive Device	Anirbit Sengupta, Dr. Shefalika Ghosh Samaddar et.al	16.09.2022		38/2022
9	20223105 3152	Published	Anirbit Sengupta, Mr. Amitava Halder et.al.	Hand Exercising Device	Anirbit Sengupta, Mr. Amitava Halder et.al.	16.09.2022		38/2022
10	20224105 4495	Published	Anirbit Sengupta	A Smart management System for controlling Medical robot beds for preventing bedsores using AI and ML	Anirbit Sengupta	16.09.2022		39/2022
11	20221107 0120	Published	Anirbit Sengupta	DEVELOPMENT OF THE INTELLIGENT SYSTEM AND METHOD FOR WORKING CAPITAL FINANCIAL MANAGEMENT PLAN FOR E-COMMERCE SITES USING MACHINE LEARNING APPROACH	Anirbit Sengupta	16.09.2022		20221107 0120

# **Copyrights:**

ROC Number	Work Title	Class of Work	Submitted By	Submitted On	Status	Work Status
L-113707/2022	Assessment of Rainfall and Temperature Variability on Maize Production In Rajasthan State	Literary/ Dramatic	Anirbit Sengupta	27/01/2022	Registered	Submitted
L-111767/2022	IoSLT- Internet of Smart Lighting Things	Literary/ Dramatic	Anirbit Sengupta	18/11/2021	Registered	Submitted

## **Consultancy Projects:**

- ➤ With Mr Anirbit Sengupta (ECE, SurTech) and Rahara Campus of Ramkrishna Mission Centenary College, consultancy for TW INSTRUMENTS on "Energy efficiency increment project using BRANON"
- ➤ Souvik Brahma and Consultant Mr. Anirbit Sengupta of Dr. Sudhir Chandra Sur Institute of Technology and Sports Complex" regarding the "Water QMS using BRANON"

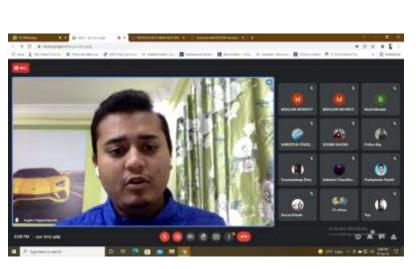
#### DEPARTMENTAL EVENTS

#### Webinar on the topic "Find The Entrepreneur In You", 10th January, 2022

Department of Electronics & Communication Engineering, SurTech has conducted a Webinar on the topic "Find the Entrepreneur in You" on Monday, 10th January, 2022 from 3pm onwards.

We are honoredand privileged to announce that the students from different years and departements, Faculties and Technical Assistants from our SurTech have participated to enrich their knowledge through this webinar.

The speaker of this webinar was *Mr. Aashutosh Jaiswal*, Owner and a Successful Start - Up Founder of Aspire Digital Media. He is also an alumni of the Electronics and Communication Engineering Department of SurTech.





Webinar on "VLSI/Electronics Industry- Current trends and the future of Innovation, Careers and Entrepreneurship

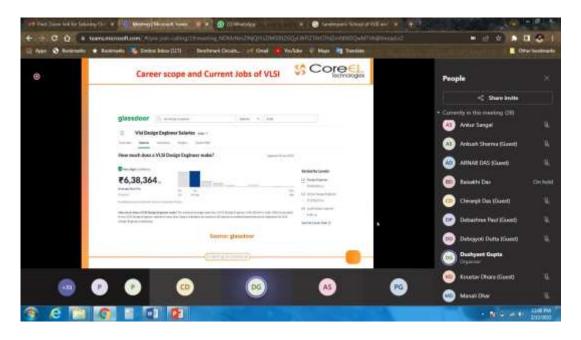
The Department of Electronics and Communication Engineering of Dr. Sudhir Chandra Sur Institute of Technology and Sports Complex organized a webinar on "VLSI/Electronics Industry-

Current trends and the future of Innovation, Careers and Entrepreneurship "on 12th February 2022 from 11.30 AM in the Microsoft Teams platform.

The speaker was Mr. Dushyant Gupta, Mr. Ankur Sangal, Mr. Prakash G of CoreEL Technologies (I) Pvt Ltd.

A total of 45 participants attended the webinar. The speaker shared his experience and enlightened the students of B.Tech about the opportunity and career scope in VLSI and Embedded Systems. The session was very motivating and all the participants thoroughly enjoyed and also interacted with the speaker throughout the session.



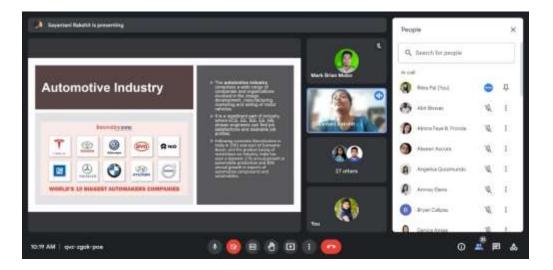


# Webinar On 'IMPORTANCE OF ELECTRONICS IN AUTOMOTIVE INDUSTRY, 22<sup>nd</sup> Feb. 2022

The Department of Electronics and Communication Engineering, DSCSITSC has organized a Webinar on IMPORTANCE OF ELECTRONICS IN AUTOMOTIVE INDUSTRY' on 26th February, 2022.

The main area of focus of this webinar will was Job aspects of ECE students in Automotive Industry as well as the technology advancement in automotive industry.

The webinar has been delivered by our beloved ALUMNI OF ECE(2014) Ms. SAYANTANI RAKSHIT. Currently she is working as a Senior Software Engineer in APTIV India. In this webinar many students from abroad have joined. The session was very interactive.







# Chess Tournament, 28th March, 2022

The first physical event "Chess Tournament" was organized on 28/03/2022. The finalists were:

Surya Ghosh (2nd year,ECE) Sudeshna Paul (2nd year,ECE) Rohit Deb (4th year,ECE)

Top selections are as follows...

Winner: Surya Ghosh (2nd year,ECE) 1st Runner Up: Sudeshna Paul (2nd year,ECE)

It was really overwhelming to get responses in this tournament with great enthusiasm. We have successfully made this physical (offline) tournament with all the members of the ECE family.





# Workshop on 'Voice and Data call flow architecture of GSM Network (2G/3G/4G/VoLTE), 26<sup>th</sup> April 2022

XVIOT Technologies has organized a One Day Workshop on 'Voice and Data call flow architecture of GSM Network (2G/3G/4G/ VoLTE)' in association with Department of Electronics & Communication Engineering of DSCSITSC on 26th April'22 from 11am onwards in SURTECH Campus. Around 50 B.Tech students from ECE, CSE,EE were participated in this workshop. Mr. Krishnendu Ghosh, Vice President of Training and Development and Mr. Abhijit Dasgupta, Founder & Director, XVIOT TECHNOLOGIES were the speakers of the entire session. Along with this, students got exposure in hands on experience with the CISCO Switch, Ethernet and others relevant networking operations.

The students got benefitted in these following aspects:

- •Bright future in Telecom Sector with multiple job opportunities.
- •Preparation of job interviews with major telecom operators & their MNC Strategic Partners

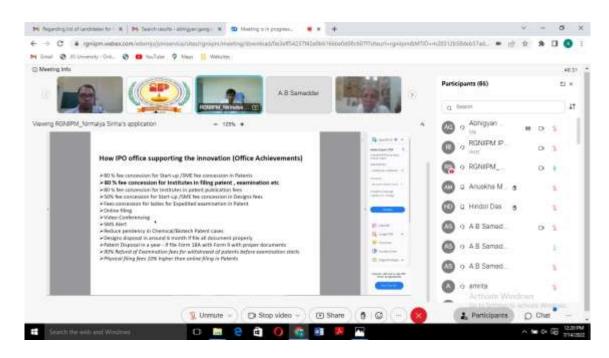
The entire sessions were very interesting and interactive. Two students (Ashwani Kumar Singh, Trikoma Biswas) from 3rd Year ECE got two book as a token of appreciation for good interaction in whole session. The event was ended with a good note.



# Online session on "IPRs & Patent / Designs filing for students and Faculty", 14<sup>th</sup> July 2022

The department of ECE, Dr. Sudhir Chandra Sur Institute of Technology and Sports Complex, is organizing an online session on "IPRs & Patent / Designs filing for students and Faculty" on 14 July 2022 for all the Faculties and students. More than 60 students and faculties participated in the online event. The attendees got idea about filing patents, copyright laws and other important aspects.





Seminar on "MBA after Engineering", 23rd Sept. 2022

The department of ECE, SurTech organized a seminar on "MBA after Engineering" on 23<sup>rd</sup> of September 2022, in association with IMS Kolkata. About 80 students participated in the session and interacted with the speaker who is himself an MBA from IIM. They learned about an alternate carieer path in management after their B.Tech.



# One Day Seminar on "Internet of Things in our Everyday Life", 01<sup>st</sup> November, 2022

The Department of Electronics and Communication Engineering in association with The Institution of Electronics and Telecommunication Engineers (IETE) Student Forum of Dr. Sudhir Chandra Sur Institute of Technology and Sports Complex has organized a One Day Seminar on "Internet of Things in our Everyday Life" on 01st November, 2022 at our College Campus.

Prof. (Dr.) Debashis De- Vice Chairman of IETE Kolkata Centre was the Chief Guest as well as Guest speaker along with other two Chief Guests- Prof. (Dr.) Jyotsna Kumar Mondal- Ex Chairman and Dr. Aniruddha Nag -Secretary of IETE-Kolkata Centre.

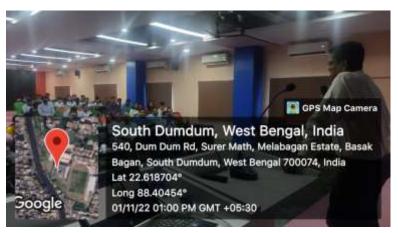
The event was inaugurated at 12.00pm sharp followed by the Welcome Address by Prof. (Dr.) Arun Barun Samaddar, Director, DSCSITSC and Address by Prof. (Dr.) Saradindu Panda, Principal, DSCSITSC.

Prof. (Dr.) Jyotsna Kumar Mondal nicely discussed about the relevance of the topic in our everyday life. Dr. Aniruddha Nag highlighted about the role of ISF and shared his experiences to encourage the new generation to work in a team.

Prof. (Dr.) Debashis De shared his vivid knowledge and experience about every aspect of technology. He Created a very much interactive environment to grow the interest of the audience about the topic. By his extraordinary delivery he explained different fields and applications of the topic.

The sessions was very interactive and more than 130 students were present.









# One Day Seminar on "Industrial application of IoT Technology", 17th November, 2022

Department of Electronics and Communication Engineering in association with The Institution of Electronics and Telecommunication Engineers (IETE) Student Forum of Dr. Sudhir Chandra Sur Institute of Technology and Sports Complex has organized a One Day Seminar on "Industrial application of IoT Technology" on 17th November, 2022 at our College Campus.

Prof. (Dr.) Jayanta Kumar Roy- Chairman of IETE Kolkata Centre was the Chief Guest as well as Guest speaker. Honourable speaker highlighted the role of ISF and shared his experiences to encourage the new generation to work in a team followed by sharing his vivid knowledge and experience about every aspect of technology. He explained different fields and applications of the topic. The session was very interactive and more than 110 students were present.



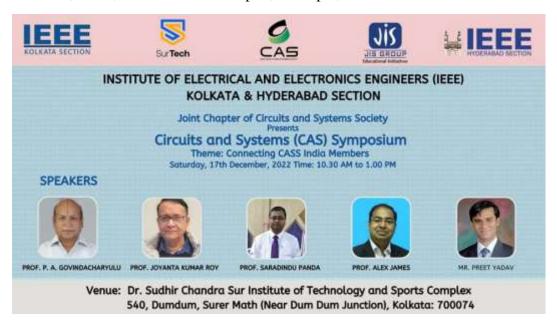




## Circuits and Systems Symposium on 17th of December, 2022

IEEE CAS Kolkata and IEEE CAS Hyderabad Chapter is jointly organizing Circuits and Systems Symposium on 17th of December, 2022 at Dr. Sudhir Chandra Sur Institute of Technology and Sports Complex Campus in association with department of ECE. The objective of this symposium is to build linkage and technology sharing among the CASS Society members spread all over India. This event will pioneer as a run-up to the main event of IEEE Asia Pacific Conference on Circuits and Systems (APCCAS 2023) to be held at Hyderabad from 20-23 November, 2023.

The guest speakers were Prof. PA. Govindacharyulu, General Chair, APCCAS 2023 by Prof. A. B. Samaddar, Director, DSCSITSC, Prof. J. K. Roy Past Chair, CASS Kolkata Chapter, Prof. Alex James, Technical Program Chair, APCASS 2023, Mr. Preet Yadav, General Chair, APCASS 2023, in presence of Prof. Saradindu Panda, Chair, CASS Kolkata Chapter, Principal, DSCSITSC.









# "Educate and raise the masses, and thus alone a nation is possible."

**SWAMI VIVEKANANDA** 

# THANK YOU