Annual Progress Report 2023
(March 2023-March 2024)
IEEE IAS-PES SB Chapter TIET Patiala, India

Executive Committee 2023-2024 (till March)		
Dr. Rajesh M. Pindoriya *Founding Advisor*	Mr. Ajay Singh *Chairperson*	Mr. Yadvendra Singh *Vice-Chairperson*
Ms. Ritika Agrawal *Secretary*	Mr. Yashwanth *Treasurer*	Mr. Aman Jain *Web Developer*
Executive Committee 2024-2025 (till March)		
Dr. Rajesh M. Pindoriya *Founding Advisor*	Mr. Aryaman Mohan *Chairperson*	Mr. Ajay Singh *Vice-Chairperson*
Ms. Vikash Ranjan *Secretary*	Mr. Ajay Kushwaha *Treasurer*	Mr. Shaswat Kshatriya *Web Developer*

Brief Background about IEEE IAS-PES SB Chapter TIET, Patiala: IEEE Industry Applications Society-Power & Energy Society Student Branch Chapter- Thapar Institute of Engineering and Technology, Patiala, Punjab, India (IEEE IAS-PES SB Chapter-TIET Patiala, India, SBC01861B), has been an active and vibrant chapter since its formation on 2nd February 2023. Having this SB chapter in the Northern India Institute, Thapar Institute of Engineering and Technology, it has faced and overcome many challenges in the organization of the events. Perhaps, these challenges have made the SB chapter stronger that apart from conducting its own events, it is continuously striking its efforts in the sponsoring of other Technical and non-technical events hosted in the Institute. Moreover, the IEEE IAS SB Chapter has been instrumental in forming more student branches in the surrounding institute of Punjab, which never knew about IEEE. It has recently made efforts in the formation of the IEEE Power Electronics Society (PELS) SB Chapter TIET, Patiala.

This is the first time the IEEE IAS-PES SB Chapter has applied for the IEEE IAS CMD award. The reason was to have an active student representation in the chapter and to encourage undergraduate and graduate students to understand the effectiveness of such a technical society in their curriculum. The membership has increased subsequently, and the number ranges between 35 and 50.

Student Branch Chapter Events: The SB chapter *(*IEEE IAS-PES SB Chapter-TIET Patiala, India, (SBC01861B*)* has conducted many events in the past year. The events range from ***Technical Activities*** to ***Administrative Activities*** and end covering the ***Outreach Activities***.

Name	Dr. Rajesh M. Pindoriya
Email:	rajeshpindoriya@ieee.org
Contact Number:	+91-7018852624
Affiliation:	Thapar Institute of Engineering & Technology, Patiala, India
IEEE Membership Number:	90994188
IEEE Membership Grade:	IEEE Senior Member
IEEE Section:	Delhi Section, India
Length of Service of Nominee:	10 Years

Dr. Rajesh M. Pindoriya (GM'14 - M'20 – SM'22) received a Ph.D. in Power Electronics and Electrical Drives from the Indian Institute of Technology Mandi (IIT Mandi), India, in 2020. He works as an Assistant Professor in the Department of Electrical and Instrumentation Engineering at Thapar Institute of Engineering & Technology (TIET), India. He is working on Power Electronics and Drive and EV. Dr. Pindoriya is an IEEE IAS Chapter Area Chair of Region 10, East and South Asia. He is a founding advisor of IEEE IEEE IAS-PES SB Chapter TIET, Patiala, India.

IEEE Professional Experiences

- IEEE IAS Chapter Area Chair, R10 East and South Asia (2023-till now)
- Founding Advisor of IEEE IAS-PES SB Chapter TIET Patiala (2023-till now)
- Founding Advisor of IEEE PELS SB Chapter TIET Patiala (2023-till now)
- Member of IEEE PES YP Professional and Educational Activities (2023- till now)
- Member of IEEE Smart Village South Asia Working Group (2022-till now)
- Member of (IAS-PES Young Professional), IEEE Delhi Section, India (2021- till now)
- Member (IEEE Membership Development), IEEE Delhi Section, India (2021- till now)

- Member of IEEE IAS Electric Machine Committee (2020-till now)
- IEEE PELS Young Professional Executive At-Large Member (2020-till now)
- IEEE PELS Students Activity Committee Member (2019-Till now)
- Mentor of IEEE Student Branch (SB) Chapter IIT Mandi, India (Aug. 2020-till now)
- Founding Chairman of IEEE SIGHT SB Chapter, IIT Mandi, India, (Sept. 2020-Mar. 2021)
- Founding Chairman of IEEE PELS SB Chapter, IIT Mandi, India, (Jul. 2019-Jul. 2020)
- Chairman of the IEEE IAS SB Chapter, IIT Mandi, India, (Apr. 2019- Jul. 2020)

IEEE IAS Volunteer Contribution:

- Dr. Pindoriya has made immense contributions to establishing the IAS-PES SB Chapter at TIET, Patiala, India, on 2nd Feb 2023.
- He conducted numerous technical talks, seminars, and workshops in collaboration with the IEEE IAS-PES Delhi Section. The chapter experienced remarkable membership growth and now boasts over 50 members in the IEEE IAS PES society.
- He trained many undergraduate and postgraduate students to become dedicated volunteers and future leaders, helping to advance IEEE, IAS, PELS, and PES to the next level.
- Dr. Pindoriya's efforts have helped the IEEE IAS-PES Student Branch support nearby Punjab, India colleges to establish IEEE Student Branches and IAS societies. His initiatives have led to the IEEE IAS PES Student Branch Chapter being recognized at the section and regional levels.
- He was crucial in founding the Power Electronics Society (PELS) as its Founding Advisor.
- Over the years, he has served as the founding advisor of IAS-PES SB Chapter TIET Patiala, Punjab, India. I am pleased to share that the IEEE IAS-PES Student Branch Chapter at TIET Patiala received first place globally in the Global Mentorship Program (2023) from IEEE IAS CMD, US.
- I am also pleased to share that the IEEE IAS PES SB Chapter at TIET Patiala received a USD 7,000 grant from the IEEE IAS Society to organize the IEEE IAS Young Professional Meet.
- Due to his motivation and sustained efforts, Student Branch has won the following awards and Grants:
    1. First Rank in Global Mentorship Program 2023
- Thanks to Dr. Pindoriya's sustained efforts, the Student Branch has received several awards, including:
    1. A travel grant from IEEE PES to attend and participate in the ***'IEEE PES India in-person meeting 2023*** for Indian PES SBC Leaders in Gwalior, India (Mr. Yadvendra Singh).
    2. A travel grant from ***the IEEE IAS Annual Meeting Travel Grant Program 2023*** to attend the 'IEEE IAS Annual Meeting 2023' in Nashville, Tennessee, USA (Mr. Yadvendra Singh and Ms. Ritika).

Dr. Pindoriya organized a variety of technical, non-technical, administrative, and outreach activities for the IEEE IAS PES Student Branch Chapter at TIET Patiala. Below is a list of the IEEE activities organized by Dr. Pindoriya at the IEEE IAS PES Student Branch Chapter at TIET Patiala. A list of the organized events is given below.

A. List of Technical Activities

Event 1: IEEE PELS Distinguished Lecture by Prof. Sanjib Kumar Panda, National University of Singapore (NUS), Singapore

The IEEE Student Branch of Thapar Institute of Engineering and Technology (TIET), Patiala, in collaboration with the IEEE IAS-PES Student Branch Chapter TIET, IEEE PELS-IES, PES-IAS Chapter Delhi Section, India, organized an IEEE PELS DL on February 9, 2023. The topic of the event was "***Single-phase inverter control techniques for interfacing renewable energy sources with micro-grid–parallel/series connected inverter topologies***" and it was presented by Prof. Sanjib Kumar Panda from the National University of Singapore, Singapore. Prof. Panda visited the TIET campus from February 8-11, 2023, during which three sessions were organized. The first session was the IEEE PELS DL, the second was a departmental lab visit, and the third was an interaction with faculty members of the Department of Electrical and Instrumentation Engineering.

Date: 9th February 2023
Venue: Main Auditorium, TIET, Patiala
Number of attendees: 110 (with 35 IEEE members and 75 non-IEEE members)

Session I: IEEE PELS DL on 9th February 2023 at 10:30 AM (IST)

Prof. Panda's visit to TIET, Patiala was facilitated by Prof. R. S. Kaler (Senior Professor and Dean Faculty Affairs, TIET, Patiala), Dr. Manoj Badoni, Dr. Rajesh M. Pindoriya, and several other senior faculty members of the Electrical and Instrumentation Engineering Department (EIED). Upon arrival, Prof. Kaler welcomed Prof. Panda and provided an overview of TIET and the EIED. Following this, Prof. Panda delivered his PELS DL in the main auditorium of the TIET campus. ***A total of 110 participants attended the event, with 35 IEEE members and 75 non-IEEE members.***

During the presentation, Prof. Panda began by introducing the IEEE PELS society and its current and past presidents, including Prof. Bradley Lehman, Prof. Liuchen Chang, and Prof. Frede Blaabjerg, and their contributions to the IEEE society and the IEEE Power Electronics Society. He also discussed the benefits of IEEE membership, such as access to the distinguished lecture program, education and student activities, standards, and networking opportunities. Prof. Panda encouraged students and faculty to join IEEE PELS and provided a promotion code for membership.

Following the introduction, Prof. Panda began his technical presentation on the topic of single-phase inverter control techniques for interfacing renewable energy sources with micro-grid–parallel/series connected inverter topologies. He started by discussing responsive grids for future energy systems, focusing on energy system intelligence and management, energy system design and optimization, and power distribution systems and electronics. Prof.

Panda then presented the evolving power grid, its challenges, and opportunities, emphasizing the need for a paradigm shift in the grid's structure and complexity for economic and efficient operation of microgrids. He further discussed the electricity consumption in Singapore and the implementation of smart grid and smart buildings, as well as the open electricity market in Singapore. Prof. Panda also delved into power converters for microgrid applications, typical multi-bus microgrid systems, and the main concerns of micro/nano-grid research areas.

The session was concluded with a summary of the advantages of the proposed single-phase p-q theory-based approach for easy control and the benefits of the LF-based controller, which provides better tracking and PFC operation. Prof. Sanjay Jain and Dr. Manoj Badoni presented Prof. Panda with a memento as a token of gratitude for his participation in the technical session.


IEEE Power Electronics Society (PELS)


IEEE PELS DL Presentation at
Thapar Institute of Engineering & Technology (TIET),
Patiala, Punjab, PELS Delhi Chapter, India
09th February 2023
Renewable Energy Source Integration to Micro-grids


ANMOL RANJAN


EXIT

Session II: Departmental Laboratory Visit on 10th February 2023 at 10:30 AM (IST)

The following day, Prof. Panda visited several departmental laboratories, including the High Voltage, Power System Protection, Electrical Machines, and Power Electronics labs. During the visit, both undergraduate students and Ph.D. scholars engaged with him and asked for his insights on improving their learning styles and research practices in India. They also

inquired about the differences in teaching and learning styles between NUS and TIET, Patiala.

Date: 10th February 2023
Venue: Department of Electrical and Instrumentation Engineering, TIET, Patiala
Number of attendees: 55 (with 25 IEEE members and 30 non-IEEE members)

Prof. Panda provided thorough and insightful responses to all of their questions, drawing on his experiences teaching and conducting research at NUS and the types of lab facilities available there. The lab visit lasted for approximately two hours.






Session III: Interaction with faculty members and Ph.D. research scholars for research collaboration with NUS on 10th February 2023 at 12:30 PM (IST)

The event was hosted by Dr. Manoj Badoni and Dr. Rajesh M. Pindoriya, aimed at providing a deeper insight into the research pursued by TIET, Patiala scholars. The interaction session was attended by faculty members and research scholars from different laboratories, specializing in Power Electronics, Electrical Drives, and Power Systems. Prof. Panda patiently answered the questions raised by the scholars. When asked about the difference between being a good researcher and a good teacher, he explained that although both require certain skills, they are different. Teaching involves more interaction between the instructor and students and a greater expectation that the audience learns something. He emphasized the importance of being confident while delivering a lecture and ensuring that the concept is well understood by the audience.

A discussion on the industry's collaborated educational system was real motivation for the students to continue their research. He shared his expertise and experience in teaching and research, offering valuable insights for improving the quality of research and teaching at TIET. The discussion also included the implementation of industry-collaborated educational systems to motivate students towards pursuing research. Prof. Panda also briefly shared his life experience and emphasized the importance of staying updated with the latest technologies across the globe. In addition, he motivated TIET's research scholars to apply for the post-doctoral program at NUS.

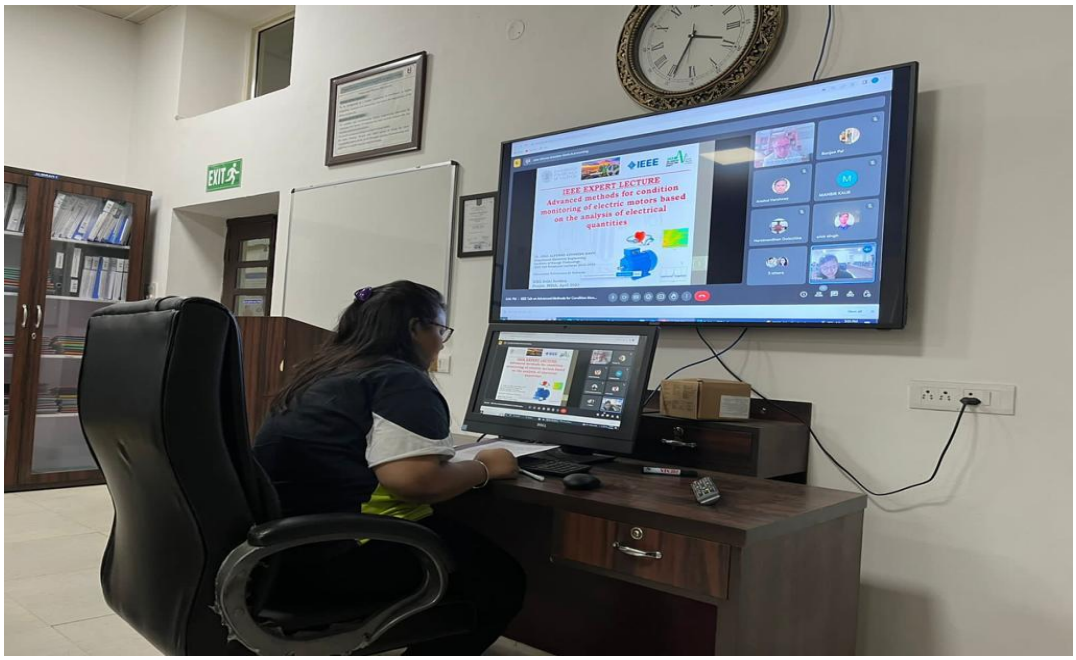
Event 2: IEEE Expert Lecture by Prof. Jose Antonino Daviu, UPV, Spain

The IEEE Student Branch of Thapar Institute of Engineering and Technology (TIET), Patiala, in collaboration with the IEEE IAS-PES Student Branch Chapter TIET, IEEE PELS-IES, PES-IAS Chapter Delhi Section, India, organized a virtual lecture on April 25, 2023. The event topic was *"**Advanced Methods for Condition Monitoring of Electric Motors Based on the Analysis of Electrical Quantities,**"* Prof. Jose Antonino Daviu presented it from the University Polytechnical de València, Valencia, Spain.

Time: 03:30 PM (IST)
Date: 25th April 2023
Venue: C104, Department of Electrical and Instrumentation Engineering, TIET Patiala.
Google Meet Video call link: https://meet.google.com/ikc-txym-xhd

Number of attendees: 25 (with 15 IEEE members and 10 non-IEEE members)

The lecture explains that the Condition monitoring of electric motors has gained increasing attention in the industry over recent years. Its advantages versus the tracking of other quantities (non-invasive nature, remote monitoring of the motor condition, simplicity, broad fault coverage) make it an exciting option in predictive maintenance programs of industrial electric motors. In this context, recent technologies relying on the analysis of different electrical quantities (currents, fluxes) under the transient operation of the engine have been proposed over recent years. These modern technologies significantly improve the performance of classical methods and open new paths for research in the area. This lecture is intended to explain the foundations of these new technologies based on transient analysis of electrical quantities, emphasizing their advantages versus the classical methods (such as MCSA). Different case stories of industrial motors of different typologies in which these new technologies have yielded successful results will be presented. Total number of attendees: **25 members** (both online and offline mode).



Event 3: IEEE Awareness of Renewable Energy Source for School Kids

On the Occasion of IEEE PES Day, the IEEE IAS-PES Student Branch Chapter Thapar Institute of Engineering and Technology (TIET), Patiala, in collaboration with Pratigya Society TIET, IEEE PELS-IES, PES-IAS Chapter Delhi Section, India, IEEE Students (SPAx) organized an event on 29th April 2023 at TIET, Patiala, India. The name of the event was "*Awareness of Renewable Energy Sources for School Kids*". The event was held at TIET and was attended by more than 50 students (Classes 1 to 4) from nearby schools. The event began with a presentation by Dr. Rajesh M Pindoriya (IEEE IAS Chapter Area Chair, R10 East and South Asia, and founding advisor IEEE IAS-PES Student Branch Chapter, TIET), on renewable energy sources, including solar, wind, hydro, geothermal, and biomass. He explained the benefits of using renewable energy sources and how they can help reduce the carbon footprint of our planet. The students were shown various videos and pictures related to renewable energy sources, which helped them understand the concept better.

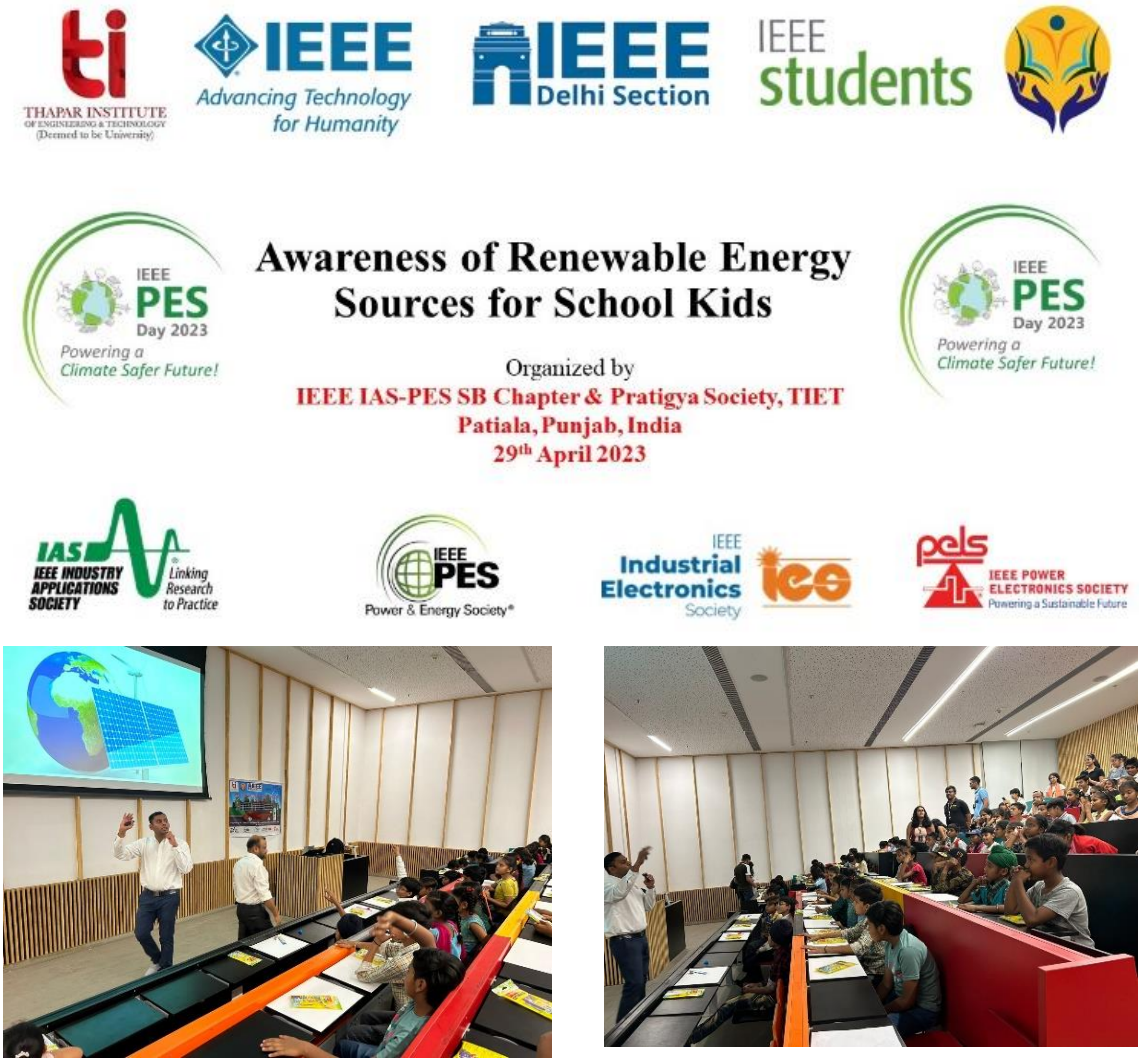


Fig. 1. Presentation on renewable energy sources presented by Dr. Rajesh M. Pindoriya (Advisor).

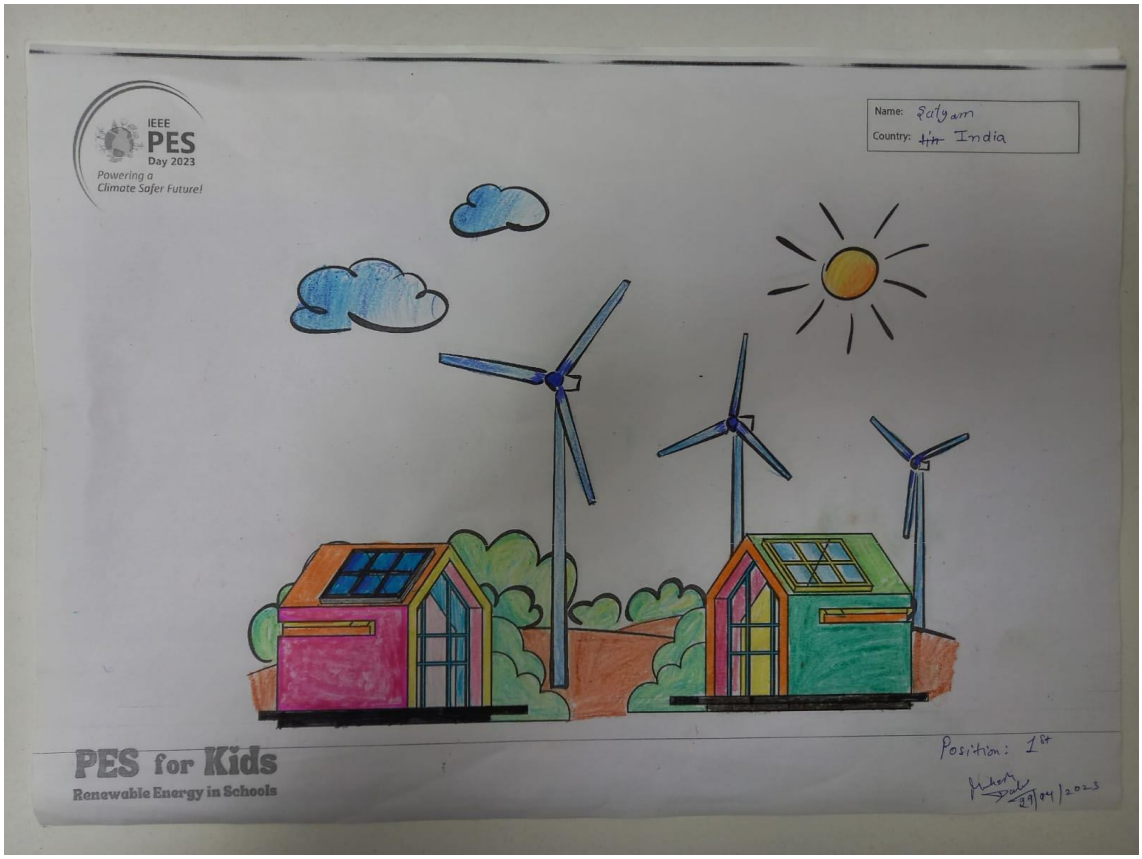
After the presentation, an exciting colouring competition was organized for the students. Each student was provided with a colouring box and a sheet that had a drawing related

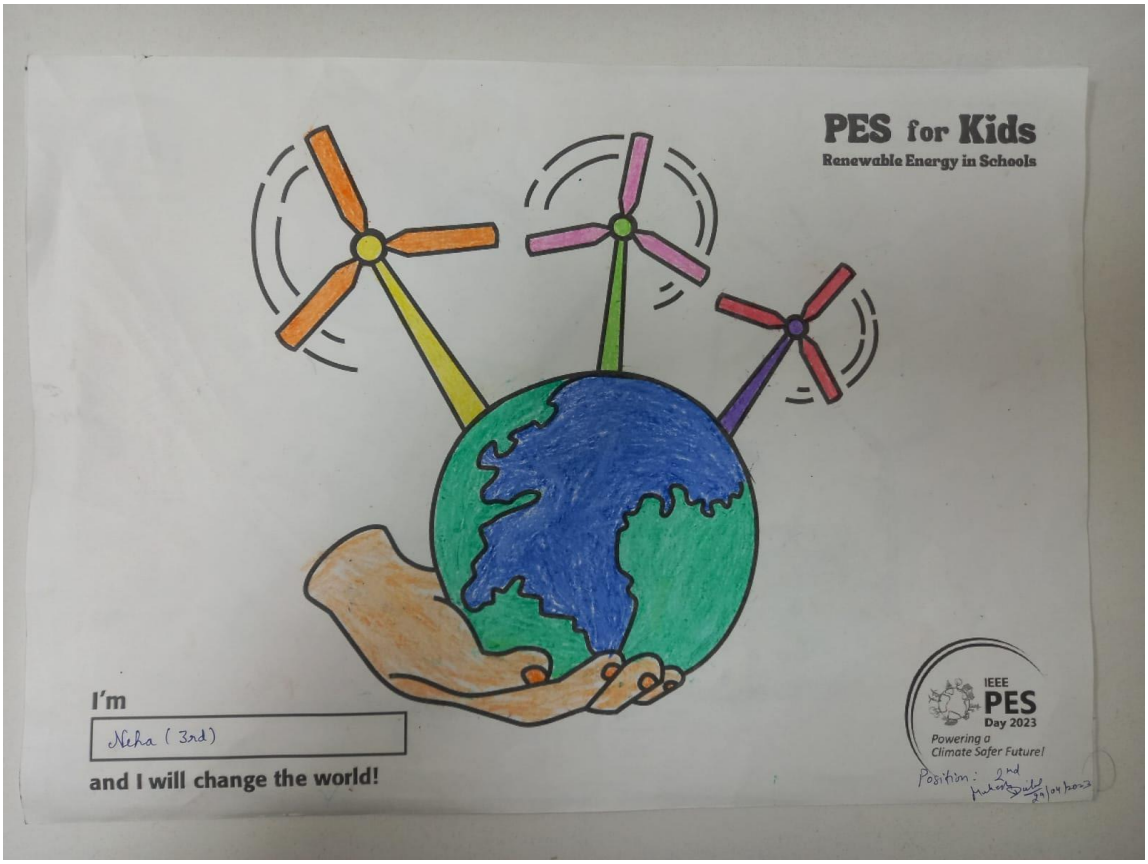
to renewable energy printed on it. The students were encouraged to use their creativity and imagination to colour the picture in a way that showcased the importance of renewable energy sources. The competition was a fun way to engage the students and reinforce the concepts they learned during the presentation.

After the engaging activities and learning sessions, the students were treated to some delicious refreshments. They were provided with a variety of snacks and beverages to recharge their energy and enjoy a little break. It was a great opportunity for the students to mingle with each other and discuss the new knowledge they gained about renewable energy sources. The refreshments added to the overall experience of the event and left the students feeling refreshed and satisfied.

Finally, the event concluded with a prize distribution ceremony where the winners of the competition were announced. The top three winners were awarded with a memorable momentous, a certificate, and a school bag as a token of appreciation for their efforts and outstanding performance. The students were thrilled to receive these awards and it encouraged them to continue learning about renewable energy sources and their significance for our planet. The prize distribution ceremony was a perfect ending to a fun and informative event that left a positive impact on the students and their understanding of renewable energy sources.

Fig. 2. Winners receiving their prizes from Dr. Rajesh M. Pindoriya and Dr. Mukesh Dalal





Overall, the event was a huge success, and the students thoroughly enjoyed learning about renewable energy sources. The event helped raise awareness among the students about

the importance of renewable energy sources and how they can play a significant role in reducing the carbon footprint of our planet.

Event 4: IEEE Students Mentorship Program: Career Counseling for School Students

On the Occasion of PES Day, The IEEE IAS-PES Student Branch Chapter Thapar Institute of Engineering and Technology (TIET), Patiala, in collaboration with Pratigya Society TIET, IEEE PELS-IES, PES-IAS Chapter Delhi Section, India, IEEE Students (SPAx) organized an event on 29th April 2023. The name of the event was "Students Mentorship Program: Career Counselling for School Students". The event was held at TIET and was attended by more than 30 students (Classes 10th to 12th), with ten 12th Passing out students from nearby schools. The event began with an introduction by Dr. Rajesh M Pindoriya (IEEE IAS Chapter Area Chair, R10 East and South Asia, and founding advisor IEEE IAS-PES Student Branch Chapter, TIET), who highlighted the importance of career counselling in helping students make informed decisions about their future. This was followed by a brief presentation by Yadvendra Singh (Research Scholar &Vice-Chairperson of the IEEE Student Branch) on the various career options available to students and the skills required to excel in them.

During the presentation, a notebook and pen are distributed to students. Yadvendra Singh also tells students about the field after the 12th and the qualification procedure for NEET, JEE exams, and many other exams. The students were then divided into groups according to their classes and assigned mentors, who provided individualized guidance based on their interests, aptitudes, and career aspirations.

The mentors discussed various career options with the students and helped them understand each field's educational and professional requirements. They also provided valuable insights into the job market and the skills required to succeed in different professions. The students were encouraged to ask questions and seek clarification from the mentors. The mentors also guided various aspects of career planning, including goal setting, developing a career roadmap, and preparing for interviews and job applications.

The program concluded with a feedback session, where the students expressed gratitude towards the mentors for their valuable guidance. Dr. Ashish Kumar Gupta (President, Pratigya Society, TIET) also thanked the IEEE Student Branch Chapter, TIET & Dr. Rajesh M Pindoriya (Advisor IEEE Student Branch Chapter, TIET), for their support in organizing the event and emphasized the need for such programs to be held regularly to help students make informed career choices.

Overall, the Student Mentorship Program was a resounding success, providing valuable guidance and support to the school students in their career-planning journey & Participation Certificated given to all the Participates.

Students Mentorship Program: Career Counselling for School Students

Organized by

IEEE IAS-PES SB Chapter & Pratigya Society, TIET
Patiala, Punjab, India
29th April 2023

Fig 1: Presentation delivered by Yadvendra Singh (Research Scholar &Vice-Chairperson of the IEEE IAS-PES Student Branch Chapter TIET)

Fig 2: A Notebook and Pen are distributed to students during the presentation.

Fig 3: Closing Session Picture.

Event 5: IEEE A Drawing Competition on Renewable Energy Sources for School Kids

On the Occasion of PES Day, the IEEE IAS-PES Student Branch Chapter Thapar Institute of Engineering and Technology (TIET), Patiala, in collaboration with Pratigya Society TIET, IEEE PELS-IES, PES-IAS Chapter Delhi Section, India, IEEE Students (SPAx) organized an event on 29th April 2023 at TIET, Patiala, India. The name of the event was "*A Drawing Competition on Renewable Energy Sources for School Kids*". The event was held at TIET and was attended by more than 60 students (Classes 5 to 9) from nearby schools. The event began with a presentation by Dr. Rajesh M Pindoriya (IEEE IAS Chapter Area Chair, R10 East and South Asia, and founding advisor IEEE IAS-PES Student Branch Chapter, TIET), on renewable energy sources, including solar, wind, hydro, geothermal, and biomass. He explained the benefits of using renewable energy sources and how they can help reduce the carbon footprint of our planet. The students were shown various videos and pictures related to renewable energy sources, which helped them understand the concept better.

Following the presentation, an exhilarating drawing competition was arranged for the students, wherein each participant was equipped with a coloring kit and a sheet depicting a renewable energy-related drawing. The students were urged to showcase the significance of renewable energy sources by coloring the picture using their ingenuity and imagination. This competition served as an enjoyable method of engaging the students and reinforcing the concepts learned during the presentation.

After participating in the informative sessions and engaging activities, the students were treated to a delectable refreshment break. They were presented with a wide range of snacks and beverages to replenish their energy and unwind. The refreshment break provided an excellent opportunity for the students to socialize and converse about the knowledge they acquired regarding renewable energy sources. The refreshments augmented the overall experience of the event, leaving the students feeling rejuvenated and satisfied.

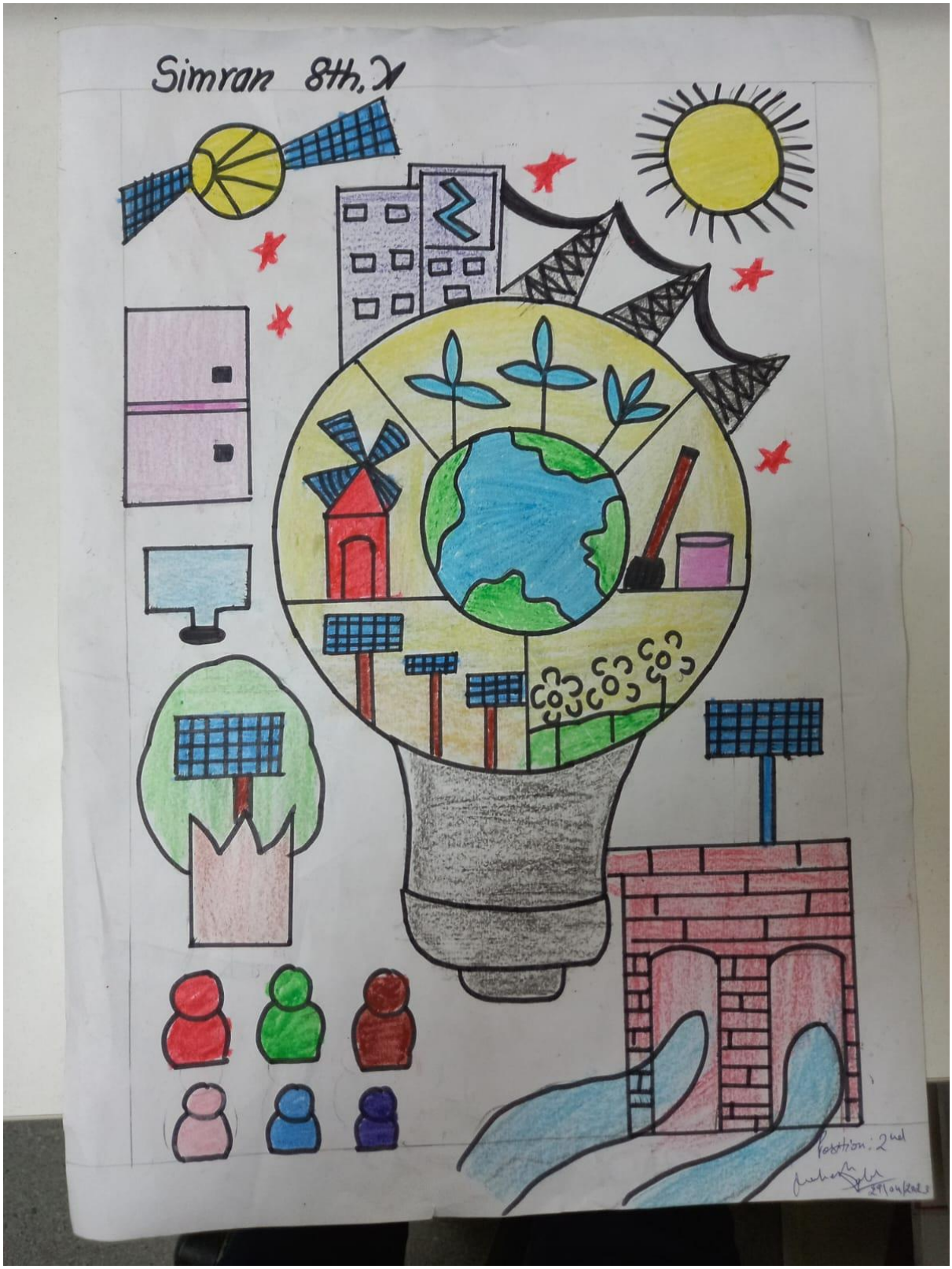
Finally, the event culminated with a prize distribution ceremony, wherein the winners of the drawing competition were announced. The top three winners were bestowed with a memorable trophy, a certificate, and a school bag as a token of appreciation for their exceptional performance and efforts. The students were overjoyed to receive these awards, which served as an inspiration for them to continue learning about renewable energy sources and their importance for our planet. The prize distribution ceremony was a fitting end to a delightful and informative event that positively impacted the students' understanding of renewable energy sources.

A Drawing Competition on Renewable Energy Sources for School Kids

Organized by

IEEE IAS-PES SB Chapter & Pratigya Society, TIET
Patiala, Punjab, India
29th April 2023


IEEE
Delhi Section
IEEE
students
Awareness of Renewable Energy Sources for School Kids
Organize by
IEEE IAS-PES SB Chapter TIET,
& Pratigya Society, TIET
Patiala, Punjab, India
29th April 2023
A Drawing Competition on Renewable Energy Sources for School Kids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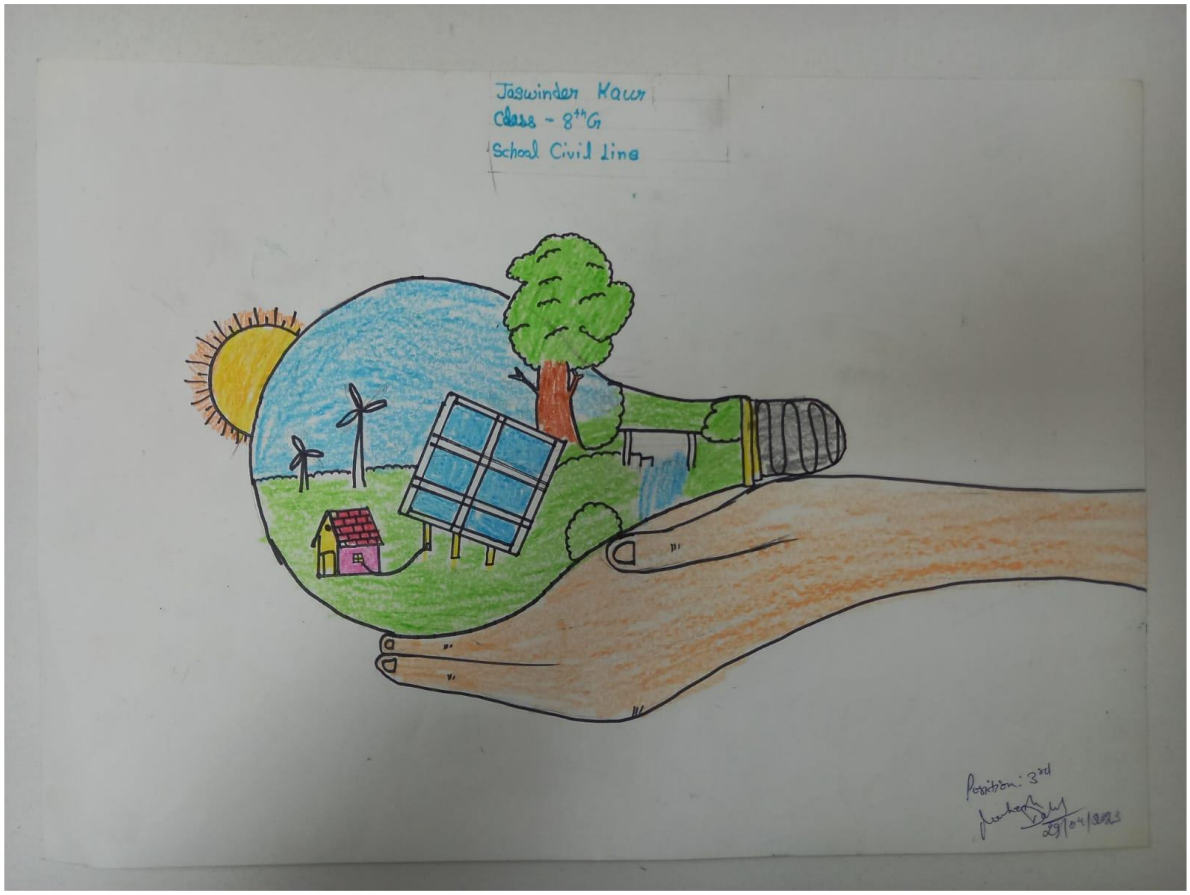


In summary, the event was an enormous triumph, and the students relished discovering the nuances of renewable energy sources. The event significantly contributed to raising awareness among the students about the crucial role of renewable energy sources in diminishing our planet's carbon footprint.

Event 6: IEEE Technical Talk on Solid State Transformers for Distributed Energy Applications, presented by Dr. Harish S. Krishnamoorthy

The IEEE Technical Talk on Solid State Transformers for Distributed Energy Applications, presented by Dr. Harish S. Krishnamoorthy, was held at C104, DEIE, TIET, Punjab on [Insert Date]. The event aimed to explore the latest advancements in solid-state transformer technology and its potential applications in distributed energy systems.

Date: 30th June 2023
Venue: Hybrid mode at C-104, EIED, TIET Patiala
Google Meet Video call link: https://meet.google.com/hsf-xjbf-nkm?hs=122&authuser=0

Dr. Krishnamoorthy commenced the presentation by providing an overview of traditional transformers and their limitations in modern energy systems. He emphasized the importance of solid-state transformers (SSTs) in addressing these limitations and enabling efficient, flexible, and resilient energy distribution. Throughout the talk, Dr.

Krishnamoorthy delved into the fundamental principles of SSTs, including their topology, operation, and key components such as power electronic converters and high-frequency transformers. He illustrated how SSTs offer advantages such as higher efficiency, lower weight and size, enhanced controllability, and improved fault tolerance compared to conventional transformers.

Furthermore, Dr. Krishnamoorthy discussed various applications of SSTs in distributed energy systems, including renewable energy integration, electric vehicle charging infrastructure, microgrids, and smart grids. He highlighted real-world case studies and ongoing research initiatives that demonstrate the feasibility and benefits of deploying SSTs in these contexts. Following the presentation, an engaging Q&A session ensued, allowing participants to seek clarification, share insights, and explore potential challenges and opportunities associated with SSTs. Dr. Krishnamoorthy addressed queries regarding scalability, cost-effectiveness, reliability, and regulatory considerations for SST deployment, providing valuable perspectives based on his expertise. The IEEE Technical Talk on Solid State Transformers for Distributed Energy Applications provided attendees with valuable insights into the transformative potential of SSTs in modern energy systems. Participants gained a deeper understanding of SST technology, its benefits, challenges, and diverse applications across the energy landscape.

In conclusion, the event served as a platform for knowledge exchange and collaboration among researchers, engineers, industry professionals, and academics interested in advancing the field of distributed energy and power electronics. Dr. Krishnamoorthy's expertise and engaging presentation contributed to the success of the event, leaving attendees inspired and informed about the promising future of solid-state transformers.

Event 7: IEEE Technical Talk on SiC power semiconductors: a key enabler for cost-optimal design and operation of power converters by Prof. Dimosthenis Peftitsis

Affiliation of Prof. Dimosthenis Peftitsis: Department of Electric Power Engineering NTNU, Norwegian University of Science and Technology, Norway
Title: “SiC power semiconductors: a key enabler for cost-optimal design and operation of power converters”

Time: 04:00 PM (IST)
Date: 20th December 2022
Venue: Hybrid Mode at C-104, Electrical and Instrumentation Engineering Department, Thapar Institute of Engineering and Technology, Patiala.

This IEEE technical lecture was organized under the aegis of IEEE PELS-IES, PES-IAS Delhi Chapter and IEEE Education Society Delhi Chapter at Thapar Institute of Engineering and Technology, Patiala in Hybrid mode. This was about the capital and operating manipulation using advanced gate drivers for SiC power semiconductor-based converters. The

major points were efficiency, thermal stress and deadtime. To achieve higher efficiency, lower power losses were suggested. Thermal stress improves operating lifetime, which require active thermal control. Dead time influence switching frequency, size and losses. Prof. Dimosthenis also discuss the basics of voltage source gate drive (VSGD) and current source gate driver (CSGD) for SiC based converters, its limitations and gate oxide failure. He suggested CSGDs can supply a predefined and more constant gate current. The fundamental gate-drive circuit for designing adaptive gate drivers has been explained. He discussed analysis and features of current source gate driver with dual current injection. Auxiliary charging with SiC converters has also been discussed along with the second turn-on phenomena. In support to the above discussed analysis simulation and experimental results have also been discussed. Finally, the presentation was summarized by suggesting gate drivers as the ultimate components to exploit the system-level benefits of SiC power devices, lower switching losses through current-source driving concept, shorter peak-peak temperature cycles by adaptively manipulating the losses and shorter delay and switching times by pre-charging the gates for reaching higher frequency.

Event 8: IEEE Technical Talk on Integrated Energy Management Solutions for Smart Distribution Grid by Dr. Naran M. Pindoriya from IIT Gandhinagar, India, 21st Dec. 2022

The IEEE Student Branch of Thapar Institute of Engineering and Technology (TIET), Patiala, in collaboration with the IEEE IAS-PES Student Branch Chapter TIET, IEEE PELS-IES, PES-IAS Chapter Delhi Section, India, organized lecture on December 21, 2022. The event topic was *"**Integrated Energy Management Solutions for Smart Distribution Grid,**"* by Dr. Naran M. Pindoriya from IIT Gandhinagar, Gujarat, India on 21st Dec. 2022.

The IEEE expert talk by Dr. Pindoriya on "Integrated Energy Management Solutions for Smart Distribution Grid" was a compelling exploration into the evolving landscape of modern power distribution systems and the integration of smart energy management solutions. Held on 21st Dec. 2022, the session attracted a diverse audience of industry professionals, academicians, and technology enthusiasts.

Key Highlights:

1. Understanding Smart Distribution Grids:

Dr. Pindoriya commenced by elucidating the fundamentals of smart distribution grids. He emphasized the role of advanced technologies, data analytics, and real-time monitoring in optimizing grid operations.

2. Integration of Renewable Energy Sources:

A significant portion of the talk was dedicated to the challenges and opportunities associated with integrating renewable energy sources into the existing grid infrastructure. Dr. Pindoriya highlighted the need for efficient mechanisms to manage the intermittency of renewable sources and their impact on grid stability.

3. Advanced Energy Management Solutions:

The discussion delved into advanced energy management techniques, including predictive analytics, AI-based solutions, and adaptive control strategies. These tools, as emphasized by Dr. Pindoriya, play a crucial role in optimizing energy distribution and demand response.

4. Resilience and Security Measures:

A critical aspect of the talk was the importance of cybersecurity and resilience in modern grid systems. Dr. Pindoriya highlighted the vulnerabilities and measures required to safeguard the grid infrastructure from cyber threats.

5. Case Studies and Real-World Applications:

Engaging case studies were presented, illustrating successful implementations of smart grid solutions in different regions. These case studies offered insights into practical challenges and effective solutions in the field.

Q&A Session:

The session concluded with an interactive Q&A segment, where attendees engaged Dr. Pindoriya in discussions surrounding grid modernization, the role of machine learning in energy management, and the integration of electric vehicles into the grid.

Key Takeaways:

The event provided attendees with a comprehensive understanding of the evolving landscape of energy management in smart distribution grids. The significance of data-driven solutions, real-time monitoring, and security in modern grid systems was highlighted, offering a roadmap for future advancements.

Dr. Pindoriya's expertise and engaging presentation style were instrumental in delivering a highly informative and thought-provoking session. The event was well-received by attendees, fostering an enriched understanding of the challenges and opportunities in the field of smart grid technology. Overall, the talk proved to be an invaluable knowledge-sharing platform, shedding light on the transformative potential of integrated energy management solutions in creating efficient and resilient smart distribution grids. Attendees left with a deeper understanding of the evolving industry landscape and innovative solutions poised to shape the future of energy management.


Integrated Energy Management Solutions
for Smart Distribution Grid


Integrated Energy Management Solutions
for Smart Distribution Grid
EXIT


Smart Grid Framework
EXIT

B. List of Administrative Activities

Event 1: IEEE IAS-PES Student Branch Chapter TIET 1st ExCom Meeting on 27th March 2023

1st ExCom meeting of IEEE IAS-PES SB Chapter TIET, Patiala, was scheduled as per the following details:

Date & Time: 27th March 2023, 3.30 PM to 5.00 PM
Venue: Faculty Lounge, TIET, Patiala

IEEE student chapters are student-led organizations affiliated with the Institute of Electrical and Electronics Engineers (IEEE). These chapters provide opportunities for students to engage with IEEE and develop their skills and knowledge in electrical and electronics engineering.

Agenda:

1. Assigning duties to an IEEE student chapter typically involves identifying specific tasks and responsibilities to help the chapter achieve its goals and objectives. The following committee members were involved in organizing events in the years of 2023-24:

    - *Chair: Ajay Singh*
    - *Vice-Chair: Yadvendra Singh*
    - *Secretary: Ritika Agarwal*
    - *Treasurer: Ashish Jha*
    - *Member: Gagandeep Singh*
    - *Advisor: Dr. Rajesh M. Pindoriya*
    - *Co-Advisor: Dr. Vishal Kumar Gaur*

    Additional Member

    - Dr. Manoj Badoni
    - Dr. Surya Prakash
    - Dr. Amit Kumar

2. Proposed student branch chapter events for the upcoming Quarter. The following are the events that are proposed:
    - Technical Events: Latex workshop, Opal-Rt Workshop *(in April 2023)*
    - Industrial visit *(in April 2023)*
    - Non-technical events *(in May 2023)*
    - Outreach activities (*in June 2023)*

Attendee List:

Total Member: 8, IEEE Member:8

Event 2: IEEE IAS-PES Student Branch Chapter TIET 2nd ExCom Meeting on 25th October 2023

2nd ExCom meeting of IEEE IAS-PES SB Chapter TIET, Patiala was scheduled as per the following details:

Date & Time: 25 October, 2023, 5:30 to 6:30 PM
Venue: Renewable Energy Lab, TIET, Patiala

IEEE student chapters are student-led organizations that are affiliated with the Institute of Electrical and Electronics Engineers (IEEE). These chapters provide opportunities for students to engage with IEEE and to develop their skills and knowledge in the fields of electrical and electronics engineering.

Agenda:

1. Confirmation of the minutes from the 1st EXECOM meeting held on March 27, 2023.
2. Discussion on the Budget for Future Events.
3. 3. Discussion on the Student Branch Chapter Website and the design of logos for the IEEE IAS-PES Student Branch Chapter and PELS Student Branch Chapter.
4. 4. Discussion on planned future events.

5. 5. Discussion on the strategy to increase IEEE membership.
6. 6. Any other item with the permission of the Advisor and Chair.

Planned Events for next 6 months:

1. A LaTeX workshop by Diwakar Tripathi will be conducted online by the end of November.
2. An OPAL-RT workshop at a renewables energy lab will include theory and hardware experimentation in groups of 5.
3. An industrial visit to the Power Grid Corporation of India Limited, Chandigarh, is scheduled for November 8th/9th, 2023.
4. Dr. Ankit from Michigan will deliver a tech talk on Power Systems on November 25th.
5. Distinguished lectures by IEEE IAS and PELS are planned for February and March 2024.
6. A career readiness workshop will cover resume building, group discussions, and personal interviews.
7. There's a program to develop and expand the membership base.
8. A career guidance program is being organized.
9. Collaboration with NSS for community outreach was discussed.
10. A membership drive to increase organization membership was outlined.
11. An outreach initiative at a nearby primary school is planned.

Event 3: IEEE IAS-PES Student Branch Chapter TIET 1st ExCom Meeting on 19th January 2024

1st ExCom meeting of IEEE IAS-PES SB Chapter TIET, Patiala was scheduled as per the following details:

Date & Time: 19 January, 2024, 4 PM
Venue: Real Time Lab, TIET, Patiala

IEEE student chapters are student-led organizations that are affiliated with the Institute of Electrical and Electronics Engineers (IEEE). These chapters provide opportunities for students to engage with IEEE and to develop their skills and knowledge in the fields of electrical and electronics engineering.

Agenda:

1. Confirmation of the minutes from the 2nd ExCom meeting held on 25th Oct. 2023.
2. Discussion on the Budget for Future Events.
3. Discussion on Annual General Meeting (AGM) of IEEE IAS-PES SB Chapter TIET
4. Presentation of slate for the IEEE IAS-PES SB Chapter TIET Executive Committee for 2024
5. Discussion on the IEEE IAS-PES and PELS Student Branch Chapter Website and the design of logos.
6. Discussion on planned future events.
7. Discussion on the strategy to increase IEEE membership.
8. Any other item with the permission of the Advisor and Chair.

Planned Events for next 6 months:

12. AGM of IEEE IAS-PES SB Chapter TIET Patiala on 2nd February 2024.
13. Website design to be completed by 15th March.
14. A LaTeX workshop by Diwakar Tripathi will be conducted for B.Tech and PhD students.
15. An OPAL-RT workshop for B.Tech and PhD students comprising of Hardware, Software, discussion of keywords and linkage with MATLAB, by the end of February.
16. STEM grant event will be organised as an outreach program for school children on social awareness topics such as-
    - Good touch-Bad touch
    - Electric safety/Road safety/
    - Feminine Hygiene
    - Renewable Energy
    - Unhealthy food and identifying labels on food products
    - Career Webinar
    - Healthy utilization of social media
17. Industrial Visit to be planned for 2nd year and remaining 3rd year B. Tech students.
18. Distinguished lectures by IEEE IAS and PELS to be planned for February and March 2024

19. Setting up a stall in Society Fair during Frosh Week to generate awareness regarding IEEE and to increase membership.
20. Collaboration with NSS for community outreach was discussed.

New ExCom members for the IEEE IAS-PES SBC TIET, Patiala have been formed for the year 2024-25

Sr. No	Name	Course	IEEE No.	Designation
1.	Dr. Rajesh M. Pindoriya	Faculty	92994188	Founding Advisor
2.	Dr. Surya Prakash	Faculty	94401232	Advisor
3.	Dr. Amit Kumar	Faculty	94114878	Co-Advisor
4.	Aryaman Mohan	B. Tech	99732345	Chairperson
5.	Ajay Singh	Ph.D.	98926127	Member
6.	Vishal Ranjan	Ph.D.	99852641	Sectary
7.	Ajay Kushwaha	Ph.D.	99521080	Treasurer
8.	Shaswat Kshatriya	B. Tech	99832495	Webmaster
9.	Sejal Jain	B. Tech	99732349	Treasurer

Event 4: IEEE IAS-PES Student Branch Chapter TIET Annual General Meeting (AGM) on 02nd February 2024

The 1st Annual General Meeting of IEEE IAS-PES SB Chapter TIET, Patiala was scheduled as per the following details:

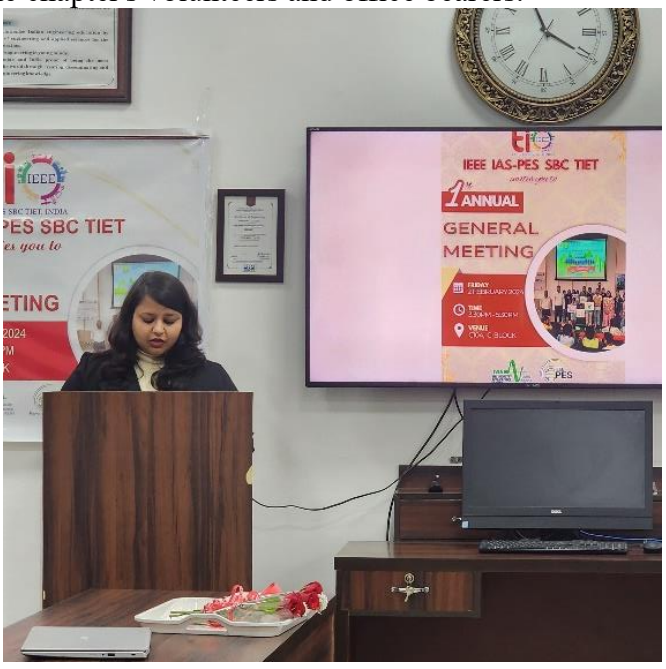
Date: 2nd February, 2024
Time: 3:30 PM-5:30 PM
Venue: Seminar Room, C-104, EIED, TIET, Patiala

Overview-

The Annual General Meeting (AGM) stands as a cornerstone event within the IEEE IAS-PES Student Branch Chapter TIET, offering a pivotal platform to conduct a thorough review of the chapter's activities and achievements over the preceding year. This gathering not only serves as a moment of reflection on past endeavours but also as a strategic forum to chart the course for the future. During the AGM, members and stakeholders engage in comprehensive discussions, evaluating the effectiveness of existing programs and initiatives while exploring innovative ideas and strategies to further enhance the chapter's impact and reach.

Agenda:

1. ***Welcome address by Secretary:***
   The welcome address by the Secretary set the tone for the Annual General Meeting, offering a warm greeting to all attendees, and providing a brief overview of the meeting's agenda. This opening statement served to officially commence the proceedings, highlighting the importance of the AGM as a key event in the chapter's calendar. The Secretary also expressed gratitude to the members for their participation and acknowledged the hard work and dedication of the chapter's volunteers and office bearers.



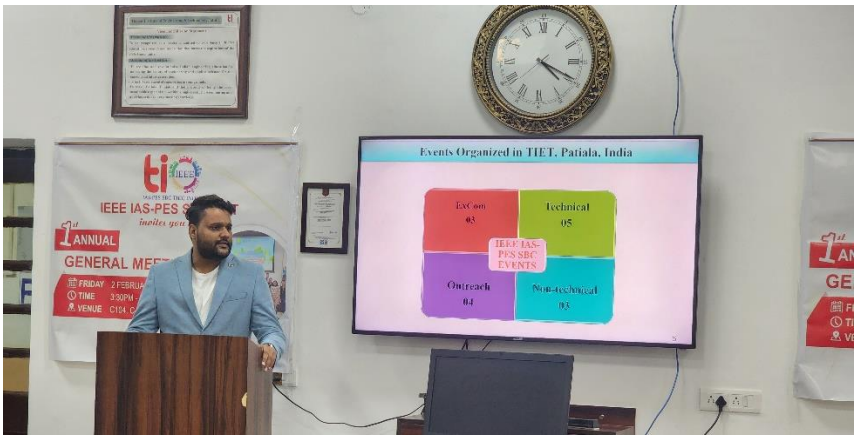
Moreover, the AGM provides a unique opportunity for active engagement with members, inviting feedback, suggestions, and ideas to continually improve the chapter's operations and offerings. By fostering an environment of open dialogue and collaboration, the AGM plays a crucial role in strengthening the chapter's community and advancing its mission to promote excellence in the fields of Industrial Applications and Power & Energy.

2. ***Token of appreciation:***

During the AGM, a special token of appreciation was presented to Dr. Sunil Singla, Head of the Electrical and Instrumentation Engineering Department, and Dr. Ashima Singh, for their unwavering support and guidance.

3. *Presentation by Chairperson:*

The presentation by the chairperson was a key highlight of the AGM, providing a comprehensive overview of the chapter's activities and achievements over the past year. They reflected on the challenges faced and the milestones achieved, showcasing the chapter's commitment to excellence in the fields of Industrial Applications and Power & Energy. They also highlighted key projects, collaborations, and outreach efforts that have contributed to the chapter's growth and success. Additionally, the presentation emphasized the chapter's commitment to fostering innovation and knowledge exchange, showcasing its role as a leader in promoting excellence in Industrial Applications and Power & Energy.



4. *Presentation by Founding Advisor:*

The presentation on IEEE membership was not only informative but also inspiring. They shared personal anecdotes and experiences, illustrating how IEEE membership had positively impacted their own career and professional growth. The advisor also highlighted the role of IEEE in shaping the future of technology and the importance of being part of a global community of innovators and thought leaders. This presentation resonated with attendees, sparking interest and enthusiasm for IEEE membership among the audience. Overall, the advisor's insights added depth to the AGM, reinforcing the value of IEEE membership and its role in advancing knowledge and excellence in the field.

5. ***Presentation by newly elected Chairperson:***

The presentation by the newly elected chairperson marked a significant moment in the AGM, symbolizing a transition of leadership and a fresh perspective for the chapter. The new chairperson outlined their vision and goals for the upcoming term, highlighting areas of focus and strategies for furthering the chapter's mission. This presentation also provided an opportunity for the new chairperson to introduce themselves to the membership, fostering a sense of continuity and enthusiasm for the chapter's future endeavours. The presentation highlighted key areas of focus, such as increasing member engagement, expanding outreach efforts, and enhancing collaboration with industry partners.

6. ***Handing over of Financial Report:***

As a symbolic gesture of the smooth transition of leadership, the outgoing chairperson handed over the society's financial report to the newly elected chairperson. This act not only demonstrated transparency and accountability but also symbolized trust and confidence in the new leadership. The outgoing chairperson took the opportunity to provide insights and context on the financial report, highlighting key achievements and challenges faced during their tenure. The new chairperson, in turn, expressed gratitude for the guidance and pledged to uphold the same standards of financial stewardship in the future. This moment exemplified the chapter's commitment to sound governance and continuity in its operations.

7. ***Token of appreciation to volunteers:***

The token of appreciation to volunteers was a heartwarming gesture that recognized the dedication and hard work of those who have contributed to the chapter's success. Volunteers play a crucial role in organizing events, managing activities, and supporting the chapter's initiatives, often going above and beyond to ensure their success. The token of appreciation was a way to express gratitude for their efforts and to motivate them to continue their valuable contributions to the chapter.

8. Cake cutting and high tea:

Following the presentations and acknowledgments, attendees gathered for a cake cutting ceremony and high tea. This informal gathering provided a relaxed setting for members to network, socialize, and reflect on the day's events. The cake cutting ceremony was a symbolic gesture, signifying unity, and camaraderie among members. High tea offered a chance for attendees to unwind and enjoy refreshments while engaging in casual conversations, further strengthening the bonds within the chapter. Overall, this part of the AGM served as a fitting conclusion to a productive and memorable event, leaving attendees with a sense of camaraderie and shared purpose.

9. Member Feedback and Suggestions:

The Member Feedback and Suggestions session provided a valuable opportunity for attendees to share their thoughts, ideas, and suggestions for improving the chapter's activities and offerings. This interactive session encouraged open dialogue and constructive feedback, allowing members to voice their opinions and contribute to the chapter's continuous improvement. Attendees shared their insights on various aspects of the chapter's operations, including event planning, member engagement, and collaboration opportunities. The session facilitated a collaborative exchange of ideas, fostering a sense of ownership and community among members.

10. Closing Ceremony:

The Closing Ceremony marked the conclusion of the Annual General Meeting, offering a moment to reflect on the day's discussions and outcomes. This final address served to inspire attendees to continue their engagement and participation in the chapter's activities. The Closing Ceremony also included a vote of thanks to all attendees, and volunteers for their contributions and support. Overall, the Closing Ceremony was a poignant conclusion to a successful AGM, leaving attendees motivated and inspired to continue their work in advancing the chapter's mission.

The 1st Annual General Meeting of IEEE IAS-PES SB Chapter TIET, Patiala, held on 2nd February 2024, was a resounding success, bringing together members, volunteers, and stakeholders to reflect on the chapter's achievements and set a course for the future. The meeting provided a platform for comprehensive discussions, insightful presentations, and valuable feedback, highlighting the chapter's commitment to excellence in the fields of Industrial Applications and Power & Energy. Through engaging presentations, heartfelt acknowledgments, and interactive sessions, the AGM fostered a sense of community and collaboration among attendees, paving the way for a successful year ahead. As the meeting concluded with a sense of camaraderie and shared purpose, attendees left inspired and motivated to continue their efforts in advancing the chapter's mission and making a positive impact in their fields.


ANNUAL
GENERAL
MEETING


EXIT

C. List of Outreach Activities

Event 1: Industrial Visit of 2nd Year BE Electrical Engineering Students Under the aegis of IEEE IAS-PES SB Chapter TIET, IEEE PELS-IES, PES-IAS Delhi Chapter, IEEE Young Professionals and IEEE Education Society Delhi Chapter

The company is amongst the top switchgear protection and panel manufacturing houses in north India. Its footprint stretches over a wide clientele of Industries i.e. Textiles, Automobiles, Aviation, Steel, Telecom, Paper, Lighting, Medicines, FMCG, & Infrastructures. The group's flagship company, EIE Electrogears, is known as the most quality-conscious manufacturer of Electric Control Panels in the region and the brand ETE is well-known across the nation in several countries in Africa, the Middle East, South, and South East Asia.

Industry Name and Address: ETE Electrogears Pvt Ltd., C-30 Industrial Focal Point, Dera Bassi-140201, Distt. Mohali
Date: 21st April 2023 (Friday)
Visiting Time: 9:30 AM to 1:00 PM
Visitors: 2nd Year BE Electrical Engineering Students
No. of Visitors: 48

The visit was headed by Mr. Tushar K. Chandra and his team. There were around 45 students, divided into two groups. One group was taken by Mr. Chandra and other by his team member. The visit was started from powder coating process of the switch boards from preparation stage to application stage. After that students were taken to demonstrate LV and MV switch boards, different components inside switch boards their wiring and high current carrying bus bars. An open Danfoss AC drive was shown to the students. Its circuits diagram, working, applications and wiring was demonstrated. After the visit, students shared their views on the technology demonstrated there and gained real-time exposure to the theory they studied in the UG course.

Event 2: IEEE Membership: A Magical Door to Professional Networking for Students and Research Scholars organized by the Department of Electrical Engineering, IOE Pulchowk Campus, Tribhuvan University, Kathmandu, Nepal (IEEE PES Chapter, Nepal)

Event Date: 12th March 2024
Organizer: IEEE PES Nepal Chapter, Kathmandu, Nepal
Venue: Department of Electrical Engineering, IOE Pulchowk Campus, Tribhuvan University, Kathmandu, Nepal
Speaker Name: Dr. Rajesh M. Pindoriya, Chairperson, R-10, South Asia, IEEE IAS

IEEE PES Nepal Section invited Dr. Rajesh M. Pindoriya to deliver an IEEE expert talk on "*IEEE Membership: A Magical Door to Professional Networking for Students and Research Scholars*", organized by the Department of Electrical Engineering, IOE Pulchowk Campus, Tribhuvan University, Kathmandu, Nepal on 12th March 2024. The event aimed to enlighten students and research scholars about the benefits of IEEE membership and its role in fostering professional networking opportunities. The event commenced with an opening remark by Dr. Rajesh M. Pindoriya, emphasizing the importance of IEEE membership in enhancing academic and professional growth. Dr. Pindoriya shared his journey as an IEEE IAS, PELS and PES student member and the invaluable benefits he gained through active participation in IEEE activities. He emphasized the role of IEEE in connecting students with industry professionals and facilitating collaborative research opportunities.

Dr. Pindoriya engaged the audience through interactive discussions, addressing queries and concerns related to IEEE membership benefits, membership categories, and ways to maximize the value of IEEE affiliation. IEEE offers various awards in every technical society. Dr. Pindoriya especially focused on the IEEE IAS CMD awards and explained the step-by-step process for applying for the awards. He also explained what types of benefits awareness get from the IEEE IAS CMD. He motivated faculty members and students to open the IEEE IAS Student Branch Chapter in the Pulchowk Campus, Kathmandu, Nepal.

Key Takeaways:

1. ***Networking Opportunities:*** IEEE membership provides access to a global network of professionals, researchers, and industry leaders, fostering collaboration and knowledge exchange.

2. ***Professional Development:*** Participation in IEEE events, conferences, and workshops offers opportunities for skill development, career advancement, and exposure to emerging technologies.
3. ***Technical Resources:*** Members gain access to cutting-edge research papers, publications, and online libraries, enhancing their knowledge and expertise in their respective fields.
4. ***Leadership Opportunities:*** IEEE offers platforms for members to take on leadership roles, organize events, and contribute to the advancement of their respective fields.

The IEEE Talk on "IEEE Membership: A Magical Door to Professional Networking for Students and Research Scholars" provided valuable insights into the benefits of IEEE affiliation and its role in fostering professional growth. The event successfully highlighted the diverse opportunities available to IEEE members and motivated attendees to explore the possibilities for career advancement through active participation in IEEE activities.


IEEE IAS CMD Awards


IEEE
Advancing Technology for Humanity


IEEE
Advancing Technology for Humanity

Event 3: IEEE Talk on Transforming Electric Vehicles to Net Zero Emissions through Green Hydrogen Technology organized by the Department of Electrical Engineering, IOE Pulchowk Campus, Tribhuvan University, Kathmandu, Nepal (IEEE PES Chapter, Nepal)

Event Date: 17th August 2023
Organizer: IEEE PES Nepal Chapter, Kathmandu, Nepal
Venue: Department of Electrical Engineering, IOE Pulchowk Campus, Tribhuvan University, Kathmandu, Nepal
Audience: IEEE members, faculties, students, and industry professionals.

IEEE PES Nepal Section invited Dr. Rajesh M. Pindoriya to deliver an IEEE expert talk on "*Transforming Electric Vehicles to Net Zero Emissions through Green Hydrogen Technology*", organized by the Department of Electrical Engineering, IOE Pulchowk Campus, Tribhuvan University, Kathmandu, Nepal on 17th August 2023. The event commenced with a thought-provoking keynote address by Dr. Pindoriya, who provided insights into the importance of transitioning to sustainable transportation solutions and the potential of green hydrogen technology in this regard. The speaker highlighted the environmental benefits, scalability, and versatility of green hydrogen as a clean energy carrier for powering electric vehicles.

In conclusion, the event "Transforming Electric Vehicles to Net Zero Emissions through Green Hydrogen Technology" served as a platform for dialogue, collaboration, and innovation in the realm of sustainable transportation. By bringing together stakeholders from across sectors, the event catalyzed discussions, inspired action, and advanced the agenda of decarbonizing transportation through the adoption of green hydrogen technology. The insights gained and connections made at the event will contribute to shaping the future of clean mobility and accelerating the transition towards a net-zero carbon future.

Publications: There has been a celebration of the IEEE PES Day which was organized by the IEEE IAS-PES SB Chapter TIET and supported by IEEE PELS-IES, PES-IAS Chapter of Delhi Section. This event was covered in the ***PELS Newsletter (eNewsUpdate).*** The same has been attached below:

by Rajesh M. Pindoriya

IEEE PELS/IES Delhi Chapter Co-hosts Event for Children

On 29 April 2023, the IEEE Power Electronics Society (PELS)/Industrial Electronics Society (IES) Delhi Chapter along with the IEEE Power and Energy Society (PES)/Industry Applications Society (IAS) Delhi Section Chapter, IEEE IAS/PES Student Branch Chapter (SBC) at the Thapar Institute of Engineering and Technology (TIET) in Patiala, Pratigya Society TIET, and IEEE Students (SPAx) Committee co-hosted an event with the theme "Awareness of Renewable Energy Sources for School Kids." The event was held at the TIET and was attended by over 50 students ranging from classes 1 to 4 from nearby schools.

To begin the event, a presentation from Dr. Rajesh Pindoriya (IEEE IAS Chapter Area chair, R10 East and South Asia) focused on renewable energy sources, including solar, wind, hydro, geothermal, and biomass (Figure 1). The students viewed multiple videos and pictures related to these renewable energy sources, which helped them to understand the concepts better.

After the presentation, the students participated in a coloring competition. Each student received a sheet that had a drawing related to renewable energy printed on it and were encouraged to color the picture in a way that showcased the importance of renewable energy sources. Once the students completed their coloring, the winners of the competition were announced and received a memento, a certificate, and a school bag.

The IEEE PELS/IES Delhi Chapter and the other sponsoring groups are pleased with the event's success and are glad to raise awareness among the students about the importance of renewable energy sources.

FIG 1 Dr. Pindoriya giving his presentation to the students.

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Date of publication: 26 September 2023

D. Awards received by IEEE IAS-PES SB Chapter TIET, Patiala

1.	First Rank in IEEE IAS Global Mentorship Program 2023
2.	Outstanding Student Volunteer Award 2023 from IEEE Delhi Section, India ***(Presented to Mr. Ajay Singh)***.
3.	Outstanding WIE Student Volunteer Award 2023 from IEEE Delhi Section, India ***(Presented to Ms. Ritika Agrawal)***.
4.	"A travel grant from IEEE PES to attend and participate in the ***'IEEE PES India in-person meeting 2023*** for Indian PES SBC Leaders in Gwalior, India ***(Presented to Mr. Yadvendra Singh)***
5.	A travel grant from ***the IEEE IAS Annual Meeting Travel Grant Program 2023*** to attend the 'IEEE IAS Annual Meeting 2023' in Nashville, Tennessee, USA ***(Presented to Mr. Yadvendra Singh)***.
6.	The ***'Award of Appreciation'*** for his exceptional service and contributions as Vice-Chairperson of the IEEE IAS-PES Student Branch Chapter at TIET Patiala for 2023-2024 ***(Presented to Mr. Yadvendra Singh)***.
7.	The ***'Award of Appreciation'*** for his exceptional service and contributions as Chairperson of the IEEE IAS-PES Student Branch Chapter at TIET Patiala for 2023-2024 ***(Presented to Mr. Ajay Singh)***.
8.	The ***'Award of Appreciation'*** for her exceptional service and contributions as Secretary of the IEEE IAS-PES Student Branch Chapter at TIET Patiala for 2023-2024 ***(Presented to Ms. Ritika Agrawal)***.

*Records of all the events can be found in vTools and the link for the same has been attached as follows:

IEEE vTools.Events : vTools Events

In case of any query and clarification, kindly contact the IEEE IAS-PES SB Chapter ExCom Member at the following email address: **rajeshpindoriya@ieee.org**

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