TECHWIZ'23

2022-2023

A MAGAZINE By
SOCIETY OF ELECTRICAL ENGINEERS

Department of Electrical and Electronics Engineering

St.Xavier's
Catholic College of Engineering
Chunkankadai, Nagercoil, Kanyakumari District

College Vision, Mission, Slogan, Quality Policy, Objectives and Values

St. Xavier's Catholic College of Engineering

Vision	Mission
To be an institution of eminence of optimal human development, excellent engineering education and pioneering research towards developing a technically-empowered humane society.	To transform the (rural) youth into top class professionals and technocrats willing to serve local and global society with ethical integrity, by providing vibrant academic experience of learning, research and innovation and stimulating opportunities to develop personal maturity and professional skills, with inspiring and high caliber faculty in a quality and serene infrastructural environment.
Slogan	**Quality policy**
Towards a technically-empowered humane society.	Attaining global eminence, by achieving excellence in all that we do, in life, education and service.

Objectives	Values
To transform our students into fully-functioning human persons and empowering leaders with autonomy and passion for continuous self-learning. To equip them with contemporary scientific and technical knowledge with student centered teaching methods. To animate them into pioneering researchers and investors. To train them to excel with cutting edge technical, entrepreneurial and managerial skills for a successful career. To expose them to challenging opportunities of self-discovery and to commit themselves to lead a value-based life of humane service. To recruit faculty who inspire the students with their passion for knowledge and transmit knowledge to the students by student-centered creative and innovative teaching and learning methods, lead them by example in high-end researchers, and edify the students with their life of integrity and ethics. To provide standard infrastructure, serene and stimulating environment that is most conducive to learning. To develop avenues of continuous and responsive collaboration with stakeholders for the optimal development of the students and institution.	Efficiency that leads to Excellence Excellence that leads to Eminence Genuineness that leads to authenticity Transparency that leads to credibility Person centeredness that leads to family-ness Appreciation that leads to high motivation Altruism that leads to humane service Critical thinking that leads to scientific approach Fidelity that leads to responsibility Knowledge that leads to wisdom Innovative research that leads to inventions Hardwork that leads to achievements Eco friendliness that leads to protection of nature Aesthetic campus that leads to serene environment Fiscal discipline that leads to economic sustainability Feedback that leads to responsivity Spirituality that leads to committed service.

Department Vision Mission PEO PO PSO
Program: B.E. Electrical and Electronics Engineering

Vision	
	Providing globally competent professionals, innovative researchers and successful entrepreneurs in the field of Electrical and Electronics Engineering for developing a technically empowered humane society.
Mission	
M 1	To impart high quality technical education in Electrical and Electronics Engineering with high caliber faculty members, excellent infrastructure and stimulating environment.
M 2	To lead the students to learn and practice technologies that are prevalent in the related industries.
M 3	To introduce the students to the latest concepts and innovations through technical gatherings and research collaborations.
M 4	To inculcate ethical values, team spirit and leadership qualities to meet the social challenges and needs.
Program Educational Objectives (PEO)	
PEO 1	Build a solid foundation in mathematics, science, engineering and soft skills for diverse career and persistent learning.
PEO2	Engage in life long process of learning and research to keep themselves abreast of new developments in the field of Electrical and Electronics engineering.
PEO 3	Have an ability to work in Multi-disciplinary Environment.
PEO 4	Practice their profession conforming to ethical values and environmentally friendly policies.
PEO 5	Model, design and develop a system and component or process the same to meet the needs of the society and industry within realistic constraints.
Program Outcomes (PO) (with Graduate Attributes)	
PO 1	**Engineering knowledge:** Apply the Mathematical knowledge and the basics of Science and Engineering to solve the problems pertaining to Electrical and Electronics Engineering.
PO 2	**Problem analysis:** Identify and formulate Electrical and Electronics Engineering problems from research literature and be able to analyze the problem using first principles of Mathematics and Engineering Sciences.
PO 3	**Design/development of solutions:** Come out with solutions for the complex problems and to design system components or process that fulfill the particular needs taking into account public health and safety and the social, cultural and environmental issues.

PO 4	**Conduct investigations of complex problems:** Draw well-founded conclusions applying the knowledge acquired from research and research methods including design of experiments, analysis and interpretation of data and synthesis of information and to arrive at significant conclusion.
PO 5	**Modern tool usage:** Form, select and apply relevant techniques, resources and Engineering and IT tools for Engineering activities like electronic prototyping, modeling and control of systems and also being conscious of the limitations.
PO 6	**The engineer and society:** Understand the role and responsibility of the Professional Electrical and Electronics Engineer and to assess societal, health, safety issues based on the reasoning received from the contextual knowledge.
PO 7	**Environment and sustainability:** Be aware of the impact of professional Engineering solutions in societal and environmental contexts and exhibit the knowledge and the need for sustainable Development.
PO 8	**Ethics:** Apply the principles of Professional Ethics to adhere to the norms of the engineering practice and to discharge ethical responsibilities.
PO 9	**Individual and team work:** Function actively and efficiently as an individual or a member/leader of different teams and multidisciplinary projects.
PO 10	**Communication:** Communicate efficiently the engineering facts with a wide range of engineering community and others, to understand and prepare reports and design documents; to make effective presentations and to frame and follow instructions.
PO 11	**Project management and finance:** Demonstrate the acquisition of the body of engineering knowledge and insight and Management Principles and to apply them as member / leader in teams and multidisciplinary environments.
PO 12	**Life-long learning:** Recognize the need for self and life-long learning, keeping pace with technological challenges in the broadest sense.
Program Specific Outcomes (PSO)	
PSO 1	Utilize the Technological advancements in the field of modern Power Systems and formulate reliable and feasible solutions towards the eco-friendly and challenging environment.
PSO 2	Design and analyze fundamental Electronics and Embedded systems for real-world problems and develop smart products.
PSO 3	Apply recent Technology to control Electrical Machines with the aid of solid-state devices to enhance energy conservation and sustainability

THE WIZARDA BEHIND THIS ENDEAVOUR

CHIEF PATRON **:Rev. Fr. Dr. M. Maria William**
Correspondent / SXCCE

PATRON **: Dr. J. Maheshwaran**
Principal / SXCCE

PRESIDENT **: Dr. S. V. Kayalvizhi**
EEE HOD/SXCCE

FACULTY ADVISOR **: Ms. P. Suji Garland**
Faculty Advisor/SEE

CONTENTS

SEE Presidents Message

It gives me immense pleasure to express my views on the release of departmental magazine. As you view through the pages, it will enlighten you with the important milestones that department has achieved this year. As the head of the department I would like to thank all the faculty members, non-teaching staffs and students for their limitless support and sincere efforts for the betterment and development of department. On this occasion, I congratulate all the team members of the editorial board for bringing up this magazine in a better shape.

Dr.S.V.Kayalvizhi
HOD, Department of EEE

Message from faculty Advisor

I am happy to present the annual magazine of our department Electrical and Electronics Engineering for the Academic year 2022-2023

This year our students eagerly selected a fabulous Theme TECHWIZ - Is To Dream To Find To Achieve. The Techwiz is knowledge based technical skills to showcase talents globally. Techwiz is the symbol of excellent. astonish, legend in creating sustainable modern world.

The Society of Electrical Engineers has always been a place where innovation, leadership, and collaboration flourish. Through technical events, workshops, industry interactions, and collaborative projects, our students are constantly exposed to new challenges, learning experiences, and opportunities to shape their futures.

This magazine stands as a testament to the talent and creativity that is part of our student community. It is a reflection of your hard work, curiosity, and commitment to advancing the field of electrical engineering. The articles, achievements, contributions shared here will not be an information but also inspire future engineers to push the boundaries of technology and contribute to meaningful change.

As your Faculty Advisor, my role is to guide and support each of you in your journey—whether you are exploring new ideas, preparing for your careers, or contributing to the growth of the society itself. The work showcased in this magazine is just a small glimpse into the incredible potential that lies within each of you.

I encourage all members to continue engaging with the society, be it through academic pursuits, professional development, or personal projects. Together, we can continue to create an environment that fosters excellence, innovation, and leadership in the world of electrical engineering.

I am proud to be part of this journey with you, and I look forward to see the continued success and growth of the Society of Electrical Engineers.

Warmregards,
P.Suji Garland

Faculty Advisor, Society of Electrical Engineers

Best wishes

Office Bearers

Convener : **Dr. S.V.Kayalvizhi ,HOD**

Faculty Advisor : **Ms. P. Suji Garland**

Secretary : **Ms. Mabish M B,Final Year EEE**

Treasurer : **Mr. Darryl Wreant L, Final Year EEE**

Joint secretary : **Ms. Shijo Mol J, Third Year EEE**

Assistant secretary : **Ms. Hari krishnan,Second Year EEE**

Executive members

Ms. Nishanthi D S, Final Year EEE

Ms. Ribina R, Final Year EEE

Ms. Sairama V, Third Year EEE

Mr. Anil Ram S, Third year EEE

Mr. Thanish T, Second year EEE

Ms. Jaculin Rose, Second Year EEE

SEE Report-2023

Department of Electrical and Electronics Engineering

Society of Electrical Engineers (SEE)

"Without continual growth and progress such words as improvement, achievement and success have no meaning."-Benjamin Franklin

First of all let me thank and praise the God almighty for his immense blessings throughout this year.

As a student Treasurer, I am really honoured to present the annual report of SEE for the academic year 2022-2023.

The inauguration ceremony of SEE for the academic year 2022-2023 was held on 02nd September 2022, and the office bearers were assigned for the academic year.

The Chief Guest of the day was Er. Manikandan Krishnan, Project lead Engineer, Hitachi Energy, an Industrialist. He has empowered and motivated our students to enrich themselves for the Social welfare and the wellbeing in multidisciplinary areas.

Workshops and Seminars:

a. A Seminar was conducted on 02ndSeptember 2022, on the topic "How to connect career with power systems and High Voltage Engineering" by Er. Manikandan Krishnan.
b. A Seminar was conducted on "Job Opportunities in the core Companies" on 17th September 2022, by Er. Abuthaheer, Sr. Engineer, Unique MEP, to introduce latest technology available for Mechanical, Electrical and Civil Engineering students.
c. A Seminar on "Job oriented skills in Electrical Software" was conducted 17th September 2022, by Er. N. Sowmiya, Technical trainer CADD training institute.
d. A Seminar on "Engineering Energy audit and Energy Conservation" by Er. S. Sivakumar, M.E ,External faculty of PCRA, to create awareness and to gain knowledge in energy audit was held on 27th February 2023.
e. A Seminar on " Over Voltage in PowerGrid" was held on 21st April 2023, by Dr.P.Valsalal, professor, Department of EEE, College of Engineering, Guindy Campus, Anna University.
f. A Seminar on "Artificial Intelligence and Machine Learning" was held on 04th May 2023, by Er. G. Gino, Marketing Executive, EMAX Education.
g. A Seminar on "Future Technology in Electric Vehicle" was conducted by Er. Geoffer Jaish on 10th May 2023.
h. A Seminar on "Real Time Applications of Embedded System", was conducted by Er. Abishek R, Founder of Check In-Tek.
i. A Seminar on "Introduction on Embedded System and Project Guidance" was taken by Er. R. Abishek on 22nd September 2022, to introduce the latest technology used in embedded system and to build project guidance for the students.
j. A Seminar on "Introduction to Industrial Automation and Carrer Options", by Er.V.G.Manikandan, Manager CADD, held on 24th September 2022, to introduce the latest technologies used in power system Automation and to build Career guidance for the students.

k. A Motivational talk for Students on " Career Guidance and Entrepreneurship" was given by Er.Angelin Indra , Founder and CEO of Edzoe, on 24th September 2022, followed by a seminar on "Introduction on to Professional Development Skill", by Er.Ankayar Kanni Rajendran, Software Engineer, FORMCEPT , and next followed by a Seminar on " Introduction on to PLC/SCADA and Carieer Connect", conducted by Er.G.R.Ranjith Business Development Executive, to enrich the students knowledge and their perspectives in their respective fields.

l. An Awareness Program Regarding "Higher Studies in Abroad", was conducted by Mr.P.Jeyakumar on 17th May 2023.

Symposium and other Competitions:

1) A National Level Technical Symposium " Tech Wiz'22" was held on 10th November 2022, to motivate, enrich and develop our fellow students, Socially to explore their ideas in latest technologies and different discipline. The chief guest of the day was Er.R.RajivSubramoniam, Associate Specialist HRBP, Atos GDC Tirunelveli.
2) A Competition for poster presentation was held for IInd EEE Students on 17th September 2022.

Conference and TechFest:

1) SEE has Organised poster presentation, Paper presentation, Project demo and Quiz in Association with College TechFest on 21st April 2023.
2) An International Conference was held on 28th April 2023, and Chief Guest for the day was Associate Professor, Antony Jeffery Vaz, NEC, Kovilpatti. On the Same occasion SEE has organised video presentation, Quiz and Poster Presentation.

INDUSTRIAL VISIT AND TOUR:

Industrial Visit were Organised to enrich students with practical and to experience real time applications in Industries.

1) An Industrial Visit for IIIrd year EEE students was organised on 27th October 2022 to Thermal Power Plant at North Chennai and Lathe Industry in Chennai.
2) One day Industrial Visit was arranged for 2nd year EEE students on 11th November 2022 at Thermal Power Plant Tuticorin.
3) All India Tour was arranged for final year EEE Students from 30th December 2022 to 07th January 2023.
4) Industrial Visit was arranged on 05th May 2023 to National Institute of Wind Energy, kayathar.
5) A one-day Industrial visit was Organised for both 2nd and 3rd year EEE Students on 15th May 2023 to Thenampatti Sub Station.

All the events Conducted were beneficial for the students to improve their talents and knowledge. SEE express our gratitude to our Correspondent Rev.Fr.Dr.M.Maria William, Principal Dr.J.Maheswaran , Head of the Department Dr.S.V.Kayalvizhi and Dean of Research Dr.M.Marsaline Beno for their motivation and support. We thank Lord Almighty for that He has Made another year of SEE a great success.

Thank You!

Secretary,
Ms. MABISH M B,
Final year EEE

TECHNICAL ARTICLES

PEBBLE BED REACTOR

Abstract:

The development of the nuclear power industry has been nearly stagnant in the past few decades. In fact, there have been no new nuclear power plant construction in the United States since the late 1970s. What many thought was a promising technology during the "Cold War" days of this nation; they now frown upon, despite the fact that nuclear power currently provides the world with 17% of its energy needs. Nuclear technology's lack of popularity is not difficult to understand since the fear of it has been promoted by the entertainment industry, news media, and extremists.

There is public fear because movies portray radiation as the cause of every biological mutation and now; terrorist threats against nuclear installations have been hypothesized. Also, the lack of understanding of nuclear science has kept news media and extremists on the offensive. The accidents at Three Mile Island (TMI) and Chernobyl were real and their effects were dangerous and, in the latter case, lethal. However, many prefer to give up the technology rather than learn from these mistakes.

Recently, there has been a resurgence of interest in nuclear power development by several governments, despite the resistance. The value of nuclear power as an alternative fuel source is still present and public fears have only served to make the process of obtaining approval more difficult. This resurgence is due to the real threat that global warming, caused by the burning of fossil fuels, is destroying the environment. Moreover, these limited resources are quickly being depleted because of their increased usage from a growing population. The estimation is that developing countries will expand their energy consumption to 3.9 times that of today by the mid-21st century and global consumption is expected to grow by 2.2 times.

Development has been slow since deregulation of the power industry has forced companies to look for short term return, inexpensive solutions to our energy needs rather than investment in long term return, expensive solutions. Short-term solutions, such as the burning of natural gas in combined cycle gas turbines (CCGT), have been the most cost effective but remain resource limited. Therefore, a few companies and universities, subsidized by governments, are examining new ways to provide nuclear power. An acceptable nuclear power solution for energy producers and consumers would depend upon safety and cost effectiveness. Many solutions have been proposed including the retrofit of the current light water reactors (LWR). At present, it seems the most popular solution is a High Temperature Gas Cooled Reactor (HTGR) called the Pebble Bed Modular Reactor (PBMR).

DESCRIPTION OF PBMR:

The commercial effort of the PBMR is the most publicized and information about it is readily available. A description of it would cover most aspects of the modern HTGR pebble bed reactors. Figure 2 shows a cross-section of the PBMR reactor and energy convertor. Therefore, the PBMR can be separated in two distinct parts. The first part is the heat source, labeled "reactor vessel", and the second part contain the power conversion units, labeled "high-pressure turbo compressor", "low-pressure turbo compressor", and "turbine generator".

THE REACTOR:

The nuclear reaction takes place within the "reactor vessel" which is a vertical steel pressure enclosure that is 6 meters in diameter and 20 meters high. The enclosure is lined with a layer of graphite bricks which serve as an outer reflector for the neutrons generated by the reaction and a passive heat transfer mechanism. This lining is drilled with vertical holes for insertion of the control rods. Illustrated by the red and blue-pebbled granules, the inner reactor core portion consists of two zones and is 3.7 meters in diameter and 9.0 meters high. The blue, or inner zone, contains approximately 185,000 graphite spheres and the red, outer zone, contains approximately 370,000 fuel spheres. The graphite spheres serve as a moderator for the nuclear reaction. This moderator slows the prompt neutrons created from the reaction such that a nuclear reaction can be sustained. As the arrows indicate, helium flows through the fuel pebble bed and is heated to provide working fluid for the generator. The helium also naturally serves as a coolant for the reactor as well; much like water does for today's LWRs

THE GENERATOR AND COMPRESSORS:

Helium enters the reactor at 500 degrees Celsius and at a pressure of about 8.4 MPa. It leaves the reactor at about 900 degrees Celsius and drives the high-pressure turbine. The high-pressure turbine will drive the return high-pressure compressor. After the high-pressure turbine, the helium flows through the low-pressure turbine that drives the low-pressure compressor. While still hot, the helium leaves the low-pressure turbine and drives the power turbine to produce the electricity through the generator. The helium leaves the power turbine and is cooled in the recuperator.

Return helium is then compressed back to a pressure of 8.5 MPa while it returns through the pre-cooler, low-pressure compressor, inter-cooler, and high-pressure compressor. The coolers increase the efficiency of the compressors since they increase the density of the helium. The helium has also been cooled back down to 500 degrees Celsius and the cycle repeats itself as it travels back to the reactor. This process is called the Brayton (gas turbine) Cycle. The advantage of this process is its high efficiency of thermal energy transfer to electrical energy. As mentioned, the efficiencies of today's LWRs are approximately 30% where the PBMR yields approximately 44%.

R.Siva Prasad
Final Year, EEE.

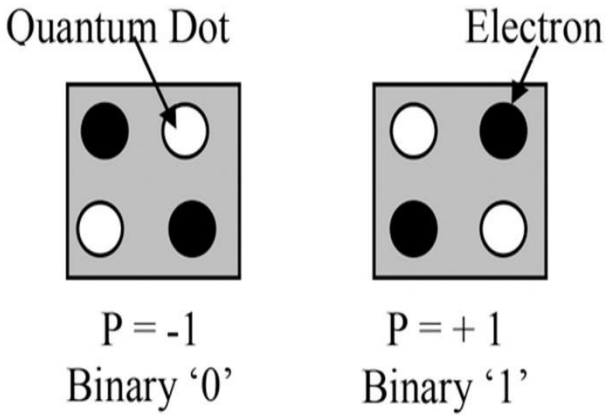
Quantum Dot Cellular Automata (QDCA)

Abstract:

Quantum Dot Cellular Automata (QCA) is a cutting-edge nanotechnology that offers a potential alternative to traditional transistor-based computing. QCA utilizes the position of electrons in quantum dots to encode binary information, enabling ultra-low power consumption and high-speed data processing at the nanoscale. This emerging technology presents opportunities for advancements in computational efficiency, miniaturization, and energy conservation, positioning itself as a promising candidate for next-generation computing paradigms.

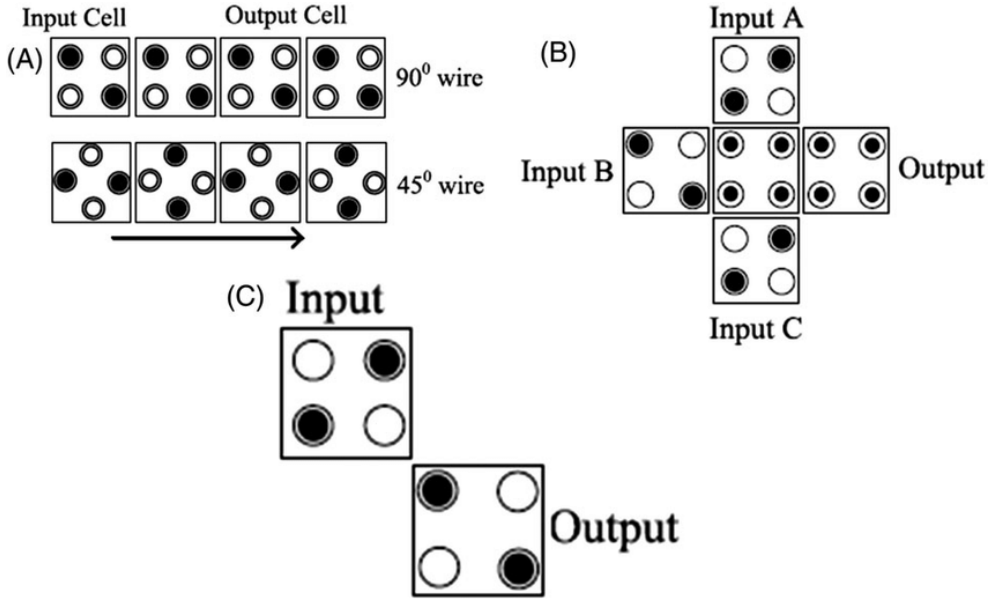
Introduction:

The relentless pursuit of miniaturization in computing has led researchers to explore novel approaches beyond conventional silicon-based transistors. As the limitations of Moore's Law become increasingly apparent, alternative technologies are being sought to sustain the growth of computational power and efficiency. Quantum Dot Cellular Automata (QCA) represents one such innovative paradigm. By leveraging the principles of quantum mechanics, QCA seeks to revolutionize the way information is processed at the nanoscale.



Concepts

1. Quantum Dot Technology**:** Quantum dots are nanoscale semiconductor particles that exhibit discrete energy levels and quantum confinement effects. These properties make quantum dots suitable for a variety of applications, including quantum computing, photovoltaics, and biomedical imaging. In QCA, quantum dots are utilized to create cells that encode binary information based on electron positions.
2. QCA Cell Design: A typical QCA cell consists of four quantum dots arranged in a square configuration. Two electrons are placed in the cell, and their positions determine the cell's binary state (0 or 1). Neighboring cells interact through Coulombic forces, enabling information transfer without the need for electric current flow.
3. Clocking in QCA: QCA employs a clocking mechanism to control the propagation of information through the cell arrays. The clocking system consists of multiple phases that coordinate the switching of cell states, ensuring synchronized data processing and minimizing power consumption.

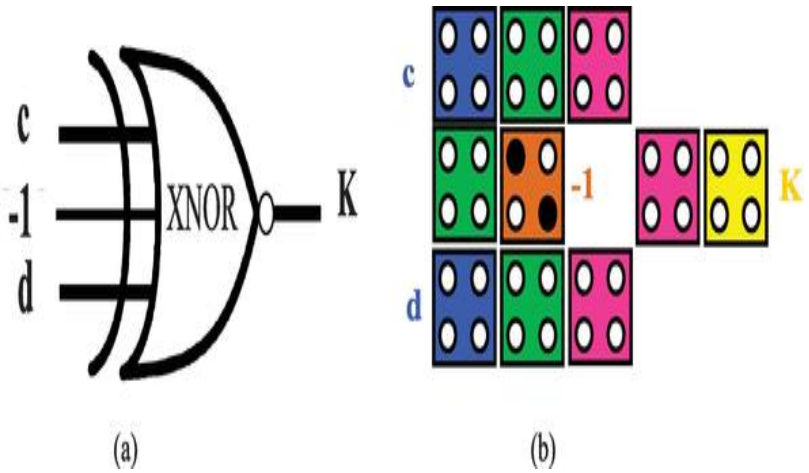


Advantages:

1. Power Efficiency: QCA boasts ultra-low power consumption as it relies on the position of electrons rather than current flow, making it highly energy efficient.
2. High Speed: The rapid switching of electron positions allows for high-speed data processing.
3. Scalability: QCA can achieve high levels of integration and miniaturization, offering the potential for densely packed computational elements.

Applications**:** QCA has the potential to impact various fields, including:

1. Digital Logic Circuits: Implementing logic gates and arithmetic units with QCA for ultra-low power computing.
2. Memory Devices: Developing high-density, energy-efficient memory storage solutions.
3. Sensor Technology: Enhancing the sensitivity and efficiency of nanoscale sensors.
4. Quantum Computing: Contributing to the development of quantum computing systems by leveraging quantum mechanical principles.



Challenges:

While QCA offers promising advantages, several challenges must be addressed for its widespread adoption. These include:

1. Manufacturing Precision: Achieving the necessary precision in fabrication at the nanoscale.

2. Temperature Sensitivity: Ensuring stable operation at practical temperatures.
3. Interconnect Design: Developing efficient interconnects for QCA circuits.
4. Error Correction: Implementing robust error correction mechanisms to ensure reliable data processing.

Future Directions:

Ongoing research is focused on overcoming these challenges and exploring new possibilities for QCA-based technologies. Potential future directions include:

1. Material Innovations**:** Investigating new materials and fabrication techniques to enhance the performance and reliability of QCA.
2. Hybrid Systems: Integrating QCA with existing silicon-based technologies to create hybrid systems that leverage the strengths of both approaches.
3. Advanced Algorithms: Developing algorithms and computational models optimized for QCA architectures.

Conclusion:

Quantum Dot Cellular Automata (QCA) represents a groundbreaking shift in the realm of computing, offering a viable alternative to traditional transistor-based technologies. By harnessing the unique properties of quantum dots and the principles of quantum mechanics, QCA promises to deliver unprecedented levels of miniaturization, energy efficiency, and computational speed.

As we stand at the cusp of the next technological revolution, QCA's potential to redefine how information is processed at the nanoscale is both exciting and transformative. The journey from conceptual research to practical implementation involves overcoming significant challenges in manufacturing precision, temperature sensitivity, and error correction. However, the ongoing advancements in material science, fabrication techniques, and computational models hold the promise of realizing QCA's full potential.

In conclusion, Quantum Dot Cellular Automata is poised to play a pivotal role in the future of nanotechnology and computing. With its ability to achieve ultra-low power consumption and high-speed data processing, QCA stands as a testament to human ingenuity and the relentless pursuit of innovation. As research continues to evolve, QCA may well become a cornerstone technology that shapes the landscape of next-generation computing systems.

References:

1. Toth, G., & Lent, C. S. (1996). Dynamic behavior of quantum cellular automata. Journal of Applied Physics, 80(8), 4722-4736. SpringerLink
2. Lent, C. S., & Tougaw, P. D. (1997). A device architecture for computing with quantum dots. Proceedings of the IEEE, 85(4), 541-557. SpringerLink
3. Mehta, U., & Dhare, V. (2017). Quantum-dot Cellular Automata (QCA): A Survey. arXiv preprint arXiv:1711.08153. arXiv
4. Orlov, A. O., Amlani, I., Bernstein, G. H., Lent, C. S., & Snider, G. L. (1997). Realization of a functional cell for quantum-dot cellular automata. Science, 277(5328), 928-930. Science
5. Niemier, M. T., & Kogge, P. M. (2001). Exploring and exploiting wire-level pipelining in emerging technologies. IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 9(6), 824-833. IEEE
6. Walus, K., Schulhof, G. A., Jullien, G. A., & Budiman, R. A. (2004). QCADesigner: A rapid design and simulation tool for quantum-dot cellular automata. IEEE Transactions on Nanotechnology, 3(1), 26-31. IEEE
7. Timler, J., & Lent, C. S. (2002). Power gain and dissipation in quantum-dot cellular automata. Journal of Applied Physics, 91(2), 823-831. SpringerLink
8.. Snider, G. L., Orlov, A. O., Amlani, I., Bernstein, G. H., Lent, C. S., & Porod, W. (1999). Quantum-dot cellular automata: Review and recent experiments. Journal of Applied Physics, 85(8), 4093-4105. SpringerLink.

---xxxx---

Harikrishnan
II Year EEE

Non-Technical Articles

A Way To Life……

Life is a debate of two phrases like what we want from life and what life wants us from. Between these two quarreling phrases the determination and the patience will be grabbing the trophy of success. For an absolute success we need to go through a lot because life won't be always a smooth road, there will be always hills and valleys. If you are up be prepared to go down and if you are down now be prepared for going up because rather than time nothing is constant as we all know. From down to up and also from up to down the main mantra we need is the patience. From dawn to dusk, from start to stop, from beginning to end it all matters what's the lesson you learnt and not how many wounds you hold back. The main thing to make a day a bit more beautiful is by making yourself happy by seeing the blessings what others don't have.

Learning is a day-to-day routine for human beings, remember that no one and nothing is as perfect as perfection everything has its own beauties and its own flaws don't look back where you start from when you are in a state of confusion, only look back when you are in a state of success. The struggles which you are going through today is going to worth in the future. So don't compare, don't feel jealous of others work or their growth you are unique in your own way. Explore your life the way you want to be and not by the circumstances or the scriptures designed by the society this for one life time and don't afraid to give it a shot.

Do you know something what lacks in this world? Kindness and Self-respect. So my question is why are you expecting these two from others where you can have your won sort of both the thing? If something is disturbing about yourself don't quit what you are currently doing just be like the flow of a river. It's always not going to be storm the dust need to be settled whatever happens.

Trust me the way you behave and the way you behaved is going to be the way you lived. But remember one thing if something you are about to do or what you did was wrong you should have the guts to accept the mistake and also the self-accusing part if you are not ready for these two don't involve in such cases because its gonna cost your life forever. Have some strength that moulds you like a firm human being with a hard-working potential to sustain every problem that arises. Whatever happening right now won't be for a life time whether it is a success or failure. Keep going and have the extreme level of happiness, do crazy things don't bother about somebody who is gonna backstab us for a day or an hour or a minute. Have a happy and a healthy life which will be filled with lots of love and kindness.

Thank You

R.Siva Prasad
Final Year ,EEE

Light Music for Healing and Intense Focus During Study Sessions

Introduction

Music has long been recognized for its ability to influence mood, stress levels, and cognitive performance. For many students, music is an essential study tool, enhancing focus and creating a calming atmosphere. While genres like classical music are widely known for their study benefits, light music—characterized by soft melodies and calming rhythms—has also gained popularity as a method to foster concentration and mental clarity. This paper explores the impact of light music on focus and mental stability during study sessions, examining its potential to provide both healing and intense concentration.

The Psychological Benefits of Light Music

Research has shown that music can have a profound impact on cognitive performance and emotional well-being. Light music, with its soothing tones and gentle rhythms, is often used as a tool for stress relief and relaxation. Unlike high-energy genres, light music promotes a peaceful environment, which can reduce anxiety and foster a state of calmness. This makes it an ideal choice for students seeking to enhance their focus and mental stability while studying.

Light Music and Focus

The calming effect of light music can help students concentrate by creating a non-distracting, peaceful backdrop. Its gentle melodies encourage focus, allowing the brain to remain alert without the risk of mental fatigue. Additionally, light music is known to improve task performance by reducing distractions and enhancing cognitive processing speed.

Healing and Stress Relief

Mental Clarity and Relaxation: Light music has a unique ability to create a relaxed state of mind, making it easier for students to manage stress during study sessions. By promoting emotional stability, it allows students to focus on their studies without feeling overwhelmed. Enhancing Cognitive Performance: Studies have shown that light, instrumental music can boost memory retention and information processing. By reducing stress and encouraging a state of calm, light music helps students absorb and retain information more effectively. Improved Mood and Motivation: Listening to light music during study sessions can enhance mood, Making the experience more enjoyable. This positive emotional environment can lead to better concentration, as students are more motivated and focused.

Conclusion

Light music provides a valuable tool for enhancing focus, improving mental stability, and reducing stress during study sessions. By creating a calm and peaceful environment, it allows students to remain concentrated and energized without feeling overwhelmed. While individual preferences vary, light music proves to be an effective study aid for those seeking to improve their academic performance and overall well-being.

References

1.Thompson, W. F., & Quinto, L. (2019). The Impact of Music on Cognitive Performance: Focus and Study. Journal of Psychology and Education, 45(2), 123-135.
2.Schellenberg, E. G. (2012). Music and Cognitive Abilities: The Influence of Music on Study Habits and Mental Focus. Educational Psychology, 39(1), 85-93.
3.Loewy, J. V. (2000). The Healing Power of Music: Stress Reduction and Focus Enhancement. Music Therapy Perspectives, 18(1), 41-50.

JOSHUVA MOSAY
II Year EEE

SEE Awards

St. Xavier's Catholic College of Engineering
Department of Electrical and Electronics Engineering

SEE Awards 2022-2023

SL. No	Name	Award	Photo
1.	DONA JOBIN .A.K (IV EEE)	SHINING STAR OF THE YEAR 2022-2023	
2.	PADUA AASHER ANTONY (IV EEE)	SEE LEADERSHIP AWARD 2022- 2023	
3.	AROCKIA JERVIN RAJ.S (IV EEE)	BEST EXTRA CURRICULAR PERFORMER AWARD 2022-2023	
4.	HARI KRISHNAN	BEST ACADEMIC STUDENT OF THE YEAR 2022-2023 II YEAR EVEN SEMESTER – APRIL/MAY 2022	
5.	JOSHUVA MOSAY A	BEST ACADEMIC STUDENT OF THE YEAR 2022-2023 II YEAR EVEN SEMESTER – APRIL/MAY 2022	

6.	HARI KRISHNAN	BEST ACADEMIC STUDENT OF THE YEAR 2022-2023 II YEAR ODD SEMESTER – NOV/DEC 2022	
7.	JOSHUVA MOSAY A	BEST ACADEMIC STUDENT OF THE YEAR 2022-2023 II YEAR ODD SEMESTER – NOV/DEC 2022	
8.	BERNISHA B	BEST ACADEMIC STUDENT OF THE YEAR 2022-2023 III-YEAR EVEN SEMESTER – APRIL/MAY 2022	
9.	SAI RAMA V	BEST ACADEMIC STUDENT OF THE YEAR 2022-2023 III-YEAR EVEN SEMESTER – APRIL/MAY 2022	
10.	BERNISHA B	BEST ACADEMIC STUDENT OF THE YEAR 2022-2023 III-YEAR ODD SEMESTER –NOV/DEC 2022	

11.	SAI RAMA V	BEST ACADEMIC STUDENT OF THE YEAR 2022-2023 III-YEAR ODD SEMESTER –NOV/DEC 2022	
12.	JEEDITH MELFHIYA R B	BEST ACADEMIC STUDENT OF THE YEAR 2022-2023 IV YEAR EVEN SEMESTER – APRIL/MAY 2022	
13.	NISHANTHI D S	BEST ACADEMIC STUDENT OF THE YEAR 2022-2023 IV YEAR EVEN SEMESTER – APRIL/MAY 2022	
14.	JEEDITH MELFHIYA R B	BEST ACADEMIC STUDENT OF THE YEAR 2022-2023 IV YEAR ODD SEMESTER – NOV/DEC 2022	
15.	BABIN DHAS G	BEST ACADEMIC STUDENT OF THE YEAR 2022-2023 IV YEAR ODD SEMESTER – NOV/DEC 2022	

16.	ASHIKA G R	BEST ACADEMIC STUDENT OF THE YEAR 2022-2023 M.E POWER ELECTRONICS AND DRIVES II YEAR EVEN SEMESTER – APRIL/MAY 2022	
17.	NEENU WILSON	BEST ACADEMIC STUDENT OF THE YEAR 2022-2023 M.E POWER ELECTRONICS AND DRIVES II YEAR EVEN SEMESTER – APRIL/MAY 2022	
18.	RITHU S KUMAR	BEST ACADEMIC STUDENT OF THE YEAR 2022-2023 M.E POWER ELECTRONICS AND DRIVES II YEAR EVEN SEMESTER – APRIL/MAY 2022	
19.	JINU MOL M	BEST ACADEMIC STUDENT OF THE YEAR 2022-2023 I YEAR ODD SEMESTER – NOV/DEC 2022	
20.	JEEDITH MELFHIA.R.B	BEST OUTSTANDING STUDENT OF THE YEAR 2022-2023	

21.	JINO.S.S (II EEE)	BEST VOLUNTEER AWARD 2022- 2023	
22.	AMALA JEFFIN .J (III EEE)	BEST VOLUNTEER AWARD 2022- 2023	
23.	DARRYL WREANT .L (IV EEE)	BEST VOLUNTEER AWARD 2022- 2023	
24.	AMAL SASI (IV EEE)	BEST PLACEMENT RECORDERER OF THE YEAR	
25.	ASKER STEPHIN.S (III EEE)	BEST DESIGNER AWARD 2022- 2023	

26.	MABISH.M.B (IV EEE)	BEST DESIGNER AWARD 2022- 2023	
27.	SIVA PRASAD.R (IV EEE)	BEST ANCHOR OF THE AWARD OF THE YEAR 2022-2023	
28.	I PRIZE -HARIKRISHNAN II EEE	POSTER PRESENTATION HELD ON 17/09/2022	
29.	I PRIZE -THANISH.T II EEE	POSTER PRESENTATION HELD ON 17/09/2022	
30.	II PRIZE- PRITHIVI.A.S II EEE	POSTER PRESENTATION HELD ON 17/09/2022	

31.	II PRIZE -FEMISHA.L.S II EEE	POSTER PRESENTATION HELD ON 17/09/2022	
32.	III PRIZE –ASHIKA.E.R II EEE	POSTER PRESENTATION HELD ON 17/09/2022	
33.	III PRIZE- KANIMOZHI.K II EEE	POSTER PRESENTATION HELD ON 17/09/2022	
34.	III PRIZE – ABIYA.J.R II EEE	POSTER PRESENTATION HELD ON 17/09/2022	
35.	III PRIZE – SHINY.R II EEE	POSTER PRESENTATION HELD ON 17/09/2022	

36.	I PRIZE -JEEDITH MELFHIA.R.B (IV EEE)	POSTER PRESENTATION	
37.	I PRIZE -DONA JOBIN.A.K (IV EEE)	POSTER PRESENTATION	
38.	II PRIZE-HARIKRISHNAN (II EEE)	POSTER PRESENTATION	
39.	I PRIZE –VIJESH.V (II EEE)	VIDEO PRESENTATION	
40.	I PRIZE -KANIMOZHI.K (II EEE)	VIDEO PRESENTATION	

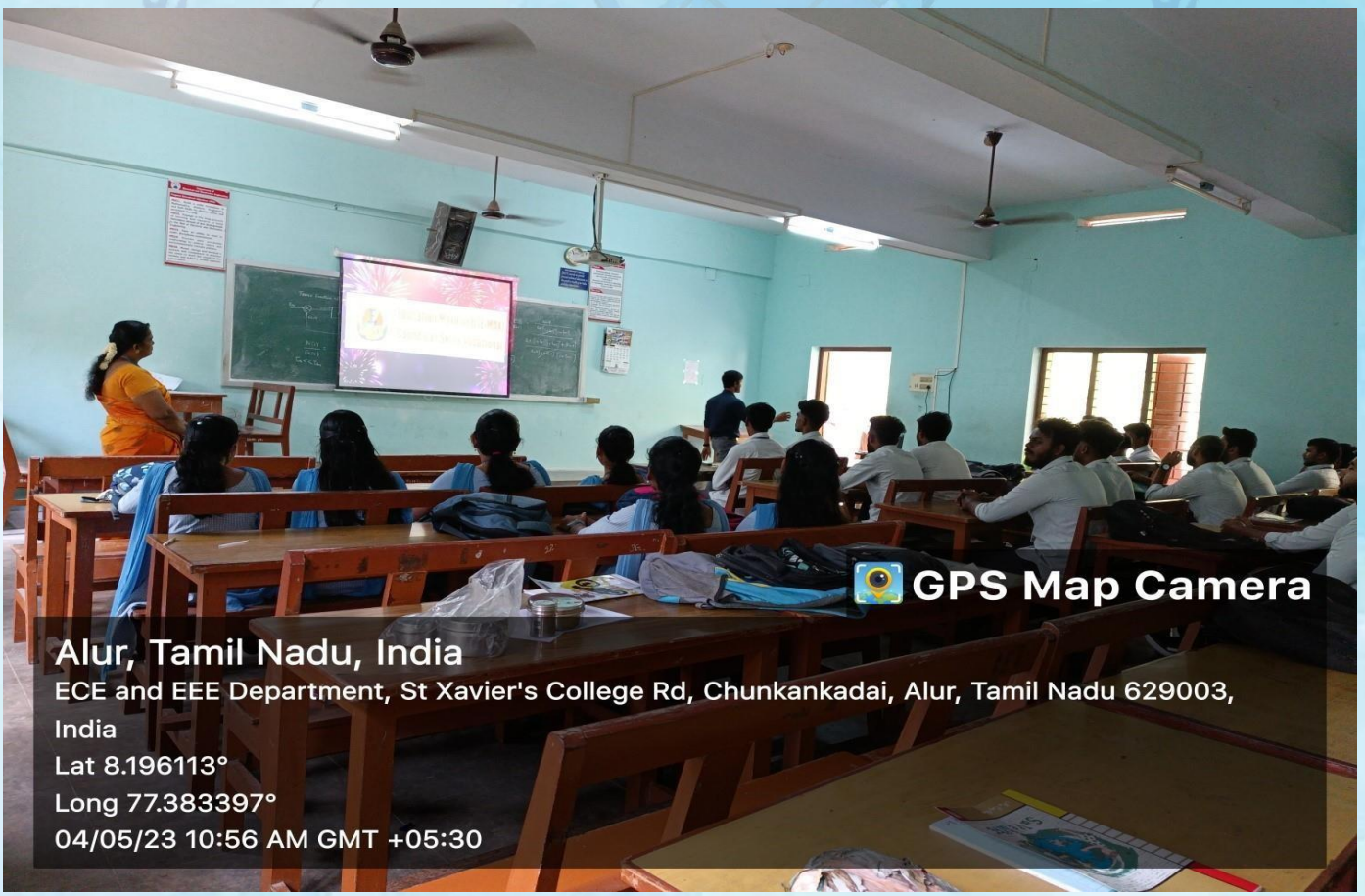
41.	I PRIZE-DHINESH.D (II EEE)	QUIZ COMPETITION	
42.	I PRIZE -MEBIN RAJA.N (II EEE)	QUIZ COMPETITION	
43.	II PRIZE-JENIN.J (II EEE)	QUIZ COMPETITION	
44.	II PRIZE - MOHAMMED ABDUL HAKKIM.A (II EEE)	QUIZ COMPETITION	
45.	III PRIZE -ALAN LAL.M.A (II EEE)	QUIZ COMPETITION	
46.	III PRIZE -SIVA.M (II EEE)	QUIZ COMPETITION	

EVENTS CONDUCTED

SEE Valedictory

Awareness on Higher Studies in Abroad

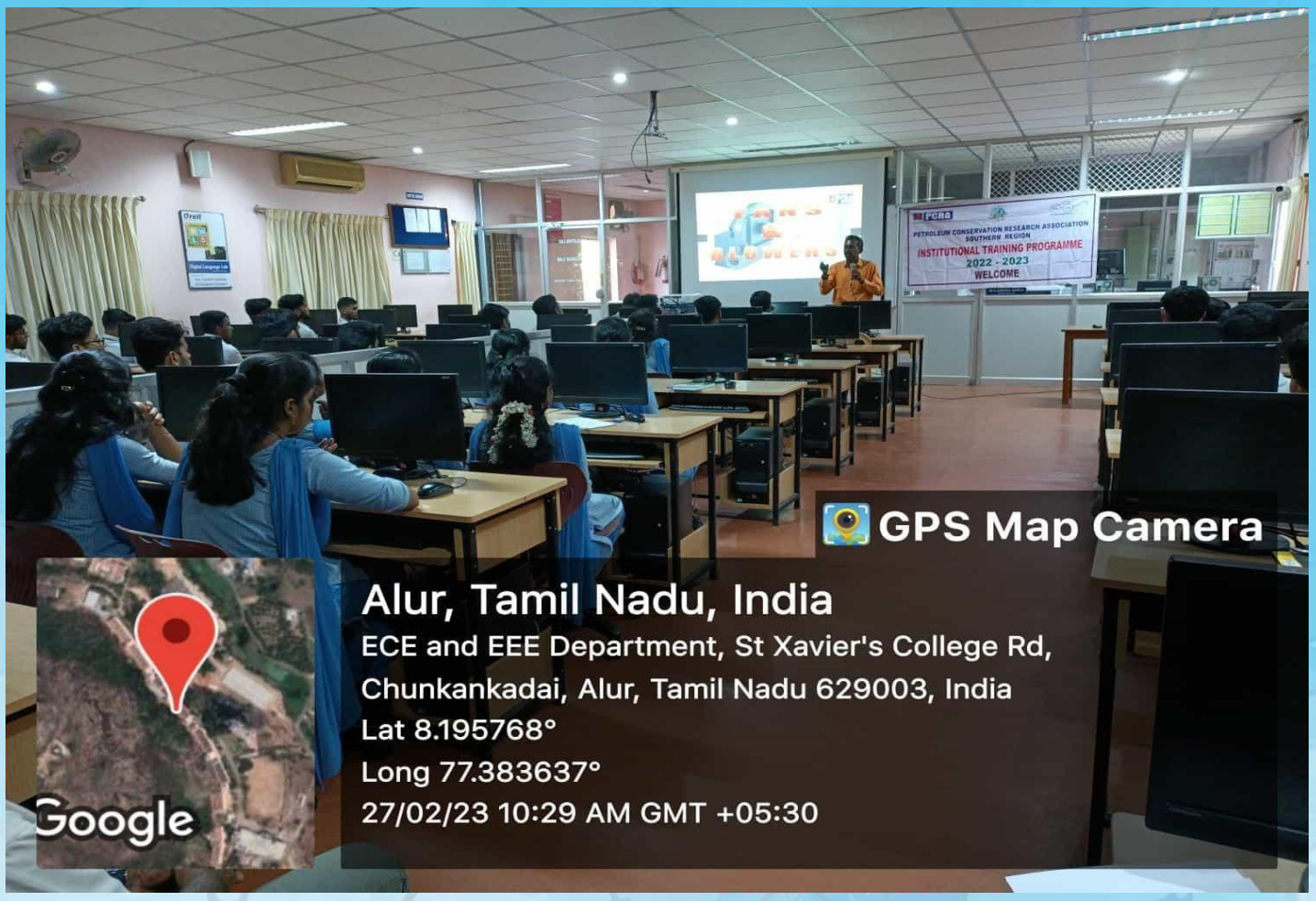
Seminar on Future Technologies in Electric Vehicles



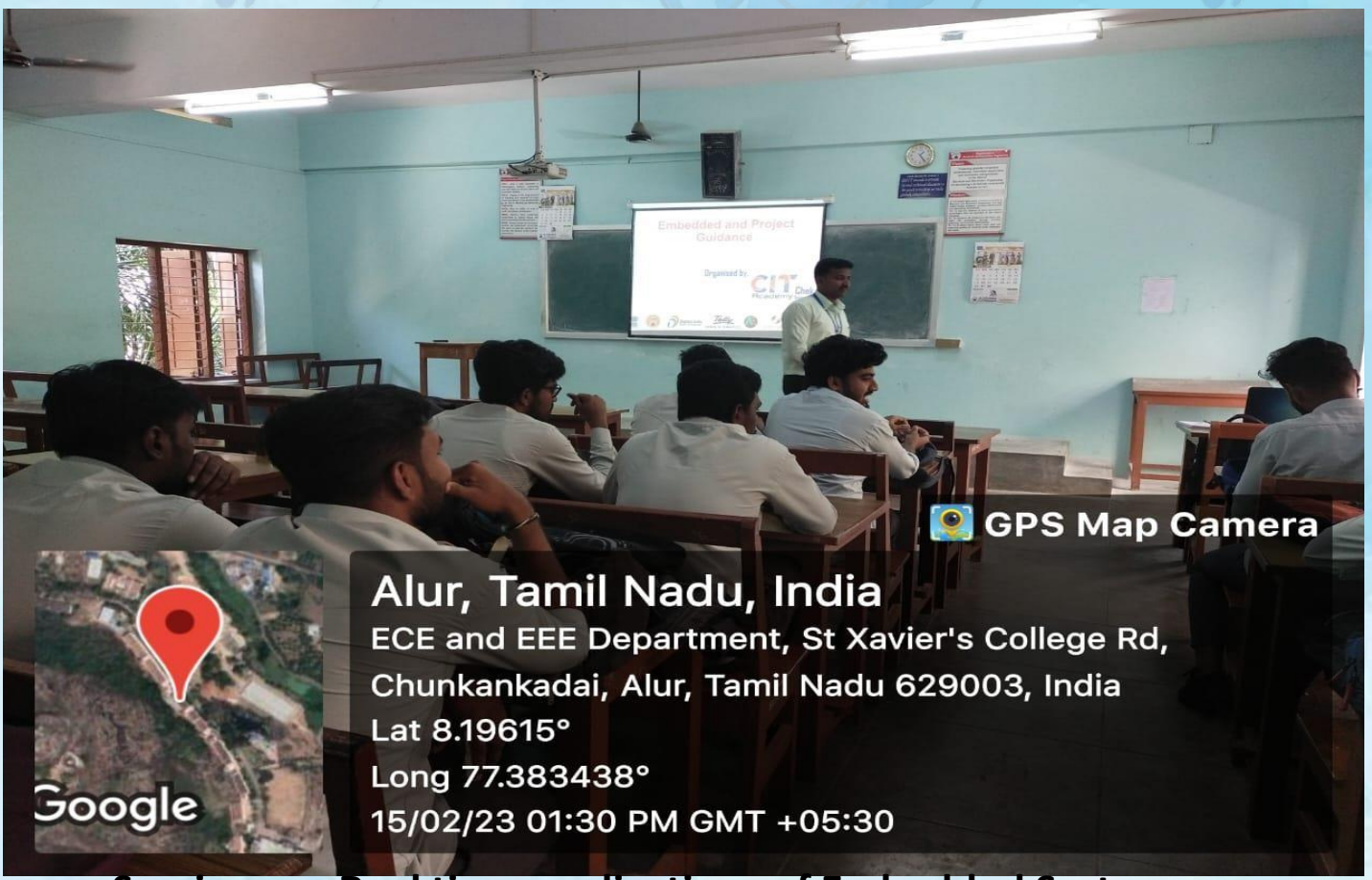
Seminar on AI and Machine Learning

International Conference "ICEETS '23"

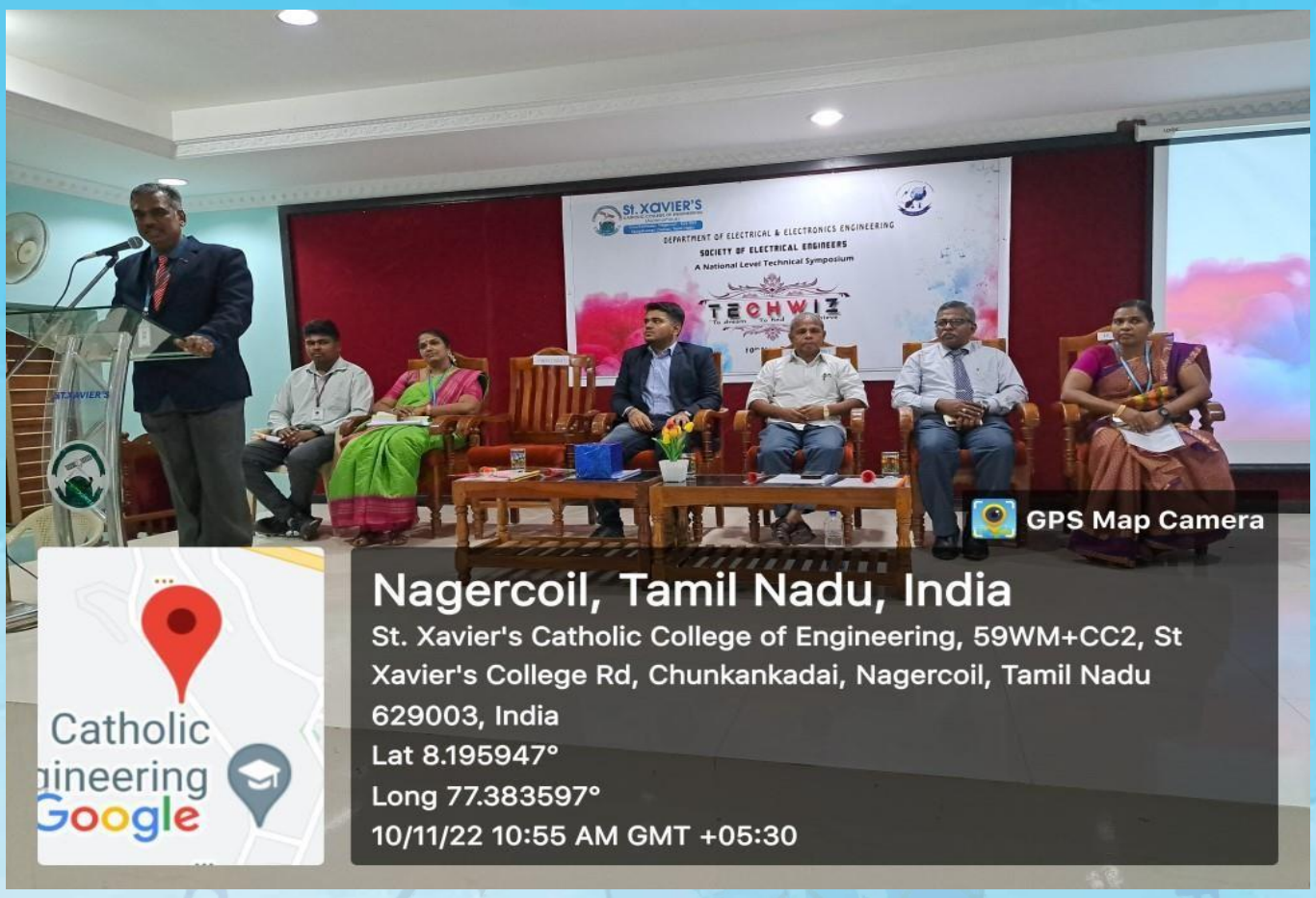
A seminar on Over Voltages in Power Grid



Seminar on Energy Audit and Energy Conservation

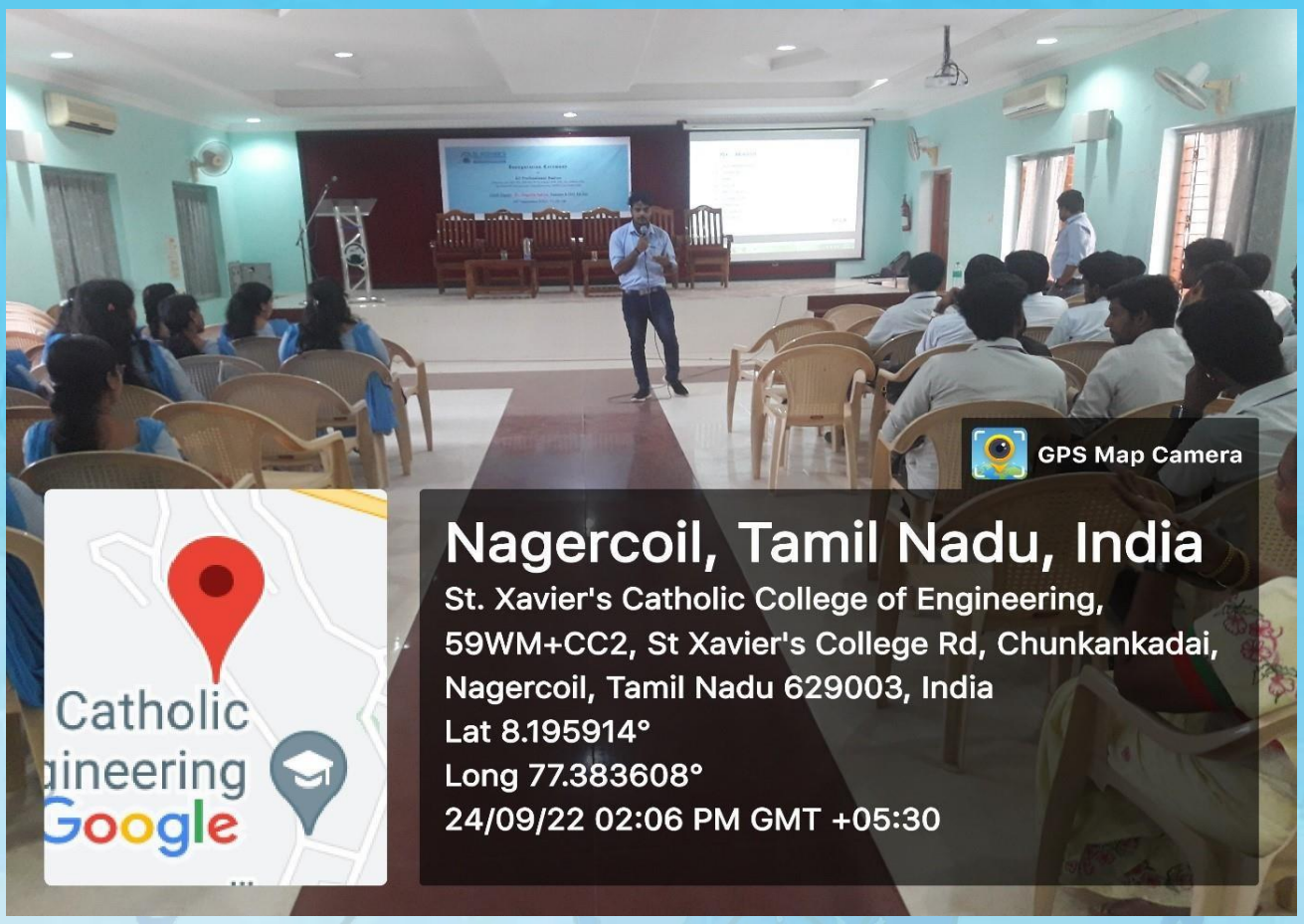


Seminar on Real time applications of Embedded Systems

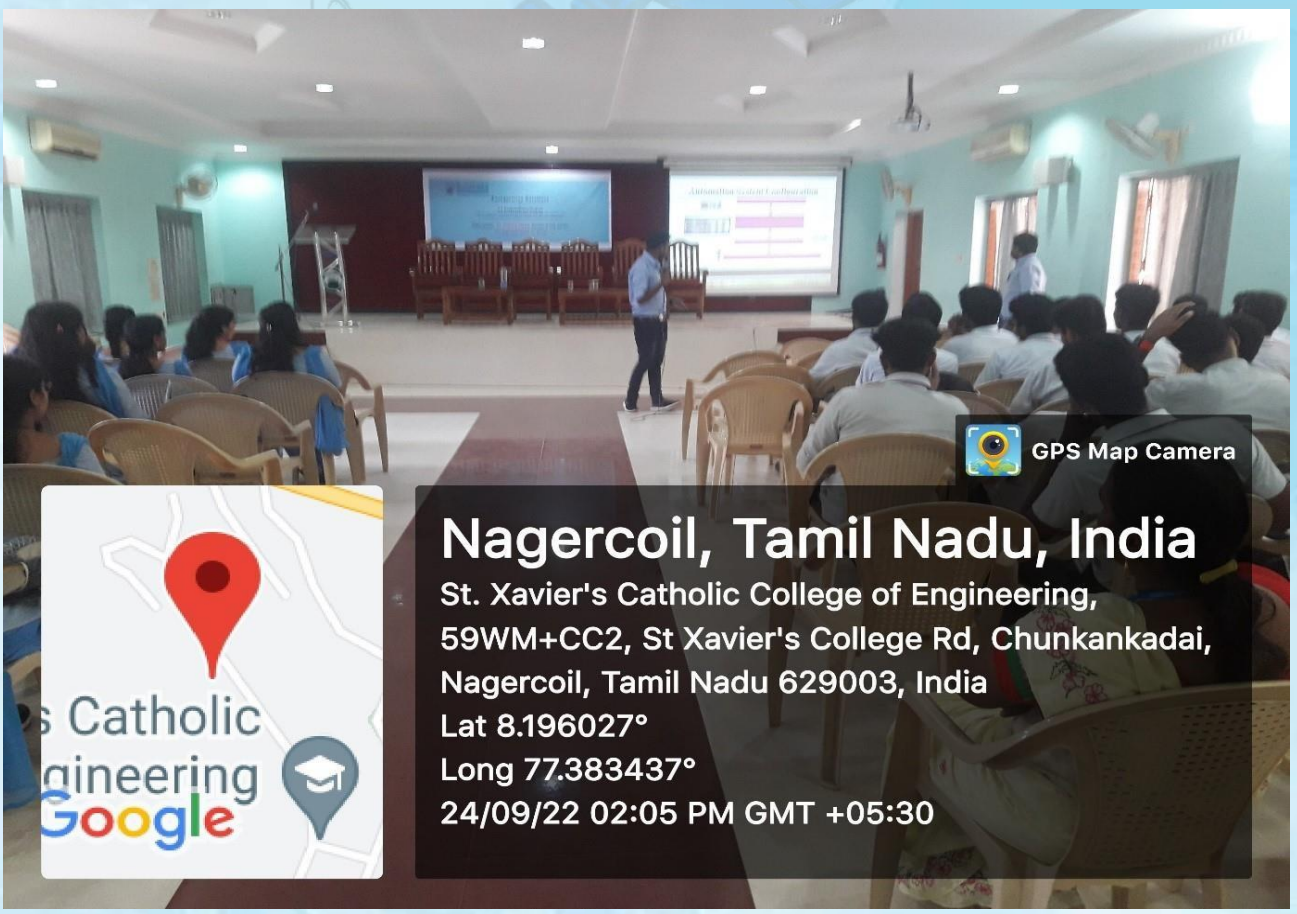


National Level Technical Symposium TECHWIZ '23

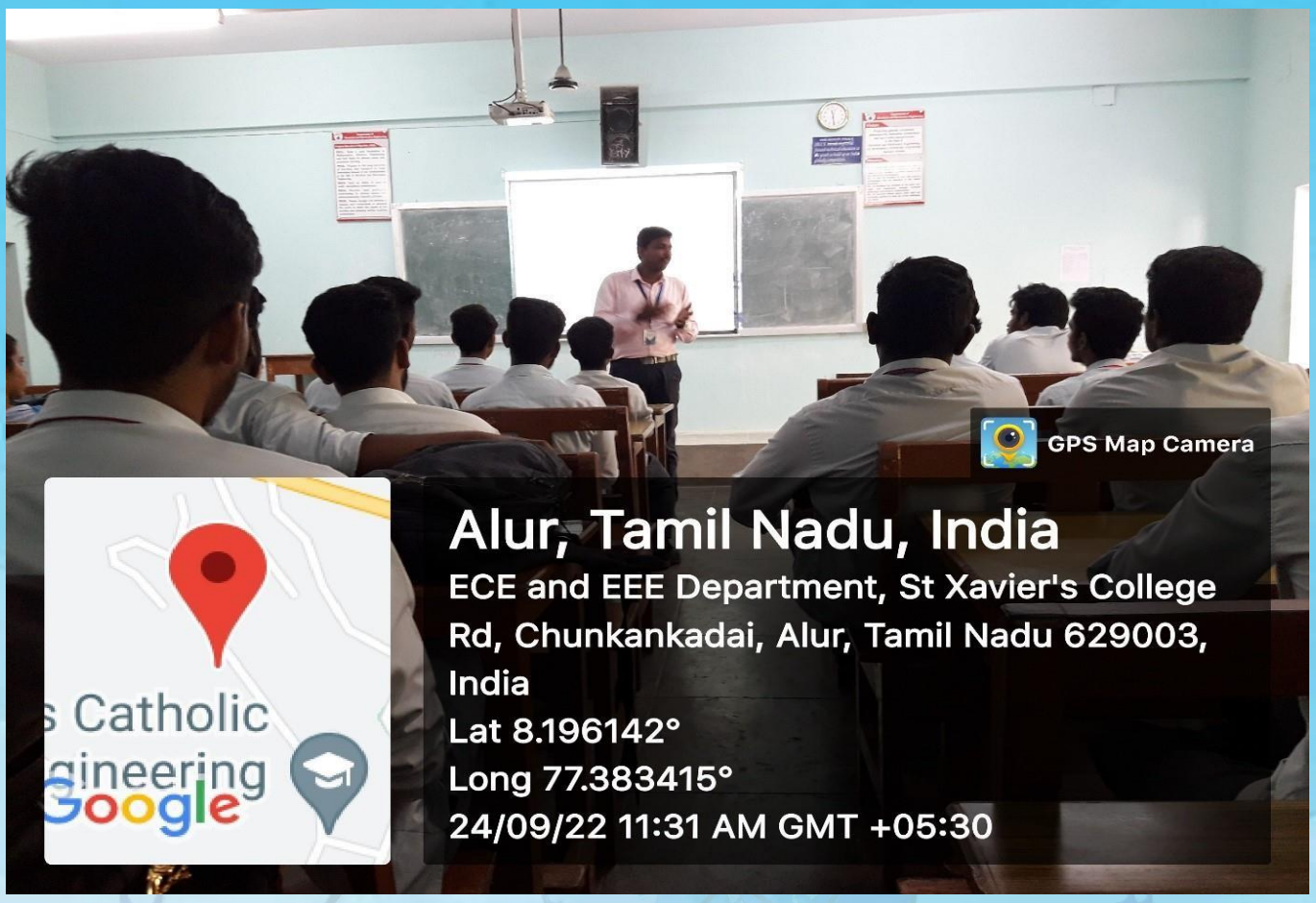
Seminar on Introduction to Professional Development Skills



Seminar on Introduction to PLC/SCADA & Career Connect



Seminar on Introduction to Industrial Automation & Career Connect



Seminar on Introduction to Embedded Systems and Project Guidance

Seminar on Job Oriented Electrical Software.

Seminar on job opportunities in the core companies

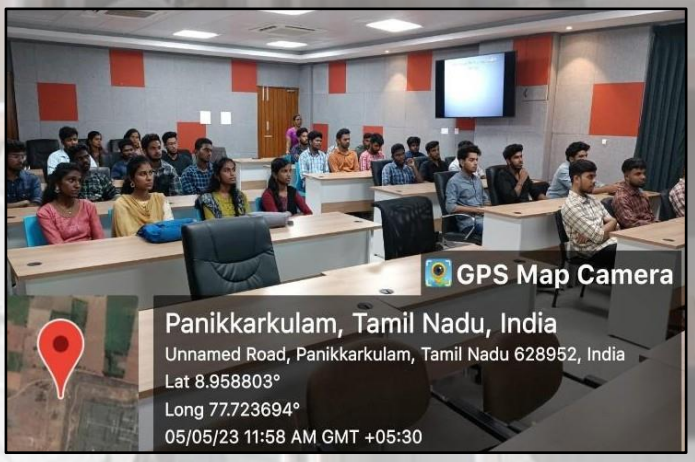
Poster Presentation on Recent Trend in Electrica

Seminar on SCADA/HMI & carrier connect

SEE Inauguration

EEE Gallery


GPS Map Camera
Alur, Tamil Nadu, India
ECE and EEE Department, St Xavier's College Rd,
Chunkankadai, Alur, Tamil Nadu 629003, India
Lat 8.196195°
Long 77.383402°
21/04/23 02:30 PM GMT +05:30


GPS Map Camera
Panikkarkulam, Tamil Nadu, India
Unnamed Road, Panikkarkulam, Tamil Nadu 628952, India
Lat 8.958803°
Long 77.723694°
05/05/23 11:58 AM GMT +05:30

ACCREDITED WITH 'A' GRADE
BY NAAC

ALL UG PROGRAMS
ACCREDITED BY NBA

RECOGNIZED UNDER 2(f)&12(B)
OF UGC ACT, 1956


INSTITUTIONAL TRAINING PROGRAMME
2022 - 2023
WELCOME


GPS Map Car


Ministry of New and Renewable Energy
GOVERNMENT OF INDIA


SOCIETY OF ELECTRICAL ENGINEERS


TY OF ELECTRICAL ENGINEERS
F ELECTRICAL & ELECTRONICS ENGINEERIN
ALEDICTORY' 2023
Thursday, 25th


St.X
DEPAR


ST. XAVIER'S
SOCIETY OF ELECTRICAL ENGINEERS
DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING
VALEDICTORY' 2023


St. XAVIER'S
CATHOLIC COLLEGE OF ENGINEERING
(Autonomous)
Chunkankadai, Nagercoil - 629003
Kanyakumari District, Tamil Nadu
SOCIETY OF ELECTRICAL ENGINEERS
DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING
VALEDICTORY' 2023
Thursday, 25th May 2023
ST.XAVIER'S


ST.XAVIER'S


St. XAVIER'S
CATHOLIC COLLEGE OF ENGINEERING
(Autonomous)
Chunkankadai, Nagercoil - 629003
Kanyakumari District, Tamil Nadu


St. XAVIER'S
CATHOLIC COLLEGE OF ENGINEERING
(Autonomous)
SOCIETY OF ELECTRICAL ENGINEERS
DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING
VALEDICTORY' 2023
ST.XAVIER'S


ST.XAVIER'S


ST.XAVIER'S


St. XAVIER'S
CATHOLIC COLLEGE OF ENGINEERING
(Autonomous)


EERS
ENGINEERING
23


NEERS
CS ENGINEERING
023


SI.XAVIER'S
SOCIETY OF ELECTRICAL ENGINEERS
DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING
VALEDICTORY' 2023


THANK YOU