



for Humanity

Annua REPORT 2021

📚 IEEE STUDENT BRANCH UET TAXILA

TENURE DETAILS



IEEE STUDENT BRANCH UET TAXILA

Following are the details mentioned that IEEE went through the TENURE 2021.

REPORT TYPE: ANNUAL

YEAR REPORT: 2021

GENERAL INFORMATION

STUDENT BRANCH NAME

University of Engineering and Technology, Taxila

STUDENT BRANCH CHAIR	MOHSIN JAVAID
IEEE NUMBER	97501878
CONTACT NUMBER	+92-314-5464521
EMAIL ADDRESS	mohsin.javaid@ieee.org
NAME OF BRANCH COUNSELLOR	PROF. DR. GULISTAN RAJA
IEEE NUMBER	90703261
CONTACT NUMBER	+92-312-9552563
EMAIL ADDRESS	<u>gulistan.raja@uettaxila.edu.pk</u>
TOTAL STUDENT MEMBER	40
TOTAL HIGH GRADE MEMBER	70
TOTAL STUDENT MEMBERS RECRUITED IN THE LAST 3 MONTHS	Nil.
TOTAL HIGH GRADE MEMBERS RECRUITED IN THE LAST 3 MONTHS	Nil.

All information in the report is accurate to my belief and knowledge.

PROF. D. GULISTAN RAJA

MOHSIN JAVAID

ANNUAL EVENTS REPORT 2021

About IEEE:

The Institute of Electrical and Electronics Engineers (IEEE) is a professional association with its corporate office in New York City and its operations centre in Piscataway, New Jersey. It was formed in 1963 from the amalgamation of the American Institute of Electrical Engineers and the Institute of Radio Engineers. Today, it is the world's largest association of technical professionals with more than 420,000 members in over 160 countries around the world. Its objectives are the educational and technical advancement of electrical engineering, electronics engineering and allied disciplines. IEEE is composed of professional engineers, scientists, researchers and students. A chained network at different level is observed in IEEE, to which IEEE Student Branch at the local universities, is the most basic level.

About IEEE UET Taxila:

IEEE Student Branch UET Taxila is one of the most well-reputed and most successful student branch of IEEE Islamabad Section. The student branch exhibits excellent performance, volunteerism and passion towards IEEE at each level.

We have two technical chapters namely IEEE Power and Energy Society (PES) and Consumer Electronics Society (CES) and Women in Engineering (WIE) Affinity Group at our student branch. Over 150 students are a part of the society as branch/university member and about 100 international members are included in the society. These include student members (graduates and undergraduates), faculty members and senior members.

IEEE UET Taxila arranged a bunch of events on branch, section, council and even regional level to help the students advance in the technology and keep pace with it. Students were engaged and empowered in the field of Science & Technology through various activities like seminars and technical workshops. This report encloses the details of the events in 2021.



Events Details:

MEMBERSHIP DRIVE

To aware the students, IEEE SB UETT arranged an International Membership drive.

IEEE SB UET Taxila announced the Membership drive 2021 on 4th January 2021. The motive was to introduce students to the international membership of IEEE which had a 50% discount and its benefits. The procedure to create an IEEE account was shared with students followed by explanation of purchasing IEEE membership along with PES and WIE memberships.



Figure 1: Poster for Membership Drive

PERSONAL BRANDING

To make the Electrical and Electronics engineers especially Women in Engineering aware of the networking benefits around the world.

Team IEEE SB UET Taxila announced the launch of WINC (WIE International Network Connections), a project of IEEE WIE & YP Florida West Coast Section U.S.A to create a knowledge bridge between the U.S.A and Pakistan initially and expand network to other countries as well. Our goals were to spread knowledge among IEEE Members by arranging webinars and workshops, connect Electrical and Electronics Engineers especially women Engineers for networking and increase IEEE members around the world.

Starting our WINC journey from Islamabad, Pakistan by organizing workshop on "Personal Branding" by Dr. Carolyn Root, CEO Alpha UMi Inc



Figure 2: Poster for Personal Branding

IEEE PES DAY 2021 ACTIVITIES

The Pes day 2021 began with introducing the power and energy society and its benefits to the world.

Realizing the importance of Power and Energy Sector, PES DAY was announced with an introductory speech by Dr. Kandeh Yumkella is a Sierra Leonean Member of Parliament and former United Nations Under-Secretary-General, Chair of UN-Energy (2008-2015) and founding CEO and Special Representative of the Secretary-General on Sustainable Energy for All.



Figure 3: Poster of the webinar

ENERGY REVOLUTION IN PAKISTAN AND WORLD

PES DAY 2021 Ambassadors arranged a webinar on energy revolution in Pakistan and world to enlighten about the clean tech trends around the globe and how it effects the energy revolution.

In regard to IEEE PES DAY 2021, a webinar was arranged on 4th April 2021 at 3 PM (+5 GMT) in which Ms. Umme Soolaim was invited as guest speaker. The event started with the PES Day's introduction, Energy Consumption across Pakistan was discussed then our worthy guest speaker Miss. Ume Soolaim told us about challenges in the energy sector due to the usage of non-renewable energy resources and then the solutions to those challenges were discussed.

As the usage of renewables is the solution, major renewable energy production ways were explained, including Solar, Wind, Hydel, Tidal/Marine, Geothermal, and Biomass Energy. Then clean tech trends of global market were discussed and finally basic guidance was provided for undergraduate engineers who are interested to pursue their career in Renewable Energy Production.



Figure 4: Poster of the webinar.

PAKISTAN ENERGY POLICY AND FUTURE ASPECTS

A webinar was conducted to impart basic knowledge energy and energy policy in Pakistani power sector and its role in future.

IEEE PES SB conducted a webinar on **Pakistan Energy Policy And Future Aspects**" in regard to PES Day activities of PES Day 2021. The webinar took place on 8th April 2021 at 4.00PM (+5 GMT).

The event started with a welcome note, followed by introduction to our Guest Speaker Ma'am Maha Kamal. With her vast experience of energy and policy, she shared her knowledge of energy security and key energy issues in Pakistan.

Initially, Energy Policy goals were discussed in terms of Cheap, Clean, and Secure terms. Consumption across Pakistan was discussed in which our speaker introduced us to the international political economy of energy.

The event proved to be a true success based on the feedback of more than 80 students who attended and found it to be both, insightful and engaging.



Figure 5: Figure Showing Poster of the event.

GRID RESILIANCE- AN INDEPTH LOOK

An IEEE PES SB conducted a webinar on **Grid Resilience: An In-Depth Look**" in regard to PES Day activities of PES Day 2021. The webinar took place on 9th April 2021 at 4.00PM (+5 GMT).

The event began with a short introduction of our honorable speaker, **Mr. Hicham Khireddine** (Grid Modernization Engineer at Eversource Energy), who then began his presentation and quickly got into the foundations of grid resilience.

He then went deep into the US grid system while comparing it with that of Pakistan's and continued to relate the technical aspects of Grid Resilience concerning Artificial Intelligence, Cyber Security, and Weather-Effect. Mr. Hicham heightened his talk with some real-world examples from his experiences, one such example was about his personal research on improving the grid resiliency at Eversource, his department.

The event proved to be a true success based on the feedback of more than 30 students who attended and found it both insightful and engaging.



Figure 6: Poster of the webinar

ALTIUM WORKSHOP

Two-day Workshop was held on Altium to introduce young minds to it's usage and applications in modern world.

IEEE Power and Energy Society UET Taxila Chapter arranged a workshop on the topic Altium Software. This Workshop was held on Friday, April 09, 2021 at 3pm (GMT+5) and Saturday, 10 April 2021, at 9:30 pm (GMT+5) via Microsoft Teams. The workshop series on Altium software was arranged by PES Day'21 Ambassador's Team UET, Taxila to make the audience aware and familiar about the Altium and its usage. This two-days were consisted of three presentations.

On the first day, the first presentation was started with a basic introduction of the event and worthy guest speakers. Initially introduction to Altium designer and its tools were discussed then our worthy guest speaker told us about different electronic circuits including Bread Board, Vero Board, and Printed Circuit Board after that different built-in Altium libraries were discussed which included the integrated libraries and the footprint libraries. On the second day, a circuit was implemented live for the audience to make them well aware of how to implement PCB design in Altium Software. The event ended on the second day all queries of the audience were entertained, followed by an ending note from the speaker



Figure 7: Speaker giving brief about Altium Design.

AI IN SMART GRIDS

IEEE Power and Energy Society UET Taxila Chapter arranged a webinar on the topic AI In Smart Grids.

This Webinar was held on Sunday, April 11,2021 at 10am (GMT+5) via Microsoft Teams. The webinar started with introduction of our Worthy Speaker Mr. Muhammad Adeel Arif. Mr. Adeel has the research experience of 4 years in "Power System Protection at Smart Grid Lab" and "Machine Learning lab for Power System". Along with this, he also has the industrial experience of working at Schneider Electric Pakistan, FFBL Power Company and Power Tech Research LCC. Germany. As Artificial intelligence and Smart Grids are becoming the new norm of future then why not we get to know about them. IEEE PES SBC UET Taxila brings an event on "AI for Smart Grids' for its parts of IEEE PES Day 2021 Celebrations.



Figure 8: Session on AI in Smart Grids

DEPLETION OF CONVENTIONAL SOURCES OF ENERGY

Webinar on Hazards of depletion of conventional sources of energy was conducted to make student s aware of future energy crisis.

This IEEE PES SBC UET Taxila with SEE conducted an event on "Depletion of Conventional sources of energy". The event started on Sunday 18th April, 2021 at 2PM (GMT+5). The event started with the introduction of our worthy speaker "Engr. Babar Abbas". He is a faculty member of Environmental Engineering at UET, Taxila and an expertise at Preparation of Integrated Solid Waste Management Plans. Engr. Babar Abbas discussed about different conventional sources of energy, the importance of renewable sources of energy and how these sources can be used to overcome the depletion in the energy sector.



Figure 9: Poster of Webinar

ELECTRICAL NETWORK MODELLING USING ETAP

An online webinar on trending technologies and usage of modern software ETAP

IEEE PES SBC UET Taxila in Collaboration with PES SBCs of CUI Islamabad, UCET IUB, UET Lahore, HITEC, IST & NED UET Karachi arranged a webinar on the topic of "Electrical Network Modelling using ETAP" on 24 April, 2021 at 3PM GMT+5 via "Microsoft Teams".

Our Speaker for this event was "Engr. Waqar Sheikh". He has over 10 years of experience in field of Power System Analysis and is 115 ETAP certified. He has also conducted several sessions in organizations within Kingdom of Saudi Arabia. The event was a major success with 200+ participants.



Figure 10: Poster of the Webinar

TALK ON ENERGY VALUE CHAIN AND INTEGRATING RENEWABLES IN THE CHAIN

Webinar was held on the said topic on **29th April 2021** for undergraduates to make them familiar with Energy policies of world and the system of chain.

IEEE PES SB UET Taxila in collaboration with IEEE IST SB, IEEE AND WIE SEECS, NUST, conducted a webinar on the topic of energy chain.

The guest speaker was Hira Wajahat Malik, who is the founder of Climate Launchpad. The event began with the introduction of the topic followed by renewable energy resources, their usage and importance. The event was successful with 120+ participants.



Figure 11: Poster of Webinar

INTEGRATION OF SOLAR POWER INTO THE ELECTRICITY GRID: APPLICATIONS AND PROBLEM

A Webinar was held to make young minds aware of solar power and its importance in the modern electric world.

Team IEEE PES SB UET Taxila held a webinar on the given topic on 31st April 2021 in regards to PED Day Activities. The event began with the introduction of the worthy speaker. The webinar focused on solar power, its usage, cost and importance, challenges faced and applications in the upcoming future.

The event was followed by a QnA session and ended.



Figure 12: Poster of the Event

WORKSHOP ON MATLAB

Webinar on the said topic was held on 12th May 2021 to make the freshmen aware of the use of software and its applications.

A workshop on MATLAB was held to make the audience aware about the MATLAB software which is very important for the beginners especially those who are going to study this software in their upcoming semesters.

The workshop regarding MATLAB software was arranged by IEEE SBC UET, Taxila on 12th May, 2021 at 03:00 pm (GMT+5). The event was started with the welcome note, followed by introducing our Guest Speaker Mr. Asmad Razzaq. Our worthy speaker made the student familiarize about the basics of MATLAB software and its importance for the engineers and the programmers. After giving students the basic introduction about the software and its functions, our worthy speaker discussed plotting and the various applications of MATLAB software by elaborating them with various examples.

Furthermore, the basic guidance was provided to all the juniors who are stepping into use this software in their degree. At the end all queries of audience were entertained, followed by ending note of speaker, the webinar ended at 04:45 pm (GMT+5).

For the event we had almost 170 participants out of which 50 were IEEE members.



Figure 13: Poster of the webinar

Figure 14: Speaker demonstrating files on MATLAB

THE ART OF FREELANCING

Webinar was held on **19th May 2021** to make the young freshmen learn about freelancing and earning on their own.

Realizing the need for an hour, Team IEEE SB UET Taxila organized a workshop on the Art of freelancing. The workshop covered important aspects of content writing, some tips to kickstart your journey towards financial independence, and a lot more.

Our speaker, Ms. Sadia Mazhar was an acclaimed freelancer and an entrepreneur herself.She is recently honored as one of the top 100 freelancers of our country and is conducting many trainings for the students and professionals. She is also a founder of Torque 360 SMC.



Figure 15: Poster of the Webinar

NATIONAL YOUTH CREATIVE EVENT

NATIONAL YOUTH CREATIVE EVENT'21 IEEE Student Branch UET Taxila announced collaboration with one of the most prominent yet competing societies of Pakistan, IEEE Student Branch MUET SZAB for their signature event "National Youth Creative Event NYCE'21".

IEEE Student Branch MUET SZAB arranged an amazing event "National Youth Creative Event NYCE'21". The event was organized for all of us for personal grooming and self learning through different Technical and Non-Technical sessions.



Figure 16: Poster of Collaboration with UET Taxila

ALL PAKISTAN TECH AND ART FESTIVAL'21

IEEE Student Branch UET Taxila announced its partnership with one of the most eminent societies of Pakistan, GCU-ACM Student Chapter for their signature event "ALL PAKISTAN TECH AND ART FESTIVAL'21".

It aimed to provide students a great exposure and a means to learn from experienced and accomplished professionals. All Pakistan Tech and ArtFestival'21 was contribute efforts of bringing the technological community of Pakistan closer together, during the pandemic when technology has been more important then ever in keeping things running.



Figure 17: Collaboration Poster of APTA'21 and IEEE UET Taxila

ANNUAL GENERAL ELECTIONS

Annual General elections were held to decide the future IEEE Student branch Cabinet.

Annual Elections were held between the nominees and the new chairperson was announced along with the future cabinet for the year 2021.

STB-6087	ENT BRANCH, UET TAXILA	Wie St
	NOTICE	
tudent Branch UET Taxila	announces Office Bearers for the te IEEE MENTOR	nure 20201 - 22.
Designation	Name	Department
Mentor	Ahmar Ul Haq	17-Electrical
	IEEE CABINET	
Designation	Name	Department
Chairperson	Mohsin Javaid	18-Electrical
Vice-Chairperson	Sabahat Tabassum	18-Electrical
General Secretary	Hasnain Riaz	18-Electrical
Treasurer	M. Waqar	18-Electrical
	WIE CABINET	
Designation	Name	Department
Chairperson	Suman Zahoor	18-Electrical
Vice-Chairperson	Sabahat Gul	18-Electrical
General Secretary	Javeria Noor	18-Electrical
Treasurer	Nayab Ahmad	18-Electrical
	PES CABINET	
Designation	Name	Department
Chairperson	Moiz Ahmad	18-Electrical
Vice-Chairperson	M zain Ali	18-Electrical
General Secretary	Ahmad Asif	18-Electrical
Treasurer	Usman Arshad	18-Electrical
	CES CABINET	
Designation	Name	Department
Chairperson	Abdul Rafay Hameed Malik	18-Electronics
Vice-Chairperson	Zunaira	18-Electronics
General Secretary	Areeba Zainab	18-Electronics
Treasurer	Habib Ur rehman	18-Electronics
Joint Secretary	Zeeshan abbasi	18-Electronics
Academic Coordinator	Hamza Tanveer	18-Electronics

UL HAO

air, IEEE UETT

UMAR KHAN Advisor, IEEE CES UETT

INTISAR ALI SALIAD Advisor, IEEE PES LIETT

GULISTAN RAJA Counsellor, IFFF UFTT

Figure 18: Cabinet 2021-22

WEBINAR ON ULTIMATE GUIDE TO FYP

A webinar was held on the topic How to FYP, basically for the final year graduates, how to ace that.

A non-technical and informative webinar on the topic of FYP was arranged by IEEE PES Chapter UET Taxila on 7th August 2021 at 04:00 pm (GMT+5) conducted by the Guest Speaker Mr. Ali Hassan Bhatti. Initially, the speaker described the basic components of a successful Final Year Project and explained them by showing various examples. He thoroughly guided all the participants regarding the hurdles students face during their final year projects.

Selection of topic, searching the content, advisor selections and many other topics were discussed elaborately. The speaker also shared some of the best tips and tricks for the successful execution of FYP.



Figure 19: Poster of the Webinar



Figure 20: Speaker explaining the topic

THE BASIC ART OF MACHINE LEARNING

A webinar was conducted to guide students about machine learning and its applications.

IEEE PES SBC UET Taxila in collaboration with TRAC, IEEE CES and IEEE WIE Affinity Group is bringing you an enlightening webinar on "The Basic Art of Machine Learning" by Ramsha Siddiqui.

Machine learning provides computers with the ability to learn without being explicitly programmed. It focuses on the development of computer programs that can change when exposed to new data.



Figure 21: Poster of the webinar

CALL FOR DIRECTORS AND DEPUTY DIRECTORS

Directors and deputy directors were inducted in different domains of IEEE SB UET Taxila.

IEEE SB UET Taxila is opened the Recruitment Drive for Directors and Deputy Directors for the academic year 2021-2022.

Every member was encouraged to take this opportunity and apply for it. General members from 2k20 can apply for Deputy Directors, whereas Co-Heads from 2k19 can apply for Directors.



Figure 22: Poster Announcing the call for Directors and Deputy Directors

STEM 1.0

A series of 10 webinars was conducted consisting of different and a variety of technical modules.

IEEE PES and IEEE WIE AG UET Taxila announced a series of events as "STEM 1.0" to foster young minds with STEM activities and ventures.

STEM is important because it penetrates every part of our lives. These activities provide hands-on and minds-on lessons for the students that encompass the whole range of experiences and skills.

STEM 1.0 is bringing you some of its signature events for the year as:

S - Solar Energy An Insight towards future

T - Technical & Non- Technical Sessions

1. Graphic Designing Workshop

2.Acing in Microsoft Excel

3.Demystifying Bitcoin

4. Achieve Your Full Potential

5. How to Create a Job-Winning Resume

E - Entrepreneurship Module (Idea Development & Startup Methodology)

M - Machine Learning Workshop



Figure 23: Posters of the STEM 1.0

ACHIEVING YOUR FULL POTENTIAL

The STEM 1.0 series conducted it's first webinar on 6th September 2021, to guide students on how they can achieve their full potential.

In this session, the speaker discussed the strategies, key personality attributes & qualities that will help students to attain their full potential



INTRODUCTION TO ARDUINO

The Last module of STEM 1.0 Series to intoduce freshmen to basics of arduino.

The STEM 1.0 came to end with a module that illustrated basic knowledge of arduino, it's usage and applications.



IEEE DAY AWARENESS WEBINAR

Leaders IEEE SB UET TAXILA in collaboration with IEEE UCET IUB Student Branch has arranged a webinar on IEEE DAY Awareness.

The webinar was held on September 12,2021. This webinar had covered the introduction of IEEE and how we become its member. The webinar also had covered the benefits we can get after joining IEEE.



Figure 26: Poster of the Webinar

ARTIFICIAL INTELLIGENCE

This webinar was conducted in order to spotlight the importance of Machine Learning called as ARTIFICIAL INTELLIGENCE on September 23rd, 2021 at 7PM (GMT+5) by IEEE, Student Branch, UET TAXILA.

The main focus of this webinar it to through light upon the Machine Learning and different aspects followed by the difference of Traditional Programming and Machine Learning (AI). The speaker of the webinar elaborated the difference by explaining Machine Learning Process step by step by giving examples and through different web diagrams. The session was very informative covering every aspect of Machine Learning and the relation of Artificial Intelligence as well as the concept of Deep Learning. In addition, speaker also explained different types of Machine Learning that includes SUPERVISED, UNSUPERVISED, and REINFORCEMENT Learning. Furthermore, speaker of the webinar also added aspects and features of these types and also gave some applications that use the concept of Machine Learning.



Figure 27: Poster of the Webinar

FIRESIDE CHAT WITH SYED HUSNAIN

This webinar was conducted on 2^{nd} October 2021 by IEEE Day 2021 Ambassadors. The webinar had Mr. Syed Husnain Tanweer Kazmi, founder of IEEE Student branch UET Taxila, The webinar aimed to have an informative talk by the speaker following the live questions from the audience and guiding them about the roadmap to a successful career.



Figure 28: Poster of the Webinar

IEEE DAY CAKE CUTTING CEREMONY

The IEEE Day Ambassadors arranged cake cutting ceremony on behalf of IEEE Day 2021 on 5th October 2021.

The event focused on guiding about IEEE Day and the discount that has been offered permanently on its international membership. The event concluded by cutting the cake and distributing it among the audience.



Figure 29: Cake Cutting ceremony

Figure 30: IEEE DAY 2021 Ambassadors

GENERAL BODY MEETING

A general body meeting was held to entertain the queries of juniors regarding webinars and events and to discuss the plans.

A GBM was conducted on **9th November 2021**. The meeting was held to discuss routine events and to introduce the newly inducted members to IEEE. The event also focused on elaborating the duties of selected directors and co-directors.



Figure 31: Poster of the GBM

SPORTS FEST

This event was conducted on 24th November 2021 in regard to the Sports week announced at University. The event focused on extracurricular activities for students by offering a variety of games and competitions for students. The students were awarded wirttecurettese award ceremony later on.



Figure 32: Poster of the Sports Fest





Contact Us

1. Dr. Gulistan Raja

Counsellor IEEE Student Branch UET Taxila Email : gulistan.raja@uettaxila.edu.pk

2. Mohsin Javaid

Chairperson IEEE Student Branch UET Taxila Contact number : 03145464521 Email : mohsin.javaid727@gmail.com

3. Moiz Ahmad

Chairperson IEEE PES Chapter UET Taxila Contact number : 03125998559

4. Suman Zahoor

Chairperson IEEE WIE AG UET Taxila Contact no : 03400017699

5. Abdul Rafay hameed

Chairperson IEEE CES Chapter UET Taxila Contact no : 03065811085

JOIN US ON :

twitter.com/IEEEorg

facebook.com/ieeepes.uett

instagram.com/ieeepes.uettaxila

f

See Student Branch uet Taxila