A

Report on

International Conference

On

"Advanced Computing Techniques in Engineering & Technology (ACTET-2023)"

December 18 –December 19, 2023

Organized by:

Department of Electrical Engineering

Swami Keshvanand Institute of Technology, Management & Gramothan, Jaipur

Submitted by:

Mr.Ankush Tandon, Dr.Pooja Jain

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Our Inspiration

"Mass illiteracy is the root cause behind backwardness of India. If we want speedy progress of nation we need to root it out as early as possible."

– Swami Keshvanand

Swami Keshvanand, an orphan, illiterate, nomadic man who never received formal education, was the founder of more than 300 schools, 50 hostels and innumerable libraries, social service centers and museums. Swami Keshvanand had a deep understanding of the rural society of the desert region. He explained the peculiarities of the desert region, identified the problems, and suggested appropriateand logical solutions. It was Swami Keshvanand's lifelong endeavor to eradicate social evils like untouchability, child marriage, indebtedness, poverty, backwardness, alcohol abuse, moral dissipation etc.

1.ABOUT SKIT:-

Swami Keshvanand Institute of Technology, Management & Gramothan (SKIT) has been Ranked No.1 Engineering Institute in Rajasthan by RTU Kota consecutively for the last five years. The institute was established in the year 2000 by a team of committed professionals and academicians. During all the past years SKIT has emerged as a premier center of technical education not only in Rajasthan but also in Northern India which has been realized through efficient and dedicated faculty members, innovative teaching learning methods, and core value of discipline. The various undergraduate programmes of the institute are accredited by the National Board of Accreditation (NBA).

2.ABOUT DEPARTMENT OF ELECTRICAL ENGINEERING:-

The Department of Electrical Engineering is distinctly focused towards integrating academics with cutting edge technology in the field of Electrical Engineering. The B. Tech. Program has been accredited four times in succession by NBA since 2009

Department is also conducting M. Tech. and PhD Program in Power Systems specialization. All efforts are subtly harnessed with the aim of preparing the budding engineers to face the challenging dimensions of technical excellence in areas such as Analog & Digital Electronics, Electrical Machines, Control &Automation, Power Systems Design and Power Electronics. The department puts in consistent efforts for field exposure to students through various research-oriented projects taken up for meeting the industry demands. The department offers a perfect blend of electrical, electronics and computer related courses to help students pursue a professional career or higher studies.

3.ABOUT CONFERENCE:

With the advent of high performance computing environments, virtualization, distributed and parallel computing, as well as the increasing memory, storage and computational power, processing particularly complex scientific applications and voluminous data is more affordable. With the current computing software, hardware and distributed platforms effective use of advanced computing techniques is more achievable. The goal of the International Conference on Advanced Computing techniques in Engineering & Technology (ACTET-2023) is to bring together researchers from the academia and practitioners from the industry in order to address fundamentals of advanced scientific computing and specific mechanisms and algorithms for particular and to exchange their innovative ideas, knowledge, expertise, and experience in advance computing techniques in various domains of engineering and technology.

The conference provides a forum where researchers are able to present recent research results and new research problems and directions related to them. The conference got contributions presenting novel research in all aspects of new scientific methods for computing and hybrid methods for computing optimization, as well as advanced algorithms and computational procedures, software and hardware solutions dealing with specific domains of science like Electrical and Electronics Engineering. The conference features various plenary talks, tutorials, project exhibition and industry sessions, apart from paper presentations.

4.VISION, MISSION & QUALITY POLICY OF THE INSTITUTE:-

Vision

To promote higher learning in advanced technology and industrial research to make our country a global player

Mission

To promote quality education, training and research in the field of engineering & management by establishing effective interface with industry and to encourage faculty to undertake industry sponsored projects for students.

Quality Policy

We are committed to 'achievement of quality' as an integral part of our institutional policy by continuous self-evaluation and striving to improve ourselves.

Institute would pursue quality in

- All its endeavors like admissions, teaching- learning processes, examinations, extra and co-curricular activities, industry institution interaction, research & development, continuing education, and consultancy.
- Functional areas like teaching departments, Training & Placement Cell, library, administrative office, accounts office, hostels, canteen, security services, transport, maintenance section and all other services."

5. VISION & MISSION OF THE DEPARTMENT:-

Vision: To promote specialized knowledge in the field of Electrical Engineering along with interdisciplinary awareness and to develop a framework to support the communicative and ethical needs of industry and society at global level.

Mission:

- To impart **quality education** in the field of Electrical Engineering and to pursue **research and higher studies** by providing latest development through expert lectures, conferences and workshops.
- To facilitate and develop students for their **better employability** to adapt the changing needs.
- To encourage students and faculty members to undertake **industry sponsored projects**.

6.SCHEDULE OF THE CONFERENCE:-

Date:18 December 2023	
Link to Join: Click here	
09:30AM-10:30 AM	**Inaugral Ceremony**
10:30AM -11:30 AM	**Keynote Talk-1** **Prof.Ramesh C.Bansal,Professor,EE Deptt.,University of Sharjah,UAE** Title of Talk:Renewable Energy Integration in Smart Grid Environment
11:30AM-12:30 PM	**Keynote Talk-2** **Prof.G R Sinha,Provost (Vice Chancellor), GSFC University,Gujrat** Title of Talk:IKS and AI Intervention
12:30PM-01:00 PM	**Lunch Break**
01:00PM -02:00 PM	**Keynote Talk-3** **Prof.Somitra Kumar Sanadhya,Professor,IIT Jodhpur** Title of Talk:Format Preserving Encryption
02:00 PM-03:00 PM	**Paper Presentation Session-1**
Date:19 December 2023	
Link to Join: Click here	
09:00AM-10:00 AM	**Keynote Talk-4** **Prof.Mohmmad Rizwan,Professor,Delhi Technological University,Delhi** Title of Talk:Recent Developments and Opportunities in Renewable Energy based Sustainable Power Generation
10:00 AM-11:30 AM	**Paper Presentation Session-2**
11:30 AM-12:30 PM	**Paper Presentation Session-3**
12:30 PM-01:30 PM	**Lunch Break**
01:00 PM-02:00 PM	**Keynote Talk-5** **Dr.Jagdish Chand Bansal,Associate Professor,South Asian University,Delhi** Title of Talk:The Rise of Swarm Intelligence
02:00 PM-03:00 PM	**Paper Presentation Session-4 & Valedictory Session**

7.OBJECTIVES OF THE CONFERENCE:-

The major objectives of this conference are as follows:

1. **Explore Emerging Technologies:**
   - Provide a platform to explore and discuss the latest advancements in advanced computing techniques relevant to electrical engineering.
   - Highlight emerging technologies that have the potential to revolutionize the field.
2. **Knowledge Exchange:**
   - Facilitate knowledge exchange among researchers, academicians, and industry professionals in the field of electrical engineering and advanced computing.
   - Foster collaboration and interdisciplinary research among participants.
3. **Cross-disciplinary Integration:**
   - Encourage cross-disciplinary integration by bringing together experts from various domains such as electrical engineering, computer science, and information technology.
   - Discuss how advanced computing techniques can be integrated into electrical engineering applications for enhanced performance and efficiency.
4. **Applications and Case Studies:**
   - Showcase real-world applications and case studies where advanced computing techniques have been successfully applied in electrical engineering projects.
   - Discuss the practical implications, challenges, and lessons learned from these applications.
5. **Address Challenges and Solutions:**
   - Identify challenges and issues in the intersection of advanced computing and electrical engineering.
   - Discuss potential solutions, innovative approaches, and best practices to overcome these challenges.
6. **Promote Innovation:**
   - Encourage and promote innovation in the development of new computing techniques and their applications in electrical engineering.
   - Provide a platform for presenting groundbreaking research and ideas.
7. **Educational Advancements:**
   - Discuss advancements in educational practices and

methodologies related to incorporating advanced computing techniques into electrical engineering curricula.
- Explore ways to prepare students for the evolving demands of the industry.

8. **Industry-Academia Collaboration:**
   - Foster collaboration between academia and industry to bridge the gap between theoretical research and practical applications.
   - Provide opportunities for industry professionals to share insights on current trends and challenges.
9. **Ethical and Social Implications:**
   - Explore the ethical considerations and social implications of implementing advanced computing techniques in electrical engineering.
   - Discuss responsible and sustainable approaches to technology development.
10. **Networking and Professional Development:**
   - Create a networking platform for participants to establish professional connections, exchange ideas, and build collaborations.
   - Provide a forum for early-career researchers and students to interact with established experts in the field.

These objectives aim to create a comprehensive and inclusive conference that addresses key aspects of the intersection between advanced computing techniques and electrical engineering.

8.EXPECTED OUTCOME OF THE CONFERENCE:-

After attending this conference,Students and Faculty will be able to:

1. **Advancement of State-of-the-Art Practices:**
   The conference is expected to contribute to the advancement of state-of-the-art practices in electrical engineering by presenting and discussing the latest developments in advanced computing techniques. Attendees will gain insights into cutting-edge methodologies and technologies, fostering innovation within the field.
2. **Establishment of Collaborative Networks:**
   The conference provides a platform for electrical engineers to establish collaborative networks with researchers, academicians, and industry professionals. These networks can lead to joint research initiatives, knowledge-sharing collaborations, and partnerships that

transcend geographical boundaries.

3. **Integration of Advanced Computing in Industry:**
   By addressing the practical applications and challenges of advanced computing in electrical engineering, the conference aims to facilitate the seamless integration of these technologies into industrial practices. This outcome supports the industry's evolution towards more efficient, adaptive, and technologically sophisticated solutions.
4. **Contribution to Academic Research and Publications:**
   The conference is expected to contribute significantly to academic research in electrical engineering by providing a venue for researchers to present their findings. This can lead to publications in conference proceedings and peer-reviewed journals, adding valuable insights to the academic literature and influencing future research directions.
5. **Professional Development and Career Advancement:**
   Attendees, particularly early-career electrical engineers, can benefit from the conference in terms of professional development. Exposure to industry trends, networking opportunities, and interactions with seasoned professionals can contribute to career advancement by providing valuable guidance, mentorship, and potential job opportunities.

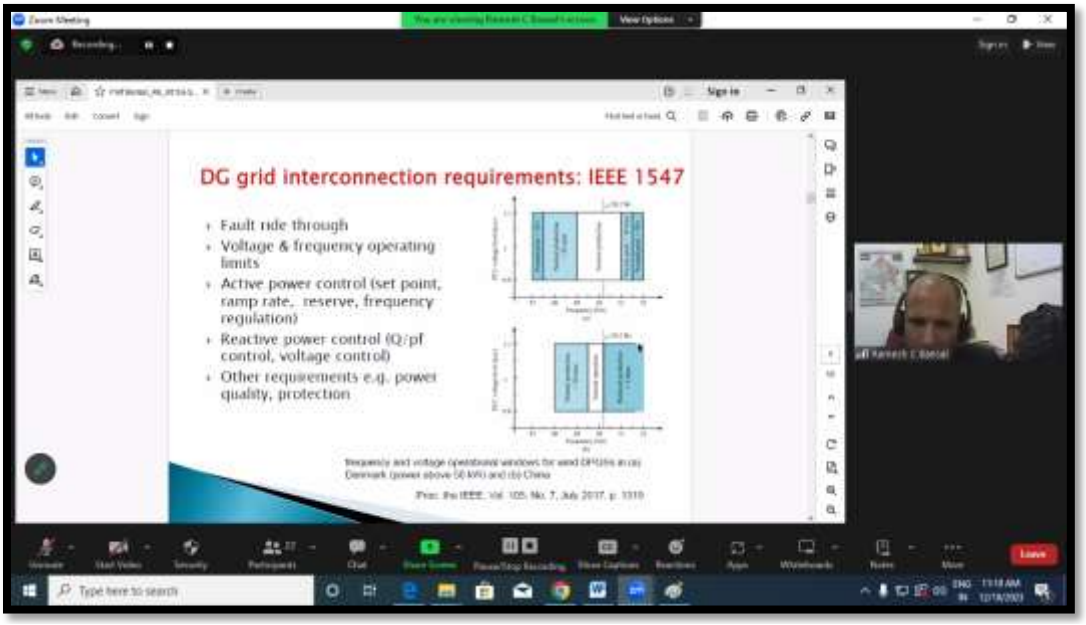
These broader outcomes collectively contribute to the growth, relevance, and impact of electrical engineering within the broader context of technological advancements, research, and industry practices.

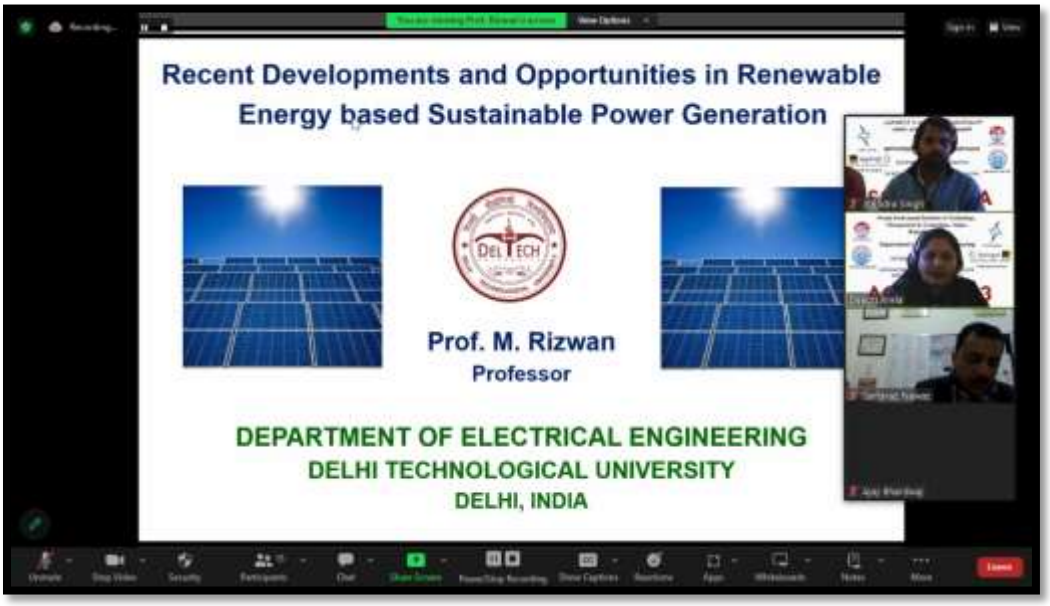
9.ATTENDANCE RECORD OF PARTICIPANTS FOR THE DURATION OF THE EVENT:

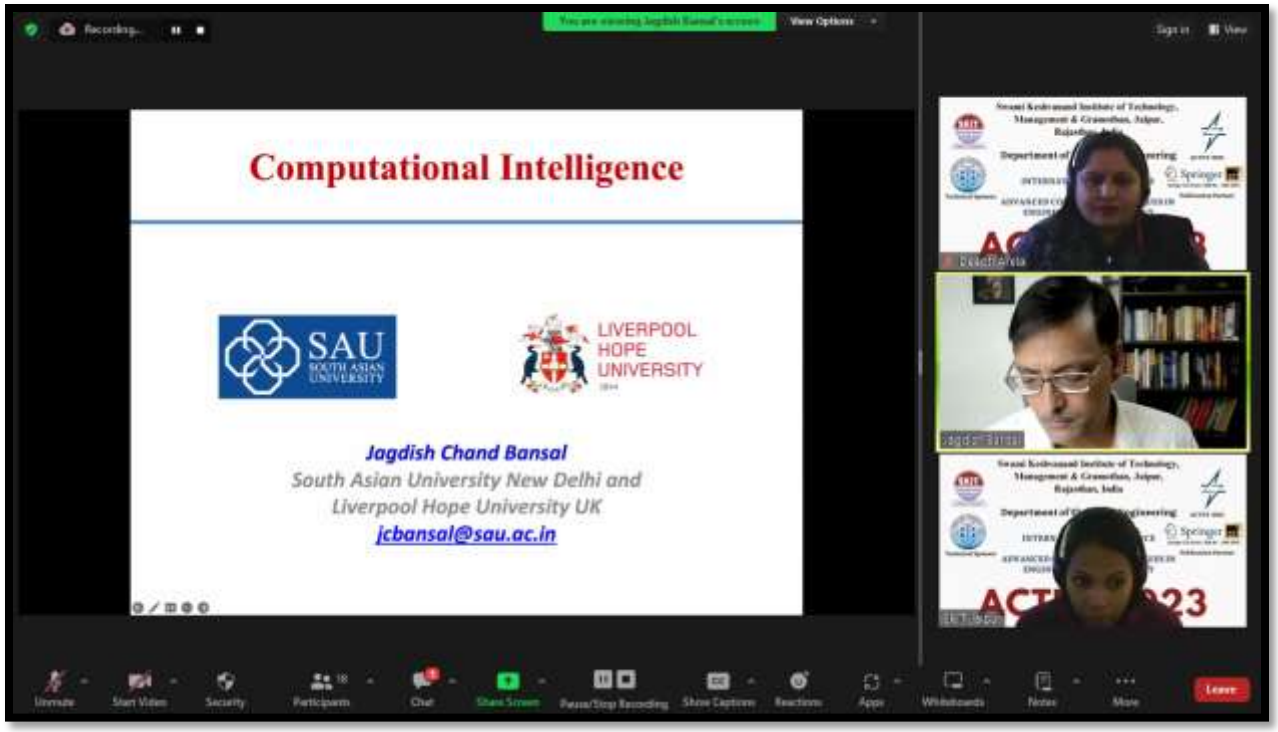
S.NO.	Name
1.	Monica Gupta
2.	Bimal Raj Dutta
3.	Jain, Diksha
4.	Shukla, Akanksha
5.	Baby, Ann
6.	SHAH, MILIND
7.	Susmita Roy
8.	Arunabha Chatterjee
9.	Vivek Sharma

10.	Priyanka Sharma
11.	Divya Rawat
12.	Sanuj Mohan
13.	Dr. Suman Sharma
14.	Smriti Jain
15.	Sanjeev Kumar
16.	Sanjeev Kumar
17.	Prashant Kumar
18.	Lalit Rai
19.	SHUBHI JAIN
20.	Anand Mandal
21.	Dr Prateek Kumar Singhal
22.	Priyanka Sharma
23.	Prakhar Saxena
24.	Sanjay Choudhary
25.	Naman Saini
26.	Mandeep Hingonia
27.	Vinay Yadav
28.	Ajay Bharadwaj
29.	Mumal Bhati
30.	Sanyam Lodha
31.	Jitendra Singh

10.GLIMPSES OF THE CONFERENCE:






Computational Intelligence
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Shahbaz Siddiqui
Dr. Virendra Sangtani
Jinendra Rahul
Dr.Jyoti Shukla
Ajay Bhardwaj
SKIT Jaipur

11.SAMPLE COPY OF CERTIFICATES

INTERNATIONAL CONFERENCE ON
Advanced Computing Techniques
in
Engineering & Technology
ACTET-2023
(December 18-19, 2023)
Organized by
Department of Electrical Engineering
Swami Keshvanand Institute of Technology, Management & Gramothan, Jaipur
ACTET-2023
Springer CCIS Series (ISSN No. - 1865-0929)

Certificate of Appreciation

This is to certify that

AARTI CHUGH

SGT University, Gurgaon

has been awarded this certificate in recognition and sincere appreciation of their invaluable contribution and outstanding presence as the **Technical Program Committee Member and Reviewer** in the International Conference on **Advanced Computing Techniques in Engineering & Technology (ACTET-2023)** held during December 18-19,2023.

Prof. Ramesh Kumar Pachar (General Chair)
Dr. Sarfaraz Nawaz (Organizing Chair)
Mr. Ankush Tandon (Convener)
Dr. Pooja Jain (Convener)

12 DAY WISE DETAILED REPORT OF THE CONFERENCE:-

The International Conference on Advanced Computing Techniques in Engineering & Technology (ACTET-2023), held at SKIT, Jaipur from December 18 to 19, 2023, proved to be a pivotal gathering for scholars, researchers, and experts in advanced computing. The conference, hosted at SKIT Jaipur, aimed to explore the latest developments, challenges, and opportunities at the intersection of engineering, technology, and computing.

Day 1: December 18, 2023

- ***09:30 AM - 09:35 AM: Welcome Address***
    - *Prof. S. L. Surana, Director (Academics), SKIT, Jaipur, set the stage for the conference, welcoming participants and highlighting the significance of the event.*
- ***09:35 AM - 09:40 AM: About SKIT***

- *Prof. Ramesh Kumar Pachar, Principal of SKIT, Jaipur, provided an overview of the institution, emphasizing its role in fostering academic excellence.*

- ***09:40 AM - 09:50 AM: About EE Department***
    - *Dr. Sarfaraz Nawaz, Head of the Electrical Engineering Department, offered insights into the department's contributions and focus areas.*

- ***09:50 AM - 09:55 AM: About Conference***
    - *Dr. Pooja Jain, Convener of ACTET-2023, provided an overview of the conference objectives, themes, and expected outcomes.*

- ***09:55 AM - 10:05 AM: Word of Wisdom by Guest of Honour***
    - *Prof. Richi Nayak, Deputy Director & Complex Data Analysis Program Leader at the Centre for Data Science, Queensland University of Technology, Brisbane, shared valuable insights on advanced computing and data science.*

- ***10:05 AM - 10:15 AM: Address by Chief Guest***
    - *Prof. Ramesh C. Bansal, Professor at the University of Sharjah, UAE, delivered a keynote address, sharing expertise on advancements in electrical engineering and their broader implications.*

- ***10:15 AM - 10:17 AM: Vote of Thanks***
    - *Mr. Ankush Tandon, Convener of ACTET-2023, expressed gratitude to the speakers, participants, and organizers for their contributions and efforts in making the conference possible.*

Conclusion: The opening day of ACTET-2023 provided a comprehensive introduction to the conference, featuring addresses from distinguished speakers and setting the stage for in-depth discussions on advanced computing in engineering and technology. The insightful talks and welcomes from esteemed speakers created an intellectually stimulating environment, setting the tone for the subsequent sessions. The conference holds promise for fostering collaboration and advancing knowledge in the dynamic field of advanced computing.

Keynote Speakers:

The conference opened with five distinguished keynote speakers, each providing unique insights:

Prof. Ramesh C. Bansal: Shared advancements in electrical engineering from the University of Sharjah, UAE.

Dr. Bansal delivered a thought-provoking talk on "Empowering the Future: Renewable Energy Integration in Smart Grid Environment." The talk delved into the intersection of renewable energy and smart grid technologies, highlighting their potential to shape a sustainable and resilient energy landscape.

Key Points:

1. **Introduction to Renewable Energy Integration:** Dr. Bansal commenced the talk by providing a comprehensive overview of the current landscape of renewable energy integration. He emphasized the global shift towards sustainable energy practices and the need for efficient integration into existing smart grid frameworks.

2. **Smart Grid Technologies:** The presentation delved into the intricacies of smart grid technologies. Dr. Bansal discussed how smart grids facilitate real-time communication, monitoring, and control of energy flows. He highlighted the role of advanced sensors, communication networks, and data analytics in optimizing energy distribution.

3. **Challenges and Solutions:** Dr. Bansal addressed challenges associated with renewable energy integration, including intermittency and grid stability. He presented innovative solutions such as energy storage systems, predictive analytics, and demand response mechanisms that contribute to overcoming these challenges.

4. **Technological Advancements:** The talk explored the latest technological advancements driving renewable energy integration. Dr. Bansal discussed emerging technologies such as blockchain, artificial intelligence, and edge computing and their transformative impact on smart grid environments.

5. **Regulatory Frameworks:** An integral part of the discussion was the examination of regulatory frameworks governing renewable energy integration. Dr. Bansal highlighted

the importance of supportive policies and regulations in fostering a conducive environment for sustainable energy practices.

6. **Case Studies and Success Stories:** The presentation included case studies and success stories from around the world, showcasing instances where effective renewable energy integration in smart grids has led to significant advancements in energy sustainability, cost efficiency, and grid reliability.

Conclusion: In conclusion, Dr. Bansal's talk on "Empowering the Future: Renewable Energy Integration in Smart Grid Environment" provided a comprehensive understanding of the transformative potential of integrating renewable energy into smart grid systems. The audience gained insights into technological innovations, regulatory landscapes, and success stories that collectively contribute to shaping a sustainable and resilient future.

Prof. Somitra Kumar Sanadhya: Offered profound insights into advanced computing techniques, showcasing cutting-edge research at IIT Jodhpur.

Prof. Somitra Kumar Sanadhya delivered an insightful talk on "Format Preserving Encryption" showcased cutting-edge research conducted at IIT Jodhpur in the realm of advanced computing techniques.

Key Points:

1. **Introduction to Format Preserving Encryption (FPE):** Prof. Sanadhya began the talk by introducing the concept of Format Preserving Encryption. He provided a clear understanding of how FPE enables encryption of data while preserving its original format, making it suitable for various applications where maintaining the structure of data is crucial.

2. **Applications and Use Cases:** The presentation delved into the diverse applications and use cases of Format Preserving Encryption. Prof. Sanadhya explored scenarios in industries such as finance, healthcare, and database management where FPE plays a pivotal role in securing sensitive information without altering its original structure.

3. **Technical Underpinnings:** Prof. Sanadhya delved into the technical aspects of Format Preserving Encryption, providing the audience with a deeper understanding of the

cryptographic principles and algorithms that enable the preservation of data format during encryption and decryption processes.

4. **Challenges and Solutions:** The talk addressed challenges associated with implementing Format Preserving Encryption and presented innovative solutions. Prof. Sanadhya discussed considerations related to security, performance, and adaptability, offering insights into strategies to overcome these challenges.

5. **Research at IIT Jodhpur:** The core of the presentation highlighted cutting-edge research conducted at IIT Jodhpur in the field of Format Preserving Encryption. Prof. Sanadhya shared insights into ongoing projects, advancements in algorithms, and the practical applications of FPE emerging from the research conducted at the institution.

Conclusion: In conclusion, Prof. Somitra Kumar Sanadhya's talk on "Format Preserving Encryption" provided a comprehensive overview of the technology, applications, and ongoing research in this specialized field of advanced computing. The audience gained valuable insights into the potential of Format Preserving Encryption and its relevance in addressing security challenges while preserving data integrity.

Paper Presentation Session-1

Session Chair:

- Dr. Somitra Sanadhya, Professor, Department of Computer Science Engineering, IIT Jodhpur

Co-Session Chairs:

- Dr. Amit Kumar Sharma, Assistant Professor, Department of Computer Science Engineering, SKIT
- Dr. Yogendra Kumar Gupta, Associate Professor, Department of Computer Science Engineering, SKIT

Session Coordinator:

- Dr. Rishi Vyas, Professor, Department of Physics, SKIT

Anchor:

- Dr. Jyoti Shukla, Assistant Professor, Department of Electrical Engineering, SKIT

Repertoire:

- Mr. Abhishek Gupta, Associate Professor, Department of Electrical Engineering, SKIT

Paper Presentation Session-1:

1. **Paper ID 12: Real-time Pattern Recognition with Support Vector Machines and Local Binary Patterns**

    - The presentation delved into real-time pattern recognition techniques utilizing Support Vector Machines and Local Binary Patterns, offering insights into applications and performance.

2. **Paper ID 30: Adversarial Attacks and Defenses in Capsule Networks**

    - This critical review examined adversarial challenges and mitigation strategies in Capsule Networks, providing a comprehensive overview of robustness concerns in the field.

3. **Paper ID 103: Analysis of Parameterized Quantum Circuits as Machine Learning Models**

    - The presentation analyzed the potential of parameterized quantum circuits as machine learning models, exploring the intersection of quantum computing and machine learning.

4. **Paper ID 107: Adaptability Scenario of Integrated Augmented-Virtual Reality in Contemporary Metaverse Healthcare System**

    - This paper explored the adaptability scenario of integrated Augmented-Virtual Reality in the contemporary Metaverse healthcare system, addressing potential applications and challenges.

5. **Paper ID 47: A Comparative Study of Various Adiabatic Techniques for Multiplexer**

    - The comparative study investigated various adiabatic techniques for multiplexer circuits, offering insights into efficiency and performance comparisons.

6. **Paper ID 54: Simulation Analysis of Fuzzy Controller for Water Level of Boiler**

    - The presentation focused on simulation analysis of a fuzzy controller for maintaining the water level in boilers, highlighting the applicability of fuzzy logic in control systems.

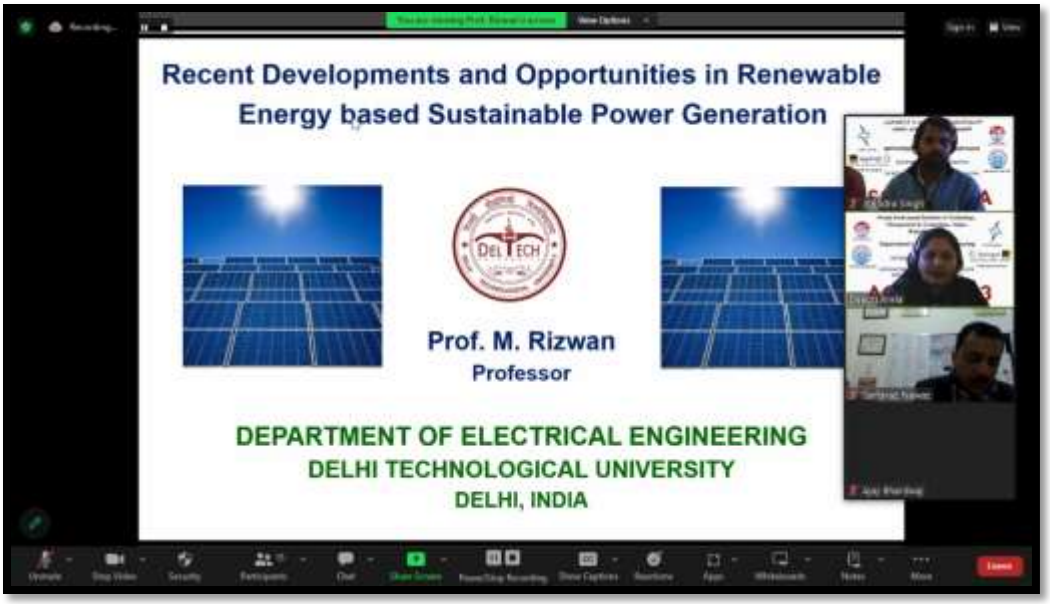
7. **Paper ID 114: Analyzing Crop Yields for the Principal Crops of Rajasthan using Machine Learning and Deep Learning**

    - This paper presented an analysis of crop yields for the principal crops of Rajasthan, employing machine learning and deep learning techniques to derive meaningful insights.

The Paper Presentation Session-1 provided a diverse range of topics, showcasing cutting-edge research and advancements in the field of advanced computing. The presentations, guided by the session chair and coordinators, facilitated meaningful discussions among participants, contributing to the overall success of ACTET-2023.

Prof. Mohammad Rizwan: Contributed expertise from Delhi Technological University, providing perspectives on the integration of advanced computing in various engineering disciplines.

Prof. Mohammad Rizwan, representing Delhi Technological University, shared valuable insights into the integration of advanced computing in various engineering disciplines during his talk on "Recent Developments and Opportunities in Renewable Energy based Sustainable Power Generation."



Glimpses of Key note talk of Dr Md. Rizwan

Key Points:

1. **Introduction to Renewable Energy Developments:** Prof. Rizwan commenced the talk by offering an overview of recent developments in renewable energy. He highlighted the growing significance of sustainable power generation and the role of advancements in technology in shaping the current landscape.

2. **Technological Innovations in Renewable Energy:** The presentation delved into the technological innovations that have transformed the renewable energy sector. Prof. Rizwan discussed breakthroughs in solar, wind, hydro, and other renewable energy sources, emphasizing their impact on sustainable power generation.

3. **Integration of Advanced Computing:** Prof. Rizwan provided insights into how advanced computing technologies are being integrated into various engineering disciplines within the renewable energy sector. He explored the role of computational techniques in optimizing energy production, improving efficiency, and addressing complex challenges.

4. **Case Studies and Success Stories:** The talk included case studies and success stories showcasing real-world applications of advanced computing in renewable energy projects. Prof. Rizwan presented examples illustrating how these technologies contribute to

increased reliability, reduced costs, and enhanced performance in sustainable power generation.

5. **Opportunities for Future Research:** Prof. Rizwan discussed potential opportunities for future research in the field of renewable energy and advanced computing. He encouraged collaboration between academia and industry to explore new avenues, address emerging challenges, and further advance the integration of these technologies.

Conclusion: In conclusion, Prof. Mohammad Rizwan's talk provided a comprehensive overview of recent developments and opportunities in renewable energy-based sustainable power generation. Attendees gained insights into the transformative role of advanced computing in various engineering disciplines within the renewable energy sector.

Paper Presentation Session-2

Session Chair:

- Dr. Md. Rizwan, Professor, Department of Electrical Engineering, DTU, Delhi

Co-Session Chairs:

- Dr. Dhanraj Chitara, Professor, Department of Electrical Engineering, SKIT
- Dr. Jyoti Shukla, Assistant Professor, Department of Electrical Engineering, SKIT
- Dr. Virendra Sangtani, Associate Professor, Department of Electrical Engineering, SKIT

Session Coordinator:

- Dr. Jyoti Shukla, Assistant Professor, Department of Electrical Engineering, SKIT

Anchor:

- Mrs. Deepti Arela, Assistant Professor, Department of Electrical Engineering, SKIT

Repertoire:

- Mrs. Smriti Jain, Associate Professor, Department of Electrical Engineering, SKIT

Paper Presentation Session-2:

1. **Paper ID 96: Optimal Design and Simulation of Large Format Outrunner Motor for EV Application**

- This presentation delved into the optimal design and simulation of large format outrunner motors, focusing on their application in electric vehicles.

2. **Paper ID 40: Control Schemes for Hybrid AC-DC Microgrid**

    - The paper discussed control schemes for hybrid AC-DC microgrids, exploring strategies to enhance the efficiency and reliability of microgrid systems.

3. **Paper ID 104: Modified African Buffalo for Optimal Accommodation of Distributed Energy Resources (DERs) for Annual Energy Loss Minimization in Active Distribution Systems**

    - This paper presented a modified African Buffalo optimization technique for optimal accommodation of Distributed Energy Resources (DERs) in active distribution systems, aiming to minimize annual energy losses.

4. **Paper ID 109: Smart Computing-Based Strategy for Ascertaining Abnormalities in Compensated Power Lines**

    - The presentation focused on a smart computing-based strategy for detecting abnormalities in compensated power lines, contributing to the reliability and safety of power distribution systems.

5. **Paper ID 74: Stochastic Model for Estimation of Aggregated EV Charging Load Demand**

    - This paper introduced a stochastic model for estimating aggregated Electric Vehicle (EV) charging load demand, addressing uncertainties associated with EV charging patterns.

6. **Paper ID 112: Power Transmission Capability Enhancement via HVDC/HVAC Integrated Transmission Line**

    - The presentation discussed power transmission capability enhancement through HVDC/HVAC integrated transmission lines, exploring advancements in high-voltage transmission technologies.

7. **Paper ID 113: A Review of Dynamic Economic Dispatch of Hybrid Microgrid**

    - The paper provided a comprehensive review of dynamic economic dispatch strategies for hybrid microgrids, contributing to the optimization of energy management in microgrid systems.

The Paper Presentation Session-2 showcased a diverse array of topics, featuring research on electric vehicle applications, microgrid control, energy resource optimization, and power transmission advancements. The session, under the guidance of the session chair and coordinators, facilitated engaging discussions and knowledge exchange among participants, contributing to the success of ACTET-2023.

Paper Presentation Session-3

Session Chairs:

- Dr. Shahbaz Ahmed Siddiqui, Professor & Head, Department of Mechatronics Engineering, Manipal University Jaipur
- Dr. Sarfaraz Nawaz, Associate Professor & Head, Department of Electrical Engineering, SKIT

Co-Session Chairs:

- Dr. Bharat Modi, Associate Professor, Department of Electrical Engineering, SKIT
- Dr. Prateek Singhal, Associate Professor, Department of Electrical Engineering, SKIT

Anchor and Session Coordinator:

- Mr. Ajay Bharadwaj, Assistant Professor, Department of Electrical Engineering, SKIT

Repertoire:

- Mr. Abhishek Gupta, Associate Professor, Department of Electrical Engineering, SKIT

Paper Presentation Session-3:

1. **Paper ID 102: Different Electrical Energy Storage Technologies Used for Renewable Energy Integration Applications: A Comprehensive Review**

- This presentation provided a comprehensive review of different electrical energy storage technologies employed for integrating renewable energy, contributing to the understanding of energy storage solutions.

2. **Paper ID 122: Voice Operated Switch**

    - The paper introduced a voice-operated switch, exploring innovative ways to control electronic devices through voice commands.

3. **Paper ID 59: Land Use Change in Selected Districts of Rajasthan Using GIS**

    - The presentation focused on land use change analysis in selected districts of Rajasthan using Geographic Information System (GIS), offering insights into environmental and urban planning applications.

4. **Paper ID 106: Green Hydrogen: Sustainable Mobility Industry**

    - This paper explored the utilization of green hydrogen in the sustainable mobility industry, providing a perspective on clean energy alternatives.

5. **Paper ID 110: Energizing the Future - Advancing Next-Gen Wireless Networks through Simultaneous Wireless Information and Power Transfer with Cooperative Relaying - A Comprehensive Review**

    - The presentation provided a comprehensive review of advancing next-generation wireless networks through simultaneous wireless information and power transfer with cooperative relaying.

6. **Paper ID 115: Automatic Plant Moisture Detection and Watering System using Arduino**

    - This paper showcased an automatic plant moisture detection and watering system using Arduino, demonstrating the application of IoT in agriculture.

7. **Paper ID 117: Portable 3D Printer**

- The presentation introduced a portable 3D printer, showcasing advancements in additive manufacturing technology.

8. **Paper ID 118: IoT-Based Health Monitoring System**

    - The paper discussed an IoT-based health monitoring system, highlighting the role of technology in healthcare applications.

9. **Paper ID 119: Solar Wireless Electric Vehicle Charging System**

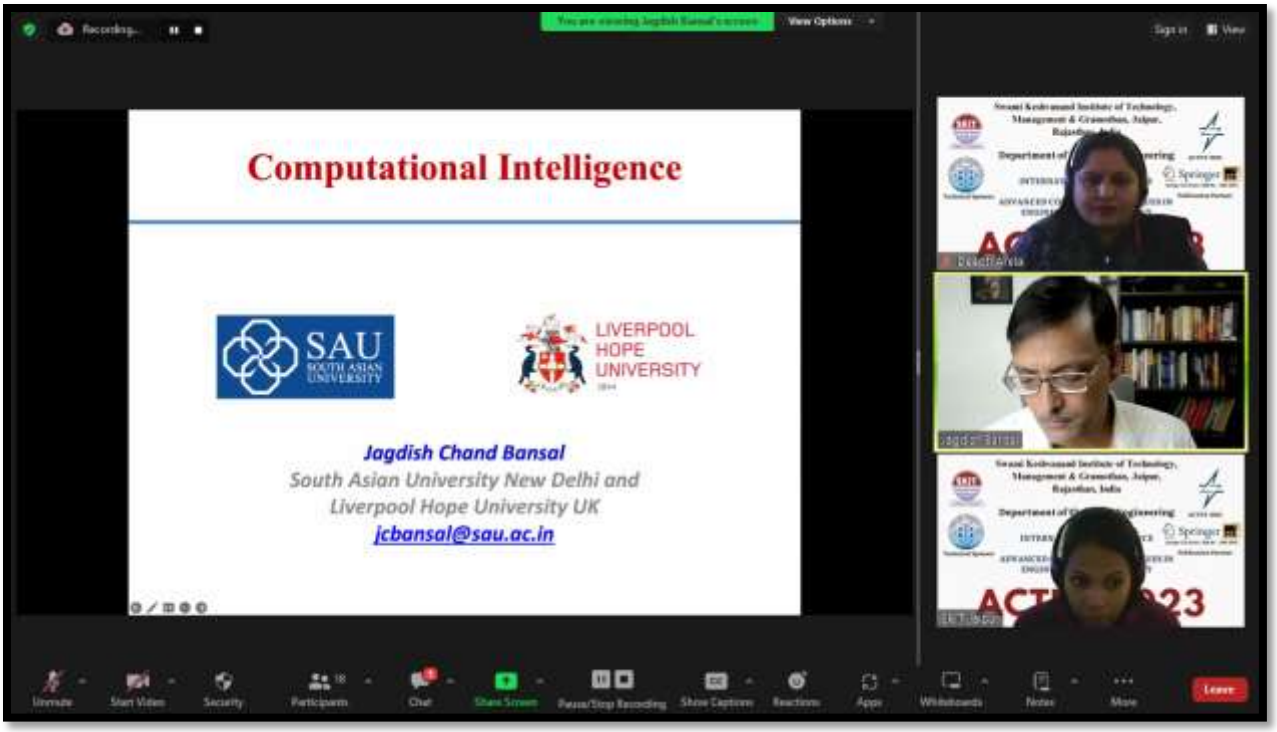
    - This paper presented a solar wireless electric vehicle charging system, addressing sustainable solutions for electric vehicle infrastructure.

10. **Paper ID 121: Solar Charging Station for Electric Vehicles**

    - The presentation explored the design and implementation of a solar charging station for electric vehicles, contributing to renewable energy solutions in the transportation sector.

The Paper Presentation Session-3 covered a wide range of topics, showcasing innovative solutions and research findings in the field of advanced computing, engineering, and technology. The session, guided by experienced chairs and coordinators, facilitated meaningful discussions and knowledge dissemination, enhancing the overall success of ACTET-2023.

Dr. Jagdish Chand Bansal: Presented insights into innovative computing techniques and their impact on engineering and technology from South Asian University, Delhi. Dr. Jagdish Chand Bansal, an Associate Professor from South Asian University, Delhi, shared profound insights into innovative computing techniques during his talk on "The Rise of Swarm Intelligence."



Glimpses of Key note talk of Dr J.C. Bansal

Key Points:

1. **Introduction to Swarm Intelligence:** Dr. Bansal initiated the talk by introducing the concept of swarm intelligence. He provided a comprehensive understanding of how this innovative computing technique draws inspiration from collective behaviors observed in nature, such as the flocking of birds or the movement of ant colonies.

2. **Applications in Engineering and Technology:** The presentation delved into the diverse applications of swarm intelligence in various engineering and technological domains. Dr. Bansal highlighted instances where this collective and decentralized approach has been successfully implemented, leading to advancements in optimization, problem-solving, and decision-making.

3. **Algorithms and Techniques:** Dr. Bansal explored the algorithms and techniques underpinning swarm intelligence. He discussed how these techniques, inspired by nature, are applied to solve complex problems in engineering and technology. Examples included particle swarm optimization, ant colony optimization, and bee algorithms.

4. **Real-world Case Studies:** The talk included real-world case studies illustrating the practical applications of swarm intelligence. Dr. Bansal presented instances where innovative computing techniques have led to breakthroughs in fields such as robotics, optimization of industrial processes, and network routing, showcasing the transformative impact of swarm intelligence.

5. **Challenges and Future Directions:** Dr. Bansal addressed challenges associated with the implementation of swarm intelligence and discussed potential future directions for research and development in this rapidly evolving field. He emphasized the need for addressing scalability, adaptability, and ethical considerations.

Conclusion: In conclusion, Dr. Jagdish Chand Bansal's talk on "The Rise of Swarm Intelligence" provided a compelling exploration of innovative computing techniques and their profound impact on engineering and technology. Attendees gained valuable insights into the potential applications, algorithms, and challenges associated with swarm intelligence.

Paper Presentation Session-4

Session Chair:

- Dr. Jagdish Bansal, Associate Professor, South Asian University, Delhi

Co-Session Chairs:

- Dr. Rukhsar Zafar, Associate Professor, Department of Electronics and Communication Engineering, SKIT
- Dr. Ankit Agarwal, Associate Professor, Department of Electronics and Communication Engineering, SKIT
- Dr. Suman Sharma, Associate Professor, Department of Electrical Engineering, SKIT (Also, Session Coordinator)

Anchor:

- Mrs. Deepti Arela, Assistant Professor, Department of Electrical Engineering, SKIT

Repertoire:

- Dr. Sanjeev Kumar, Associate Professor, Department of Electrical Engineering, SKIT

Paper Presentation Session-4:

1. **Paper ID 52: Design of Low Power and Energy Efficient Write Driver with Bitline Leakage Compensation for SRAM**

    - This paper presented the design of a low-power and energy-efficient write driver with bitline leakage compensation for Static Random-Access Memory (SRAM) applications.

2. **Paper ID 116: Experimental Exploring the Charging and Discharging Dynamics of a Latent Thermal Energy Storage System Utilizing Triplex Tube Heat Exchanger**

    - The presentation focused on experimental exploration of the charging and discharging dynamics of a latent thermal energy storage system using a triplex tube heat exchanger.

3. **Paper ID 65: An Optimal Design of an MLFNN Coupled with Genetic Algorithm for Prediction of MIG-CO2 Welding Process**

    - This paper discussed the optimal design of a Multilayer Feedforward Neural Network (MLFNN) coupled with a genetic algorithm for the prediction of Metal Inert Gas (MIG) - Carbon Dioxide (CO2) welding process.

4. **Paper ID 58: Review of Synergistic Integration of Microstrip Patch Antennas in Biomedical and Artificial Intelligence Domains**

    - The presentation provided a review of the synergistic integration of microstrip patch antennas in biomedical and artificial intelligence domains, exploring their applications.

5. **Paper ID 108: An Investigation on the Application of Advanced Computing Techniques for Conventional Machining with Metal Matrix Composite Materials**

    - This paper investigated the application of advanced computing techniques for conventional machining with metal matrix composite materials, contributing to manufacturing processes.

6. **Paper ID 120: Profit Maximization of Generation Company Using Modified Grey Wolf Optimizer with Monte Carlo Simulation Approach**

    - The presentation discussed profit maximization for a generation company using a modified Grey Wolf Optimizer with a Monte Carlo simulation approach.

7. **Paper ID 123: Empowering the Energy Transition: Unveiling the Crucial Role of Energy Storage in Sustainable Grids**

    - This paper empowered the energy transition by unveiling the crucial role of energy storage in sustainable grids, emphasizing its importance in the evolving energy landscape.

The Paper Presentation Session-4 featured diverse topics, showcasing research contributions in areas ranging from memory design and thermal energy storage to neural network optimization and energy transition. The session, guided by experienced chairs and coordinators, fostered insightful discussions and knowledge dissemination, enriching the overall success of ACTET-2023.

Conference Statistics:

- Papers Submitted: 126
- Papers Accepted and Presented: 31
- Number of Sessions: 4
- Papers to be Published in Springer CCIS Book Series: 7

Highlights:

Diverse Sessions: The conference featured four thematic sessions, providing a comprehensive overview of topics in advanced computing.

Quality Papers: Rigorous review processes ensured the acceptance of 31 high-quality papers, reflecting the depth and relevance of the presented research.

Publication Opportunities: Seven outstanding papers have been selected for publication in the prestigious Springer CCIS Book Series, contributing to the dissemination of valuable research outcomes.

Conclusion:

ACTET-2023 successfully fostered collaboration among academia, industry professionals, and

researchers. The keynote speakers, paper presenters, and attendees collectively contributed to the conference's success, creating an intellectually stimulating event. Gratitude is extended to the keynote speakers for their insightful addresses, authors for valuable contributions, and all participants for making ACTET-2023 a memorable and productive conference. Looking forward to future editions, anticipation is high for continued advancements and breakthroughs in the dynamic field of advanced computing.