

IEEE Islamabad Section (R00091)

PART A - SECTION SUMMARY

A.1 Executive Summary

- Section Executive Committee Member List

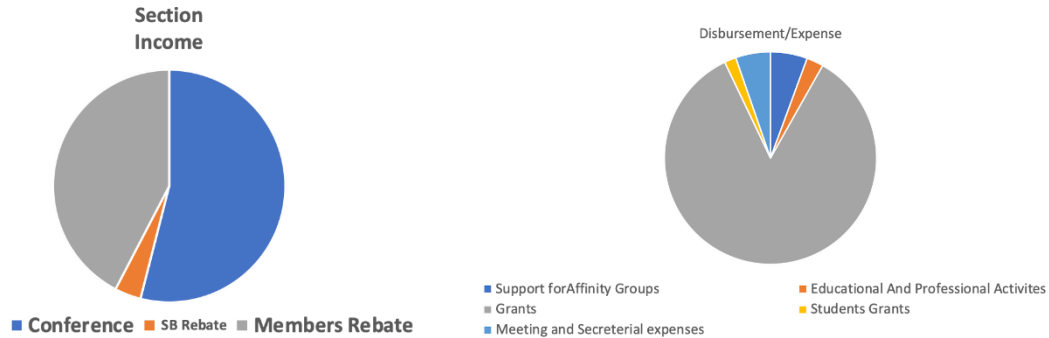
Position	Name
Chairperson	Dr. Muhammad Uzair Khan
Vice Chair Islamabad Section	Dr. Gulistan Raja
Treasurer Islamabad Section	Dr. Muhammad Arshad Islam
Secretary Islamabad Section	Mr. Ahsan Farooqui
Chair Membership Development	Mr. Farrukh Jamal
Chair Publications	Dr. Haider Abbas
Chair Media and Electronic Communications	Dr. Qurat ul Ain
Chair Awards and Recognitions	Dr. Muhammad Haroon Yousaf
Chair Conference Activities	Dr. Muhammad Tariq
Chair Educational Activities	Dr. Sohail Khalid
Chair Professional Activities	Dr. Haroon ur Rashid
Chair Student Activities Committee	Dr. Noshervan Shoaib
Industrial Relations Coordinator	Dr. Waheed ullah
Chair Peshawar Subsection	Dr. Salman Ahmed
SSR Islamabad Section	Mr. Umair Ashraf Toor
SSR Peshawar Subsection	Mr. Usman Haider
YP Chair	Mr. Muzamil Mahmood
WIE Chair	Ms. Komal Batool

- Section Highlights
 - 7 society chapters (4 joint chapters) in section
 - 433 Student Members
 - 225 Members
 - 60 Graduate Student Members
 - 109 Senior Members
 - 3 Life Senior Members
 - 1 Life Member
 - 31 Student branches
 - 18 student branch society chapters
 - 10 student WIE Affinity groups
- Major Events (International, National)
 - IEEE Islamabad Section technically sponsored 6 conferences in the year 2024
 - 2024 International Conference on Frontiers of Information Technology (FIT)
 - 2024 International Conference on Robotics and Automation in Industry (ICRAI)
 - 2024 International Conference on Engineering & Computing Technologies (ICECT)
 - 2024 21st International Bhurban Conference on Applied Sciences and Technology (IBCAST)
 - 2024 International Conference on Digital Futures and Transformative Technologies (ICoDT2)
 - 2024 International Conference on Emerging Technologies (ICET)
- Major Chapter Activities
 - Chapter Project of Computational Intelligence Society.
 - Summer school of Computational Intelligence Society
 - Detailed activities are mentioned in fields below
- Major Student and Affinity Group Activities
 - IEEE Pakistan Student/Young Professionals/WiE/SIGHT Congress 2024
 - IEEE R10 SAC SSBR 2024
 - IEEE R10 MDLT 2024

- IEEE R10 SAC Student Summit 2024
- IEEE WiE Leadership Summit 2024
- IEEE Islamabad Section YP - Learn from the Professionals 2024
- IEEE Islamabad Section YP UpSkill 2024
- Detailed activities are mentioned in fields below

A.2 Financial Report – (Please follow the format given below)

- Summary (as per submitted on NetSuite)
- Any other financial activities



PART B - ORGANIZATIONAL ACTIVITIES

B.1 Membership Development Activities

- Total number of active members in the past 3 years.
- Summary and evidence of work done to improve the value of membership, which leads to retention and growth of members.
 - MD Activities in 2024
 - Membership Development collocated with SAC, YP and WiE and other events

B.2 Chapter Activities

- Total number of Chapters in the Section
 - 3 x Chapters
 - 4 x Joint Chapters
- Number of Chapters formed in the current year
 - NONE
- Number of active Chapters (Chapters who have reported required number of meetings during the year)
- Summary of Chapter activities (Chapter wise with attachment table/information)

The summary on the activities held by chapters/joint chapters is given as follows:

Event Title	Event Date	Number of Attendance
IEEE PES/PELS Extended Committee Selection 2024-25	2024-04-03 09:40:00	18
Comprehensive Guide to study in Germany	2024-04-04 09:47:00	38
Comprehensive Benefits & Opportunities in the Power and Energy Society (PES) for Maximum Potential	2024-04-07 10:00:00	51
Essensial Tips & Trick for Landing in your First Job	2024-04-14 10:00:00	49
"GlobeTrot Edu: Your Passport to Academic Adventure"	2024-04-28 14:00:00	78
Combined Heat and Power (CHP), Types, Application & Optimum Sizing	2024-05-03 10:00:00	24
Algorithms and the Brain: How Programming Shapes our Mathematical Thinking	2024-06-08 08:00:00	31

Progression Towards Safe Career Path in Engineering	2024-07-05 12:00:00	22
Unlocking the Scholarship Opportunities within Europe	2024-07-10 13:00:00	21
Unlocking the Scholarship opportunities within Australia	2024-07-20 11:30:00	18
Robotics, Power Electronics & AI: Real World Solutions	2024-08-12 13:00:00	48
Renewable Energy Integration: Overcoming the Engineering Challenges	2024-08-17 12:00:00	48
Current Trends from First Software application to Industrial Projects	2024-09-04 13:00:00	24
A Dual Approach to Microcontroller Projects	2024-09-12 14:00:00	24
Data-Driven Signal Processing: Leveraging Machine Learning Techniques in Power Electronics	2024-08-31 13:00:00	17
Power System Protection Techniques	2024-09-15 09:30:00	38
Potential Power Quality Challenges due to Renewable Energy	2024-09-16 12:00:00	48
Excom Meeting	2024-03-31 07:00:00	3
IEEE PES/PELS Excom Meeting	2024-05-06 10:00:00	4
IEEE PES/PELS Excom & Extended Team Meeting	2024-08-09 13:00:00	11
IEEE PES/PELS Excom Meeting	2024-12-23 09:00:00	4
IEEE PES/PELS Extended Committee Selection 2024-25	2024-04-03 09:40:00	18
Use of Version Control Systems in Project Management and Collaboration	2024-03-05 12:00:00	25
IoT-Enabled Data Driven Control Systems	2024-03-26 11:00:00	35
Conventional vs Data-Driven Control-A Comparison	2024-04-25 04:00:00	12
Anomaly Detection in Cyber Physical Systems	2024-05-02 04:00:00	22
Development of an Open-Source Testbed Based on the Modbus and OPC-UA Protocol for Cybersecurity of Power Plants	2024-05-09 04:00:00	31
Data-Driven Kalman Filtering	2024-05-23 04:00:00	71
Development of Real-time Embedded Systems and Graphical User Interface for Machine Condition Monitoring	2024-05-30 04:00:00	81
CSS Day 2024: Putting Cells Under Control	2024-10-24 09:00:00	35
Discover, Learn, Innovate: The World of Control Systems	2024-11-15 09:00:00	57
Speed Programming	2024-02-02 08:00:00	58
Bug Catcher	2024-02-09 10:00:00	55
The rise of AI	2024-03-11 08:00:00	15
Getting started with Vertex AI Workshop	2024-04-08 08:30:00	25
Data Voyage	2024-04-25 09:00:00	62
Tech Jobs in the world	2024-03-21 10:00:00	24
Gateway to the Industry	2024-05-14 09:30:00	33
Autism Awareness Workshop	2024-02-15 09:00:00	170
IEEE Electromagnetic Compatibility & Interference (EMC/I) Workshop - 2024	2024-03-05 04:00:00	80
IEEE SPAX FUNDED SEMINAR ON "IEEE: A Promising Platform"	2024-04-04 07:00:00	80
Circuits based STEM Workshop for School Children	2024-04-05 04:00:00	55
Future Fusion: IEEE Microwave Workshop for Professionals & Students	2024-05-09 04:00:00	95
IEEE DML Talk on "Additive Manufacturing: Emerging Opportunities for Microwave Components"	2024-05-09 05:45:00	95
Empower Orphans via STEM Technology	2024-05-16 04:00:00	46
IEEE Microwave Workshop 2024	2024-07-04 05:00:00	100
Tunable RF front-end Design and Modelling using Pathwave SystemVue for Communication Technologies	2024-07-04 12:30:00	22
System Level RF Design	2024-07-19 12:30:00	36
RF Simulations and Validations for Cellular Products	2024-07-29 12:30:00	16
RF Circuits Schematic Design in Altium and EM & Co-Simulation in ADS	2024-07-31 12:30:00	29
RF low Noise Amplifier (LNA) Design	2024-08-05 12:30:00	39
Phase locked loop design for RF applications	2024-08-15 05:00:00	19

IEEE AP03/MTT17/EMC27/CAS04 ADMINISTRATIVE COMMITTEE (ADCOM) MEETING “ February 2024	2024-02-13 11:00:00	4
IEEE AP03/MTT17/EMC27/CAS04 ADMINISTRATIVE COMMITTEE (ADCOM) MEETING May 2024	2024-05-06 05:30:00	4
IEEE AP03/MTT17/EMC27/CAS04 ADMINISTRATIVE COMMITTEE (ADCOM) MEETING August 2024	2024-08-27 11:00:00	4
2024 IEEE CASS Industry Forum on Integrated Circuits & Systems for Emerging Technologies	2024-09-24 05:00:00	70
Circuits and System based STEM Activities for Orphan Children	2024-08-28 08:00:00	60
Circuits & Systems Design Workshop	2024-12-09 11:00:00	50
Workshop on Machine Learning with Python	2024-03-22 04:00:00	37
IEEE SPAX Effective Communication Strategies for Success in Academic and Professional Life	2024-04-20 09:00:00	46
Revolutionizing Industry: Empowering Through Industrial Automation and IoT	2024-10-21 05:00:00	95
IEEE R10 YP UpSkill 2024 - Islamabad	2024-10-24 05:00:00	98
IEEE CIS Summer School on Artificial Intelligence and Data Science	2024-10-02 04:00:00	155
IEEE Islamabad Section CIS Industry Gala 2024	2024-12-30 04:00:00	200

B.3 Professional and Continuing Education Activities

Summary of continuing Educational activities including conferences, technical activities, training courses, and distinguished lecture programs with attachment table / information

OU type	Technical Activities Count
Chapter/Joint Chapter	64
Student Branch Chapter	135
Student Branch	163
YP	12
WIE	21
Section	8

B.4 Students Activities

- Total number of Student Branches in the Section = 31
- Number of Student Branches formed in the current year = 2
- Section level student activities (student congress, paper and other contests, awards etc.)
 - **Meetings**
 - Branch Chairs Meeting at NUST RIMMS (July 2024)
 - Branch Chairs Meeting at NUST RIMMS (Nov 2024)
 - Branch Chairs Meeting at PIEAS (Dec 2024)
 - **Activities**
 - IEEE Islamabad Student/YP/WiE/SIGHT Congress at PIEAS Islamabad (Dec 2024)
 - IEEE SPAX Activity at different student branches (Jan 2024 – Dec 2024)
 - Webinars on VoLT (Jan 2024 – Dec 2024)
 - STEM Activities at Student Branches (Jan 2024 – Dec 2024)
 - **Membership Development - IEEE Introductory Sessions at**
 - NUTEC
 - Pak Austria Fachhochschule Institute of Applied Sciences and Technology
 - HITEC University
 - NUST SEECs
 - COMSATS Islamabad
 - Hamdard University Islamabad
- Number of active Student Branches (Student Branches who have reported required number of meetings during the year)

Sr. No	Student Branch
1	PIEAS
2	COMSATS University Islamabad

3	National University of Modern Languages-Islamabad
4	Hamdard University Islamabad
5	NUST SEECS
6	Riphah International University
7	HITEC University
8	Riphah University FC
9	Taxila Univ of Engineering and Tech

- Summary of Student Branch activities (Student Branch wise with attachment table/information)

Pakistan Inst of Engineering & Applied Sciences

Sr. No	Event Name	Description
1	IEEE PIEAS RAS - Workshop on Interfacing components with STM32 for Motion Control	This workshop organized by IEEE PIEAS Robotics and Automation Chapter focused on the technical details and practices to interface sensory components with an STM32 microcontroller for real-time data acquisition and operations.
2	IEEE PIEAS Industrial Electronics Chapter - Ltspice Workshop	This workshop was organized by the IEEE PIEAS Industrial Electronics Chapter to teach the freshman batch of BS Electrical Engineering, how to use an electrical stimulation tool such as Ltspice.
3	IEEE PIEAS Robotics and Automation Chapter - Workshop on Solidworks	At the SOLIDWORKS workshop, students gained valuable knowledge in 3D CAD design, learning to create and manage complex models and assemblies. Led by Muhammad Ovais Ulhaq, the session provided hands-on experience with the software, equipping participants with skills for mechanical design, simulation, and product data management, essential for careers in engineering and design.
4	IEEE PIEAS PES Chapter - Industrial Visit	he IEEE PIEAS Student Branch's technical chapter, IEEE Power and Energy Society (PES), organized a visit to the main power grid station, specifically a 132 KV station managed by NILOP PAEC. It was an excellent educational opportunity for students to gain firsthand experience of how a power grid operates and the complexities involved in distributing electricity on a large scale. Students attending this visit engaged in a guided tour where they saw the various components of the power grid, such as transformers, substations, and control rooms. They learned about the engineering principles behind power generation and distribution, and the safety protocols that are essential for the operation of such a facility. It provided a chance to ask questions, understand the challenges faced by energy professionals, and perhaps even inspired some to consider careers in the power and energy sector.

COMSATS Islamabad

Sr. No	Event Name	Description
1	IEEE WIE x HULT Prize	On February 29, 2024, IEEE Women in Engineering (WiE) orchestrated a landmark collaboration with the prestigious Hult Prize, marking a significant stride towards fostering innovation and entrepreneurship within the STEM community. This groundbreaking partnership underscored WiE's unwavering commitment to empowering women and underrepresented groups to realize their entrepreneurial ambitions. Leveraging their collective expertise and resources, WiE assumed a pivotal role in orchestrating the event's logistics, including the meticulous management of decor, photography, and overall event coordination. Through meticulous planning and execution, WiE ensured a seamless and immersive experience for participants, setting the stage for a transformative journey of ideation and collaboration.
2	PyCon'24	yCon 2024, a two-day event organized by Arbisoft, took place at Lahore University of Management Sciences (LUMS) on March 9th and 10th, 2024. The event secured significant attention from both national and international developers, along with esteemed speakers, to delve into discussions about emerging and promising market trends in the world of technology. This time, PyCon engaged in a valuable partnership with the IEEE Computer Society (CS) Chapter at the COMSATS University Islamabad (CUI). The partnership aimed to foster greater knowledge exchange and networking opportunities among technology enthusiasts and professionals.
3	IEEE PES CUI Seminar: Awareness on FYP	The objective of the event was to raise awareness among students about the significance, process, and requirements of Final Year Projects (FYPs) in their academic journey. FYPs serve as a culmination of students' learning experiences, providing them with an opportunity to apply theoretical knowledge into practical projects.
4	IEEE WIE CSS Webinar	A week of CSS Awesomeness! Our Webinar Series from 25th – 29th July, 2024 was an unforgettable experience. IEEE Women in Engineering (WIE) in collaboration with UET Narowal Student Branch orchestrated an intellectually stimulating series of webinars dedicated to the rigorous

		preparation for the Central Superior Services (CSS). The webinars featured an assemblage of distinguished CSS rank holders and esteemed Assistant Commissioners, who imparted their profound insights and shared their journeys through the labyrinthine CSS exam process.
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NUST College of Electrical and Mechanical Engineering

Sr. No	Event Name	Description
1	Tech Talk on Engineering, Technology and Innovation + Orientation	A question answer and technical awareness session with industry representatives for the undergraduate students. The panel of industry representatives consisted of 3 members.
2	Antenna Design and HFSS Workshop	A brief workshop on basics of antenna designing, latest trends in industry, tutorial of Ansys HFSS software and a step by step tutorial on design of patch antenna.
3	Kicad, Introduction to PCB designing	A detailed workshop on basics of PCB designing, Its industry trends and the industry standard open source tool, Kicad.
4	Pathway to Innovation, IEEE Awareness Session	An IEEE Awareness session for the students and professionals. This session was part of the IEEE 6th International Conference on Automation in Industry (ICRAI) held at NUST College of Electrical and Mechanical Engineering.

National University of Modern Languages-Islamabad

Sr. No	Event Name	Description
1	Industrial Advisory Board (IAB) Meeting	The Electrical Engineering Department's Industrial Advisory Board (IAB) convened on February 27th, 2024, with esteemed representatives from key institutions such as the National Institute of Electronics, the National Centre of Artificial Intelligence, and AFNITI, alongside senior faculty members. The meeting focused on the integration of hardware and software expertise in product development and the strategic direction of the department's academic programs. The IAB expressed strong support for the proposed BS Computer Engineering program, recognizing its potential to produce graduates capable of bridging the gap between physical and digital systems. Additionally, the board recommended organizing an industry exhibition to enhance industry-academia collaboration and promote the practical application of knowledge within the faculty.
2	Workshop on Data Visualization Using MATLAB	On April 24, 2024, the Department of Electrical Engineering organized an engaging workshop on Data Visualization using MATLAB, led by Dr. M. Khurram Ehsan, Associate Professor at Bahria University Islamabad. This workshop was designed for students from BEEE 6, BS Electronics 6th, and 7th semesters, providing them with practical knowledge and skills in visualizing complex data sets using MATLAB. Participants learned how to effectively represent and interpret data, which is a crucial skill in engineering and data analysis, thereby enhancing their overall proficiency in these areas.
3	Seminar on Underwater Communication Networks	The Department of Electrical Engineering with the collaboration of IEEE hosted a seminar on "Underwater Communication Networks" on November 18, 2024, featuring Dr. Ali Niaz, Director of MARS Lab at FAST University, as the keynote speaker. The seminar provided an in-depth look into the evolution of underwater communication, highlighting the shift from traditional cable-based systems to modern wireless technologies. Dr. Niaz discussed the challenges posed by heavy cables, their associated costs, and the advancements in underwater networks that enable efficient data exchange. Applications such as oceanographic data collection and underwater radio were also explored, offering students insights into cutting-edge developments in this critical area of communication technology.
4	Web Design Competition: Landing and Internal Page for a University Website	The Department of Computer Science organized an event of Web Design Competition focused on creating a landing and internal page for a university website. This competition invited students to showcase their web development skills by designing responsive and visually appealing web pages using technologies like HTML, CSS, JavaScript, Bootstrap, Tailwind, React, and Vue. The were submitted till 22nd May 2024. The winning design received a cash prize and a certificate.

Hamdard University Islamabad

Sr. No	Event Name	Description
1	IEEE SPAX Effective Communication Strategies for Success in Academic and Professional Life	The webinar on "Effective Communication Strategies for Success in Academic and Professional Life" was organized by IEEE Hamdard University Islamabad Student Branch on 20th April 2024. The webinar covered essential aspects of communication for success

		in both spheres i.e. Academic and Professional Life. Beginning with the importance of clear communication, speakers highlighted strategies such as verbal and non-verbal techniques, active listening, empathy, and adaptability. Attendees were encouraged to refine their skills in speaking and writing, observe body language, and strengthen professional networking. The event was funded by IEEE SPAX..
2	Hook, Line, and Sinker: Mastering the Art of the Elevator Pitch	The STEP session "Hook, Line, and Sinker: Mastering the Art of the Elevator Pitch" aimed to bridge the gap between academia and industry by equipping students with essential skills to craft compelling elevator pitches. It provided insights into employer expectations, common interview questions, and industry requirements. The interactive session featured presentations, discussions, and practical exercises, helping students develop concise yet impactful pitches that highlighted their strengths and personal brand. Role-playing activities and personalized feedback allowed students to refine their communication skills, ensuring they could effectively present themselves in interviews, networking events, and professional interactions.
3	IEEE R10 YP UpSkill 2024 - Islamabad	The IEEE R10 YP Upskill 2024 - Islamabad, held on October 24, 2024, at Iqra University, H-9, Islamabad, was organized by IEEE YP Islamabad Section to foster leadership, entrepreneurship, and ethical values among young professionals and students. The event featured three keynote talks, a panel discussion, and a workshop, providing valuable insights into e-marketing, cultural exchange programs, entrepreneurship, freelancing, and digital transformation. Sessions covered the role of e-marketing in business growth, the economic benefits of cultural exchanges, and entrepreneurial strategies for balancing customer needs and competition. A panel discussion on freelancing explored opportunities for Gen Z, emphasizing essential skills and strategies for success. Additionally, a workshop on digital transformation highlighted AI, cloud computing, and automation as key drivers of innovation and efficiency. The event served as an engaging platform for learning and networking, equipping participants with practical knowledge and motivation to advance in their careers while maintaining ethical standards.
4	Empowering the Futures with IEEE YP Mentoring Meet Islamabad (R00091)	On 6th November 2024, IEEE Islamabad Section YP organized IEEE YP Mentoring Meet 2024 at Hamdard University Islamabad, creating an inspiring platform for students and young professionals to connect with experienced mentors. Designed to support career growth, the event brought together experts from academia, industry, and government, who shared valuable insights on career development, personal branding, and industry trends. Through interactive sessions, mentors provided practical guidance on leadership, networking, and adapting to industry advancements. Attendees left with actionable skills and a stronger professional network, with many expressing appreciations for the opportunity to engage with accomplished leaders. This impactful event reinforced IEEE's commitment to fostering a supportive community, empowering young professionals to advance confidently in their careers.

National University of Technology

Sr. No	Event Name	Description
1	IEEE Awareness Webinar NUTECH	The IEEE Student Branch at NUTECH, in collaboration with the IEEE Islamabad Section's Membership Development Committee, held a pre-event webinar to raise awareness about IEEE membership and its benefits. Key topics covered included: Introduction to IEEE: Overview of IEEE as a global professional association for technology advancement. Highlighted IEEE's extensive membership and resources.

		<p>Membership Benefits: Access to the IEEE Xplore Digital Library. Professional networking, career services, and continuing education opportunities.</p> <p>Organizational Structure: Explanation of IEEE's hierarchy and the role of student branches.</p> <p>Student Activities: Introduction to the IEEE Islamabad Section Student Activities Committee and its team. The webinar concluded with a Q&A session, providing participants with additional insights into IEEE membership benefits. For more information, students were directed to IEEE's official website and social media pages.</p>
2	Field Visit to Karot Hydropower Plant	<p>The IEEE Student Branch at NUTECH organized an educational field visit to the Karot Hydropower Plant, a 720MW run-of-river project on the Jhelum River. This visit was an excellent opportunity for participants to gain practical knowledge about hydropower generation. The day started with an introductory session covering the dam's structure, safety protocols, and the significance of the project in Pakistan's energy landscape. Participants observed the electricity generation process during a guided tour of the plant, learning about turbine and generator operations. After lunch, the visit concluded with a tour of the control room, where the entire plant's operations are managed. The visit was highly informative and greatly enhanced participants' understanding of hydropower systems and control mechanisms.</p>
3	Role of IEEE Student Branches for Professional Growth	<p>The IEEE SPAX-funded event, held at the inaugural ceremony of the IEEE Student Branch at the National University of Technology (NUTECH), was a resounding success, drawing an audience of approximately 150-200 attendees. The talk, titled "Role of IEEE Student Branches in Professional Growth," served as the highlight of the event, focusing on the pivotal role IEEE Student Branches play in fostering professional development, leadership skills, and networking opportunities for students.</p>
4	FPGAs A Step Towards IC Design	<p>This workshop focused on introducing participants to the world of Field Programmable Gate Arrays (FPGAs), highlighting their significance in the journey toward Integrated Circuit (IC) design. The session covered foundational concepts, hands-on demonstrations, and practical applications of FPGAs in modern technology. Key topics included:</p> <ul style="list-style-type: none"> • Basics of FPGAs and their architecture. • The role of FPGAs in IC prototyping. • Practical design and simulation using FPGA tools. • Applications of FPGAs in the semiconductor industry. <p>The workshop aimed to bridge the gap between academia and industry, encouraging students and professionals to explore the field of IC design and hardware development.</p>

NUST School of Eng and Computer Science

Sr. No	Event Name	Description
1	IEEE SPAX FUNDED SEMINAR ON "IEEE: A Promising Platform"	<p>The event was held at School of Electrical Engineering and Computer Science (SEECS) at National University of Sciences and Technology (NUST) H-12 Campus, Islamabad, Pakistan on 4th April 2024. The event was of three hours and three speakers delivered the talks which were based on IEEE and its benefits for students, electrical engineering opportunities and related technologies for betterment of the community. A total of 80 participants attended the seminar.</p>
2	Let's Revive: A Step Towards Revival of Student Branches	<p>The one-day seminar, "Let's Revive: A Step Towards Revival of Student Branches," was held on July 4, 2024, at SEECS, NUST, Islamabad, bringing together 75+ participants from various IEEE student branches. The event featured invited talks and a networking session, highlighting IEEE's benefits, technical advancements, and opportunities for student and professional growth.</p>

3	System Level RF Design	The online seminar, led by Muhammad Ayaz Zakir, Team Lead at Saher Flow Solutions, focused on the product development cycle and RF front-end design from a system perspective. He demonstrated a live simulation of a receiver chain using ADS, covering key design parameters, and concluded with an interactive Q&A session.
4	Future Fusion: IEEE Microwave Workshop for Professionals & Students	The one-day event, "Future Fusion: IEEE Microwave Workshop for Professionals & Students," was held on May 9, 2024, at SEECS, NUST, Islamabad, bringing together IEEE graduate student members and professionals. With 80 participants (35% female), the event fostered networking, mentoring, and awareness of IEEE MTT-S opportunities while providing promotional kits, certificates, and refreshments.

Institute of Space and Technology

Sr. No	Event Name	Description
1	Arduino Workshop	The session began with an introduction to Arduino and its diverse applications, providing participants with a foundational understanding of its capabilities. It covered the basics of electronics and essential components such as sensors, LEDs, and motors, ensuring attendees gained insight into their functionality and integration. Participants then engaged in hands-on programming using the Arduino IDE, learning to write and execute simple codes. As a practical exercise, they built their first Arduino project, which included an LED blink, a motion detector, or a temperature display. The session concluded with a Q&A segment, allowing participants to troubleshoot their projects and seek guidance from experienced mentors.

Taxila Univ of Engineering and Tech

Sr. No	Event Name	Description
1	VISIT OF TEAM FFC	Team FFC visited our institution for bilateral session with the potential candidates in each discipline...primarily, Mechanical, Electrical (specialized in Power) and electronics seeking assignments in manufacturing industry after graduation.
2	WOMEN IN STEM: British Council Scholarship & More	The seminar organized by IEEE WIE UET Taxila was an enlightening session for attendees as the speakers delve into British Scholarship Council and empowering female students to come forward and unlock this opportunity for their career.
3	Comprehensive Benefits & Opportunities In The Power And Energy Society (PES) for Maximum Potential	The webinar started with the brief introduction of the speaker followed by a presentation to highlight society's history and key focus areas. The speaker shared valuable insights showcasing how the group fosters diverse leadership and supports the career advancement of individuals in the energy industry. The webinar concluded with a Q&A session and final remarks by the speaker himself.
4	MPOWER ME 2.0: Role Of Machine Learning in Data Science	The event started with a brief introduction from the speaker, then he discussed Scalability, Unsupervised Learning and Unsupervised Learning. Moreover, the workshop emphasized how machine learning enhances the capabilities of data science by enabling powerful analysis, predictive modelling, and automated decision-making processes, thereby unlocking valuable insights and driving innovation across various industries.

National University of Modern Languages-Islamabad

Sr. No	Event Name	Description
1	Workshop Series '24 - Flutter Unleashed	Participants explored mobile app development at "Flutter Unleashed" with NUML Rawalpindi's IEEE Student Branch. The session introduced Flutter, offering hands-on experience and insights from industry experts. Attendees enhanced their skills, built dynamic applications, and connected with professionals, gaining practical knowledge to excel in the evolving tech landscape..

2	Blockchain Technology and its Applications	Seminar on Blockchain Technology and its Applications, presented by Ms. Aimen Sultan. This seminar aims to provide insights into the fundamentals of blockchain technology and its diverse applications in various fields.
3	ICECT 2024	3rd International Conference on Engineering & Computing Technologies (ICECT 2024) held on May 23rd, 2024, at National University of Modern Languages (NUML) Islamabad, Pakistan. Our branch was proud to support this event, which brought together innovators, researchers, and professionals in the field of engineering and computing technologies. We witnessed inspiring talks, engaging discussions, and meaningful connections being made. Thank you to all the speakers, delegates, and participants who made this event a success! We look forward to future collaborations and events that foster innovation and knowledge sharing.

National Univ Computer & Emerging Sci-Islamabad

Sr. No	Event Name	Description
1	Employment Vs Entrepreneurship: Discussion Seminar for Young Engineers	The session featured industry experts discussing the job market, startups, and innovation, with Zunaira Ali moderating an engaging discussion. A Q&A session allowed students to seek career guidance, making the event a valuable and inspiring experience for all attendees.
2	International Conference on Accreditation and Internationalization in South Asian Higher Education Institutions (HEIs)	The event focused on quality assurance, accreditation, and internationalization in higher education, facilitating discussions on aligning academic programs with global standards. Stakeholders shared insights and best practices to enhance education quality and competitiveness in South Asia. A comprehensive publication captured the conference outcomes, reinforcing the SSAPI project's commitment to global standards and continuous improvement.

Riphah University FC

Sr. No	Event Name	Description
1	Exploring App Development With Flutter	Flutter, introduced by Google in 2017, is an open-source UI framework that enables cross-platform app development using a single codebase in Dart. It offers high performance, native-like experiences, and efficient development with features like hot reload and customizable widgets.
2	Things to Prepare for FYP Documentation	The IEEE FC Student Branch at Riphah International University Islamabad organized a workshop titled "Things to Prepare for FYP Documentation." The session aimed to guide students through the essential steps of preparing effective and professional Final Year Project (FYP) documentation. This event targeted final-year students working on their capstone projects, emphasizing the importance of clear and well-structured project documentation.
3	Mobile Application Development	The IEEE FC Student Branch at Riphah International University Islamabad organized an insightful workshop on "Mobile Application Development." This session aimed to provide participants with a comprehensive understanding of the latest trends, technologies, and best practices in mobile app development. The event targeted students and professionals eager to enhance their skills in building mobile applications for Android and iOS platforms.
4	Current Software Testing Practices	A seminar on Current Software Testing Practices was held to discuss the latest trends, tools, and methodologies shaping the field of software testing. The event gathered industry professionals, developers, and students to explore how modern testing practices are evolving to meet the demands of rapid software development cycles, increasing complexity in systems, and the rise of AI-driven technologies.

Riphah International University

Sr. No	Event Name	Description
1	Workshop Series COMSOL	The event focused on advanced COMSOL Multiphysics techniques, exploring simulation strategies for complex engineering problems. Participants gained hands-on experience in modeling, analysis, and optimization, enhancing their skills in multiphysics simulations for real-world applications.
2	IEEE Project Showcase	The event featured project displays from students across various departments, showcasing engineering prototypes, software applications, and artistic creations. A panel of faculty and industry experts evaluated the projects based on originality, technical expertise, and presentation. The event concluded with an award ceremony, recognizing outstanding projects in different categories..
3	IEEE Students Conference	The IEEE Students Conference 2024 at Riphah International University was a successful event that brought together students, faculty, and industry professionals. The conference fostered collaboration between academia and industry, showcased innovative student research projects in fields like AI, IoT, and biomedical engineering, and provided a platform for knowledge sharing and networking.
4	The Dynamics of Solar Systems	The seminar highlighted the significance of solar energy in addressing global challenges and promoting sustainability. Attendees explored technological advancements in solar systems, including on-grid, off-grid, and hybrid solutions. The event emphasized industry collaboration, the growing career opportunities in renewable energy, and fostered interactive learning through engaging discussions and sessions.

B.5 Affinity Group Activities

Young Professional (YP)

Sr. No	Event Title	Date	Event Category
1	Workshop on Machine Learning with Python	2024-03-22 04:00:00	Technical
2	Workshop on Machine Learning with Phyton	2024-04-12 04:00:00	Technical
3	IEEE SPAX Effective Communication Strategies for Success in Academic and Professional Life	2024-04-20 09:00:00	Professional
4	1st CBB Hands-On Training Workshop on Data Analysis (SPSS and MATLAB)	2024-05-22 05:00:00	Technical
5	Technovation: Empowering Young Minds for the Future	2024-08-08 04:00:00	Technical
6	Hook, Line, and Sink: Mastering the Art of the Elevator Pitch	2024-09-25 04:03:00	Non-Technical
7	Revolutionizing Industry: Empowering Through Industrial Automation and IoT	2024-10-21 05:00:00	Technical
8	IEEE R10 YP UpSkill 2024 - Islamabad	2024-10-24 05:00:00	Professional
9	TechSustain: Empowering Communities for Environmental Innovation	2024-10-30 05:00:00	Technical
10	Empowering the Futures with IEEE YP Mentoring Meet Islamabad (R00091)	2024-11-06 07:06:00	Professional
11	Networking Deck	2024-11-08 04:31:00	Professional
12	IEEE Islamabad Section CIS Industry Gala 2024	2024-12-30 04:00:00	Technical

Women In Engineering (WIE)

Sr. No	Event Title	Date	Event Category
1	IEEE WIE Islamabad Section ILS 2024 Phase1 Meeting for planning	2024-01-17 19:00:00 UTC	Administrative
2	Islamabad Section WIE Project Proposal for protecting Greenery in Islamabad City	2024-01-18 05:00:00 UTC	Humanitarian
3	IEEE WIE ISLAMABAD SECTION ILS 2024 PHASE1 MEETING FOR SETTING UP THE ILS SCHEDULE	2024-01-22 08:00:00 UTC	Nontechnical
4	IEEE ISLAMABAD SECTION WIE Awards Compilation Meeting	2024-01-19 08:34:00 UTC	Professional
5	Islamabad Section WIE ILS 2024 Event Day Planning	2024-02-01 11:45:00 UTC	Administrative

6	IEEE Islamabad Section WIE ILS followup Meeting	2024-03-25 07:33:00 UTC	Administrative
7	WIE Islamabad Section hosts ISYWSC'24 initial meeting	2024-04-23 10:17:00 UTC	Administrative
8	Islamabad section WIE visit to CDA Hall for ILS'24	2024-05-06 06:01:00 UTC	Administrative
9	Role of women in build up Industrial economy of a country	2024-05-07 05:07:00 UTC	Professional
10	Women as CyberGeeks: Explore the vulnerabilities in your machines	2024-05-08 05:00:00 UTC	Technical
11	Engaging More Women in AI and 4IR Technologies: Women in AI, Lets Build your future with WIE	2024-06-28 04:00:00 UTC	Technical
12	Learn to Hack: Identify vulnerabilities in applications	2024-06-03 12:30:00 UTC	Technical
13	WIE ILS Followup Meeting by IEEE WIE Islamabad Section	2024-08-09 07:36:00 UTC	Administrative
14	WIE AGM'24	2024-08-09 13:06:00 UTC	Nontechnical
15	WIE Islamabad Section organizes International Leadership Summit'24 on 10 OCT-11 OCT 2024	2024-10-10 03:30:00 UTC	Technical
16	Welcome speech and introduction - Dr. Celia Shahnaz IEEE WIE Golabal Chair at IEEE WIE ILS'24	2024-10-10 05:30:00 UTC	Administrative
17	Keynote Address: By Riphah International University Dean Innovations in Education- Insights into how technology transforms education	2024-10-10 05:40:00 UTC	Pre-U STEM Program
18	IEEE WIE gives me wings to fly	2024-10-10 05:50:00 UTC	Administrative
19	October Talk: Breast Cancer	2024-10-27 12:00:00 UTC	Humanitarian
20	IEEE WIE Multilingual Web Series By WIE Islamabad Section on Breaking barriers navigating the gender gap in tech	2024-11-09 07:46:00 UTC	Professional
21	IEEE WIE Multilingual Web Series By WIE Islamabad Section on Women in Cybersecurity: Protecting the Digital Future and Empowering the Next Generation	2024-11-09 07:00:00 UTC	Technical
22	Bridging Gender Gap in Technology, Academia and Industry	2024-12-14 10:00:00 UTC	Professional
23	Panel Discussion on AI Trends	2024-10-30 08:00:00 UTC	Pre-U STEM Program

B.6 Awards & Recognition Activities

- Award constituted by the Section
 - **BEST STUDENT BRANCH:** IEEE Riphah International University SB
 - **BEST STUDENT VOLUNTEER:** Hasaan Bin Munir Malik
 - **BEST WIE AG:** IEEE PIEAS Islamabad WiE AG
 - **BEST WIE AG VOLUNTEER:** Amatullah
 - **BEST STUDENT TECHNICAL CHAPTER:** IEEE CTSoc UET Taxila
 - **Medal of Honor**
 - Prof. Dr. Umar Shahbaz Khan
 - Prof. Dr. Yasar Ayaz
 - Mr. Ahsan Farooqui
 - Certificates were also awarded to SAC team.

Educational Activities:

- Skill Development for college students - IEEE R10 EAC
- Please list all Awards and Recognitions received by the Section, and members in the Section, from R 10 and IEEE HQ during the year

Key Achievements:
<ul style="list-style-type: none"> • Execution of Islamabad Students/ Young Professionals / Women in Engineering / SIGHT Congress 2024 • Won multiple Global and Region 10 Grants in Educational Activities, YP Activities, WiE Activities, SPAX Activity, Membership Development Activities, Society Activities, and Industrial Activities • Revamping of Student Branches

Grants won:
<ul style="list-style-type: none"> • IEEE R10 SAC Membership Development and Leadership Training • IEEE R10 SAC Student Branch Revival Fund • IEEE CIS Chapter Project • IEEE CIS Summer school • IEEE YP Local Activity • IEEE YP STEP • IEEE YP Meetup • IEEE R10 Industry Relations • IEEE R10 YP UpSkill • ISYWSC 2024

B.7 Communication Activities (Newsletter, Home Page, E-mail etc.)

- Newsletter (name and number of issues in the year)
 - Activities: IEEE Newsletter Published (Bi Annual)
- Home Page of the Section (www.ieeeislamabad.org)
- Islamabad Section has an active Facebook page and a Facebook Group.

B.8 Industry Relations

- Membership growth and retention
- Activities for/with industrial members

B.9 Humanitarian Technology Activities

- Humanitarian Technology related activities supported by the Section including collaboration with other OUs.

Event Title	OU
Islamabad Section WIE Project Proposal for protecting Greenery in Islamabad City	Islamabad Section WIE AG
Autism Awareness Workshop	NUST SEECS
Blood Donation: Awareness and Instrumentation Insights	Riphah International University
Breast Cancer Awareness Seminar	National University of Modern Languages, Islamabad
October Talk: Breast Cancer	Taxila Univ Of Engineering And Tech, WIE
Seminar on University Culture: Insights from an Islamic Perspective	National University of Modern Languages, Islamabad

B.10 Community Activities

- IEEE Social activities (Family Day, IEEE day, Engineers Week)”

Event Title	Event Date
VISIT OF TEAM FFC	2024-02-15 05:30:00
INDUSTRIAL TOUR TO OGDCL	2024-02-19 03:40:00 UTC
ANNUAL GENERAL MEETING 2023-24	2024-02-29 07:00:00 UTC
CSR: Cleanliness Drive	2024-02-28 04:00:00 UTC
IEEE Day 2024 Celebration	2024-10-01 06:00:00 UTC
Iftar Dinner of IEEE Islamabad Community	
IEEE CTSoc UET Taxila Cleanliness Walk in collaboration with Electronics department	2024-04-29 05:30:00 UTC
Community Service Awareness Seminar by IEEE CTSoc in collaboration with Electronics Department	2024-05-02 05:00:00 UTC
IEEE DAY 2024	2024-10-10 06:30:00 UTC
Clean & Green Pakistan Initiative at F-9 Park	2024-10-24 06:00:00 UTC
Meme Competition	2024-11-05 07:30:00 UTC
Game Fest	2024-11-07 07:00:00 UTC
IEEE COMSATS Orientation FA'24	2024-09-01 03:00:00 UTC

Farewell Ceremony 2k24	2024-04-20 08:00:00 UTC
Cleanliness Walk 2k24	2024-04-29 08:00:00 UTC
IEEE Day 2024	2024-10-10 06:30:00 UTC

PART C - OTHERS

C.1 Special Events

- Please briefly describe the importance of special events and the outcomes achieved
- Funding secured from the IEEE and external sources including sponsorships

C.2 Relationship with National and International Societies and Non-Government Organizations (NGO)

- The National Organization called CESAT (Centre of Excellence in Science & Applied Technologies) organizes a conference with IEEE Islamabad Section on yearly basis.
- A company called DICE Analytics provides training in field of AI and Big Data. IEEE Islamabad signed MOU with them to provide discounted training to IEEE Islamabad Section members.

C.3 Collaboration with other IEEE Sections

- A WhatsApp group is created with all 3 sections of Pakistan to better communicate with each other

C.4 Support extended to Sub-sections & Society Chapters within the Section

Chair Peshawar subsection is the member of IEEE Islamabad Section Executive Committee. Our subsection is at the brink of getting enough resources to move to section. We will try to have more activities in subsection to enable it to move it towards being a full section. The following things are planned:

- Promotion of student activities in the sub-section
- Arranging membership development seminars in sub-section with focus on professional memberships.
- Create value addition to engage professional and senior members in IEEE activities

C.5 Best Practices of your Section (which you would like to share with other Sections for the benefits of members)

- We have also made several listserv mailing lists that help us communicate more effectively
- We made it compulsory for conference organizers to connect with a society chapter and should have student branch in university
- We use enotices to reach out to all members for all announcements
- Secretary is available to all members and interacts with most of them to ensure they are motivated.

C.6 Problems anticipated and suggestions for solutions, if any

PART D - GOALS AND PLANS

D.1 Continuation of project/activity in progress and their implementation plans

- Information is provided in Section D.2

D.2 Goals and Future Plans

Subsection:

- Promotion of student activities in the sub-section
- Arranging membership development seminars in sub-section with focus on professional memberships.
- Create value addition to engage professional and senior members in IEEE activities

Technical:

- Workshops and seminar series to equip IEEE members with latest technologies are planned and will be executed in this year

Humanitarian:

- Revamping of SIGHT Group to execute full fledge humanitarian

Membership Development:

- Membership development seminars are planned to improve membership statistics

Educational Activities:

- Several activities were conducted in 2024. In future we will be arranging more pre-university event for the school students

D.3 Any innovative ideas to make IEEE more creative and value added for sustaining the membership retention and recruitment goals.

- Create a framework for local benefits. IEEE should provide SOP and details on how to incorporate and validate local benefits

D.4 Business Plan for Sustainable Growth and Financial Stability.

- Engage more and more volunteers
- Work with National and Private organizations and try to resolve their main points