

**Section Report**

**IEEE LAHORE SECTION**

**ANNUAL REPORT 2011**

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# **PART A ­ SECTION SUMMARY**

## A. 1 Executive Summary

IEEE Lahore Section previously known as Pakistan Section was formed as a full-fledged Section in 1964. There are two society chapters, namely, Communication Society, and Computer Society. A joint chapter of Control Systems Society has also been formed last year. There are 11 active student branches in this section besides GOLD and WIE groups. Work is being done to establish new branches and reactivate old branches.

The Annual General Meeting of Lahore Section for the year 2011 was held on December 20, 2011 at the Government College University, Lahore. Dr. Tanveer Haq, Vice President Wi-Tribe was the Chief Guest.

In the year 2011 effort continued for advancement of eligible Members to Senior Member and Fellow grades.

The section membership was five hundred eleven (511) as on Dec 20, 2011, very close to the last year’s total of 520.

The Lahore Section was represented in Region 10 Committee Meeting by Chair Dr. Shafay Shamail.

During the year 2011, five (5) administrative meetings were held apart from many technical activities.

This year students from Lahore Section participated in the R10 Student Congress held in Auckland. The IEEE Lahore Section acknowledges the generous support from NetSol, Lumen Soft, and Mentor Graphics for the travel of the student volunteers to this prestigious event of the R10.

The year 2010 saw devastating floods affecting a large number of population. The IEEE Foundation established “Pakistan Flood Relief Fund” in which over US$ 100,000 were collected worldwide. In 2011, Proposals were sought from organizations to participate in the activities to support the flood-hit areas. Due to the leading role of Mr. Aamir Jelani from Islamabad Section, the award is under way. The following three organizations were finally selected for the award after a rigorous selection process.

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## A. 2 Financial Report

Financial reports are provided separately, and uploaded through L50.

## A. 3 List of Outgoing Section Officers and Executive Committee Members – 2011

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Name** | **Designation** | **Member Number** |
| 1 | Dr. Shafay Shamail | Chair | SM-01855139 |
| 2 | Prof. Dr. Khaver Zia | Vice Chair  Computer Society Chair | M-85026639 |
| 3 | Dr. Tariq Jadoon | Treasurer | M-40056520 |
| 4 | Prof. Dr. Amjad Hussain Shah | Secretary  Conference Chair | SM-41388554 |
| 5 | Prof. Dr Syed Zahoor Hassan | Past Chair | SM-04404604 |
| 6 | Prof. Dr. Arshad Hussain | Student Activity Chair (SAC) | M-08334994 |
| 7 | Prof. Dr. Noor M. Sheikh | Communication Society Chair | M-41533774 |
| 8 | Engr. Jawed Iqbal Bhatti | Member | M-08893836 |
| 9 | Dr. Zartash Uzmi | Member | M-40056520 |
| 10 | Engr. Syed Shahid Hussain | Member | M-04433850 |
| 11 | Dr. Shahid Masud | Member | SM-03210119 |
| 12 | Eng. Shazeb Javed Rahore | Invited Member | M-04673612 |
| 13 | Rafaeel Akbar Chaudhry | Chair GOLD  Chair Membership Development | M-80057009 |
| 14 | Syeda Synnia Tanveer | Section Student Representative (SSR) | 90556208 |
| 15 | Mr. Ishtiaq Bhatti | Office Manager |  |

## A. 4 List of Incoming Section Officers and Executive Committee Members – 2012

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | | **Title** | **Membership No.** |
| 1. | Dr. Khaver Zia | Chairman | M-085026639 |
| 2. | Dr. Amjad Hussain | Vice Chairman | SM-41388554 |
| 3. | Dr. Ali Afzal Malik | Secretary | M-90361581 |
| 4. | Dr. Syed Zahoor Hassan | Treasurer | SM-04404604 |
| 5. | Dr. Shafay Shamail | Past Chair | SM-01855139 |
| 6. | Dr. Muhammad Tahir | Member | M-40153160 |
| 7. | Dr. Sarmad Hussain | Member | M-91268391 |
| 8. | Mr. Shazeb J Rathore | Member | M-4673612 |
| 9. | Mr. Naveed Ahmad Khan | Member | M-91284317 |

The new ExCom 2012 will announce the following:

* Membership Development Activities Chair (MDAC)
* Student Activity Chair (SAC)
* Professional Activity Chair (PAC)
* Web Master / Newsletter Editor
* Section Representative for the Coordination of IEEE Foundation Fund for Pakistan Flood
* Computer Society Chair (CSC)
* Communication Society Chair (ComSocC)
* Section Student Representative (SSR)
* Chair GOLD
* Co-opted Members of Ex-Com

## A. 5 First Executive Committee of IEEE Pakistan WIE Forum

IEEE Pakistan WIE Forum was initiated and planned by IEEE-WIE GCUF with the collaboration of Madam Ramalatha (Former, R10 WIE Coordinator) on 30th May 2010 during the National WIE Summit 2010 held at GC University Faisalabad. Initially an ad-hoc committee that was then replaced by elected members in March 2011. The Chair Mehvish Zahoor, and the Treasurer Anum Javed of the IEEE Pakistan Forum were from the IEEE Lahore Section.

The members of the first Executive Committee of the IEEE Pakistan Forum are:

|  |  |  |
| --- | --- | --- |
| Name | Designation | Affiliation |
| Mehvish Zahoor | Chair | IEEE Lahore Section |
| Fatima Imdad | Vice Chairperson | IEEE Islamabad Section |
| Maryam Saeed | Secretary | IEEE Islamabad Section |
| Anum Javed | Treasurer | IEEE Lahore Section |
| Rabia Khalid | Newletter Editor | IEEE Karachi Section |
| Sana Syed | Web Administrator | IEEE Karachi Section |

# **PART B - ORGANISATIONAL ACTIVITIES**

## B. 1 Membership Development Programmes

**Efforts in Membership Development**

Efforts are being made for membership development through seminars, lectures and by inviting non-members to special functions, where they are briefed about technical and educational advantages offered by IEEE through its technical societies offering state-of-the-art learning opportunities. Different engineering organisations, software houses, and teaching institutions are being approached. Quite a few of these have shown their interest of joining IEEE because of its quality of scientific and engineering material.

Introductory sessions have been conducted with the representatives of different colleges & universities where Bachelors and Masters in Electrical Engineering and Computer Science programs are being offered. The response from the institutions has been very positive and some of the new institutions are ready to start IEEE student chapters at their institutions. The organisations that pay or reimburse the membership dues will be targeted with greater effort.

Work is being done to establish new branches and reactivate old branches at:

GIFT University, Gujranwala

University of South Asia, Lahore

COMSATS Institute of Information Technology, Sahiwal

Bahauddin Zakarya University, Multan

Student volunteers have conducted motivational seminars and presented talks on how to set up a new student branch at different universities.

An effort is being made to motivate organizations to give incentives to their employees by subsidizing their IEEE membership fee. It is hoped that these efforts will help young engineers to participate in technical and professional activities and benefit from the experience and knowledge of their peers.

**Evidence of Retention of Members**

There has been no significant change in the overall membership structure from last year. At the end of the year 2011, the membership of the Lahore Section was as given below in comparison of the same for the years 2008, 2009 and 2010.

Current Active Members in SAMIEEE Database (20-Dec-2011)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Current Grade Description** | **Dec-11** | **Dec-10** | **Dec-09** | **Dec-08** |
| Affiliate | 4 | 4 | 2 | 5 |
| Associate Member | 14 | 7 | 7 | 10 |
| Graduate Student Member | 34 | 32 | 14 | 14 |
| Life Member | 1 | 1 | 1 | 1 |
| Life Senior | 1 | 1 | 1 | 2 |
| Member | 181 | 194 | 167 | 120 |
| Senior Member | 12 | 11 | 14 | 13 |
| Student Member | 264 | 270 | 344 | 269 |
| **Total** | **511** | **520** | **550** | **434** |

**Current Student Branches:**

1. NUCES Lahore
2. GCU Lahore
3. LUMS Lahore
4. UET Lahore
5. COMSATS Lahore
6. University of Central Punjab, Lahore
7. University of Management and Technology, Lahore
8. GCU Faisalabad
9. NFC Faisalabad
10. University of Faisalabad
11. College of Engineering & Technology Islamia University, Bahawalpur

The objectives of the Membership Development Committee (MDC) of IEEE Lahore Section are:

* To increase members: professionals and students
* To retain the members as much as possible
* To promote more Senior Members or even Fellow
* To set up more Society Chapters and Student Branches

## B. 2 Professional and Continuing Education Activities

**Events, Seminars, and Invited Talks**

IEEE Lahore Section arranged the following activities this year. Some of these activities were held in collaboration with the Electrical Engineering Department, School of Science and Engineering, LUMS, Lahore.

1. “A Hierarchical Based Framework for Multimedia Forensics” by Dr. Hafiz Malik from University of Michigan – Dearborn on Thursday, January 06, 2011 at 03:00 - 04:00pm. Venue 10-301 Auditorium, SSE Building,
2. “Modern Electronic Manufacturing” by Dr. Shahid Khan - MD Micropak (Pvt) Ltd.  on Monday, January 17, 2011 at 03:00 - 04:00pm. Venue will be A-1, Academic Block, LUMS DHA, Lahore Cantt.
3. “Generalized Cosine and Similarity Metrics: A Supervised Learning Approach based on Nearest Neighbors” by Dr. Ali Mustafa Qamar  (University of Grenoble, France) on Thursday, January 20, 2011 at 03:00 - 04:00pm. Venue A-1, Academic Block, LUMS DHA, Lahore Cantt.
4. “ROILA to your Robot” by Mr. Omer Mubin – PhD Candidate at the Eindhoven University of Technology (TU/e), The Netherlands on Friday February 18, 2011 at 02:00 - 03:00 p.m. Venue A-12, Academic Block, LUMS DHA, Lahore Cantt.
5. “Creating Value through Investment: Indigenous Fuel is the Key to Energy Security” by Engr. Khalid Manzoor – CEO Engro Power Gen. Limited, Engro Energy Limited, Sindh Engro Coal Mining Limited  on Friday February 18, 2011 at 03:00 - 05:00pm. Venue A-9, Academic Block, LUMS DHA, Lahore Cantt.
6. “Asymmetric Chip Multiprocessors” by Dr. Aater Suleman from Intel Corporation Texas, USA on Monday, February 28th, 2011 at 4:30 - 5:30 pm. Venue A-5, Main Academic Block, LUMS.
7. “LUMS Initiative Towards Energy Harvesting Through Renewable Energy Sources, Focus: Photovoltaic Devices” Dr. Hassan Abbas Khan from Dept. of Electrical Engineering, LUMS School of Science and Engineering on Friday, March 4, 2011 at 3:30 - 4:30 pm. Venue 10-302, 3rd Floor, SSE Building, LUMS.

**Executive Committee Meetings**

IEEE Executive Committee Meeting held on Friday, March 18, 2011 at 5:00 p.m. in R#9-117, CS Dept., Ground Floor, SSE Building, LUMS, DHA, Lahore.

IEEE Executive Committee Meeting held on Wednesday, May 04, 2011 at 5:15 p.m. in R#9-117, CS Dept., Ground Floor, SSE Building, LUMS, DHA, Lahore.

IEEE Executive Committee Meeting held on Wednesday, October 12, 2011 at 5:15 p.m. in R#9-117, CS Dept., Ground Floor, SSE Building, LUMS, DHA, Lahore.

IEEE Executive Committee Meeting held on November 24 at 5:15 p.m. in R#9-117, CS Dept., Ground Floor, SSE Building, LUMS, DHA, Lahore.

IEEE Executive Committee Meeting held on Thursday, December 29, 2011 at 5:15 p.m. in R#9-117, CS Dept., Ground Floor, SSE Building, LUMS, DHA, Lahore.

**Annual General Meeting**

The Annual General Meeting of Lahore Section for the year 2011 was held on December 20, 2011 at the Government College University, Lahore. Dr. Tanveer Haq, Vice President Wi-Tribe was the Chief Guest.

## B. 3 Awards and Achievements

**Section Awards**

In the past the Section has given awards to the Best Volunteers, Best Student Volunteer and Best Student Chapter as incentives for the outstanding work done by them for promoting the cause and function of the Section in particular, and the IEEE in general. The awards are normally beautiful plaques and certificates.

The recipients of 2011 IEEE Lahore Section Awards are:

1. Best Student Volunteer of the Year Ms. Synnia Tanveer
2. Best Student Branch of the Year GC University Lahore
3. Best WIE Affinity Group Student Branch of the Year GC University Faisalabad

**Achievements in Section**

Mehvish Zahoor was elected as the first Chair of the Pakistan WIE Forum. Anum Javed was elected as the Treasurer.

Saqib Jamil, Mehvish Zahoor and Synnia Tanveer participated in the R10 Student Congress held in Auckland.

**Achievements in Region 10**

The Region 10 SAC committee has been reconstructed for the year 2012. This year there will be three sub Regional Student Representatives (RSRs) working with the Region 10 RSR. One from West, one from North-East and one from South-East. Ms Synnia Tanveer has been appointed as the Sub RSR (West).

## B. 4 Student Activities

Our Student Branches have been very active and progressive. They have been organising IEEE seminars in other teaching institutions, especially with IT and Computer related subjects, with positive results. The members of the student branch participated in the national as well as international events, organized a number of technical talks and workshops, and conducted awareness and marketing campaign to successfully motivate students to join their student branch.

The following section gives brief summary of activities of Student Chapters.

1. NUCES Lahore
2. GCU Lahore
3. LUMS Lahore
4. UET Lahore
5. COMSATS Lahore
6. University of Central Punjab, Lahore
7. University of Management and Technology, Lahore
8. GCU Faisalabad
9. NFC Faisalabad
10. University of Faisalabad
11. College of Engineering & Technology Islamia University, Bahawalpur

**GCU-Lahore**

**Pakistan Student Congress 2011**

**Pakistan Student Congress** is the biggest event held by student volunteers of IEEE Sections on rotation basis. This year it was the Lahore Section’s turn to host this magnificent event.

The PSC brings together members and professionals, belonging to different environments, cultures and schools of thought from all over Pakistan. Its main focus is on the role and significance of IEEE in students’ professional and community lives, and to serve as a uniting factor towards a common healthy cause.

The Congress helps in creating and revitalizing strong links between students and professionals. It also provides a platform to the members of Student Branches from all over Pakistan meet, exchange ideas and learn from each others experiences. The Congress helps in promoting the professionalism among the students.

**Annual General Meeting of the IEEE Lahore Section Hosted at GCUL**

The IEEE-GCUL team has once again the honor to host the Annual General Meeting 2011 of the IEEE Lahore Section.

**IEEE-GCUL Activities 2011**

The GCUL organized many promotional and interactive events, and participated in external events during the year 2011. The IEEE-GCUL Student Branch has actively participated in the Executive Committee meetings of the IEEE Lahore Section. The Student Branch also has managed to start **two active affinity groups** in this short period. The IEEE-GCUL Student Branch has also contributed in spreading the IEEE cause by providing guidance and support to students of other institutions when and where needed. Some of the important activities are:

* IEEE Orientation at COMSATs, Sahiwal
* Talk by Ms. Synnia Tanveer (Mentor IEEE-GCUL and Lahore SSR) on IEEE Day
* Attended the IEEE Week at FAST
* Participated in the NFC Techno War
* Participated in the IEEE-GOLD Congress 2011
* Made the IEEE Lahore Section Newsletter 2011
* Actively participated in all four IEEE Lahore Section Ex-com meetings of the year.

**International Participation**

Syeda Synnia Tanveer participated in the **IEEE Region 10 Student/GOLD/WIE Congress 2011** held at the University of Auckland, New Zealand July 7 – July 10, 2011. It was a great experience of representing IEEE Lahore Section and Pakistan at an international platform where world's best volunteers of IEEE showed up. She is thankful to IEEE Lahore Section for providing such an opportunity. She is also thankful to the sponsors of the visit, IEEE Lahore Section, NetSol, LumenSoft, and Mentor Graphics.

**IEEE-WIE-GCUL**

WIE remained substantially active on the departmental as well as Section level, having a fair blend of different types of activities. WIE conducted many promotional activities, competitions and events within the department and partook in others at Section level. A **WIE ECI’11** week was also dedicated to IEEE-GCUL-WIE-ECI’11.

**IEEE-GCUL Electronics Wing**

This group was launched for electronics in March, with the responsibility to promote activity and membership and to spread the purpose and benefits of IEEE for Electronics students. Salman Mehmood Qazi was selected the first chair.

This smart team participated in the **Techno War** event by NFC, and also organized the intervarsity event **NAGS – Nerds of Art, Gurus of Science 2011,** in collaboration with the Photography Club of the GC University, Lahore. 300 students from 27 educational intuitions of Pakistan participated in the three-day event. This was a collection of competitions including robotic race, circuit designing, technical quiz, speed writing, science project exhibition, best proposed scientific solution, best scientific idea, photography, essay writing, short film contest, sketching, painting, sculpture, dress designing, short story writing, poetry, recycling, dubbing, e-gaming and flash war. This event gained media coverage too.

**Branch Achievements**

1. **Bronze honour** earned by Syeda Synnia Tanveer in engineering project proposal rural sustainability – an outreach to the unreachable. It has been published in three editions of Pakistan EIR Magazine in 2011.
2. Got the honour to organize the Mega Events of the year – the Pakistan Student Congress and Annual General Meeting 2011.
3. Recognizing our reporting skills, IEEE-GCUL was asked to report the GOLD Congress 2011, and Asma Niaz, Vice Chair IEEE-GCUL, reported it in detail.
4. Syeda Synnia Tanveer’s **Participation in the IEEE R10 Congress as a speaker** in WIE Session, and addressing Gender Imbalance, topic *“Don’t hold back! Go and get it”*.
5. Inauguration of a new Group – the IEEE-GCUL Electronics Wing. This announcement makes us proud as the newly created body’s team has shown great vigour through its mentioned feats.

**IEEE-NUCES Activities 2011**

The IEEE NUCES Lahore branch has been very active during the past year, organizing a number of major events and seminars. IEEE Week ’11, the biggest event of the year, the scavenger hunt ’11 for the new batches, Orientation ’11 and membership drive are some of them.

**Membership Drive**

A week after the orientation, the interested students were invited to come and officially sign-up for IEEE by making an online account and actively becoming part of the society’s activities.

**SCAVENGER HUNT ’11**

On Tuesday 25th October 2011, IEEE-NUCES Lahore organized a scavenger hunt for the 2010 and ’11 batches as a pre-orientation event to gear-up the young batches for the orientation. Teams consisted of 4 members each. The tasks varied from taking a photograph of an airplane to balancing three apples, one on top of the other, on one’s head, all to be done on-campus. From the time they were set loose on their quest to the time they reported back, the campus was rank with excitement; participating students running helter-skelter, badgering anybody and everybody they could get hold of for a BlackBerry™, an even digits FAST-NU ID card and Ray Ban glasses. The teams were to be marked on basis of their reporting time and the total marks they accumulated.

**Orientation ‘11**

Right after the huge success of the Scavenger Hunt, IEEE NUCES-Lahore held its orientation session for the new batches, to familiarize them with workings of IEEE, its benefits and the events. Evaluation forms were given out to the audience in which they were asked a series of yes/no questions based on their strengths, weaknesses and their likes, so as to get a better understanding of the team we are going to make for the future. Videos and pictures of previous events were shows.

**IEEE- WEEK ‘11**

The IEEE WEEK was a 6 days long event full of fun filled activities, and competitions for the students to demonstrate their creativity and skills. The week was in collaboration with NUCES Circuit Society, Drama Festival Fast and NUCES Media Group, IEEE UET, Highway Buzz team and WIE NUCES. The opening ceremony comprised of speeches by the Rector, Director and Faculty Advisor and the then IEEE-NUCES President’s starting note. Cambridge Docs organized the two hour IPhone development workshop and Android Development. A workshop on photography was also held by the students of FAST-NU. WIE-NUCES organized a **Graphic designing workshop** for the graphic lovers. ‘Match to Catch’, a fun filled yet mind boggling event was organized by IEEE-NUCES on its 2nd day of IEEE week. WIE-NUCES arranged Women Empowerment Forum in on 10th February, 2011 on Human Rights Day. Women from different walks of life were invited to the occasion. These honorable women which included Mrs. Ammara Farooq Malik, Dr. Aaliya Aftab,Ms. Robina Shakeel and Mrs Nasreen Aftab were requested to share their precious views and experiences about the role of women in society. WIE-NUCES organized Graphic Designing Competition on the sixth day of IEEE week. Students were asked to do portray “Positive Image of Pakistan” through their posters. Adobe PhotoShop was the platform of designing. Time allowed was 1 hour and 30 mints and there were 11 teams participating.

IEEE-WEEK ended with a bang in the form of an exciting closing ceremony. All the team members and participants were present at the event. Dr. S. M. Sajid and Dr. Amjad Hussain took out their time as the guests of honor. The ceremony drew a huge number of people from FAST-NUCES, NUST (college of EME), UET Lahore, UMT, Kinnard College Lahore and Beacon House School System. IEEE-UET Chapter participated throughout the week and was helpful in making IEEE week a success story. Speeches from President and Vice President IEEE-NUCES thanked the participants and the team members. All the winners of competitions were presented with IEEE winning awards. Team IEEE-NUCES were presented with the shields for their contributions.

**IEEE-GCUF Activities 2011**

The IEEE GCUF has been an active Student Branch during the year 2011. It has hosted a number of events as well as participated in many events hosted by other institutions. The IEEE-GCUF has actively participated in the IEEE Lahore Section meetings. One of its members had the honour to represent the IEEE-GCUF, the IEEE Lahroe Section and Pakistan in the R10 Student Congress 2011 held in Auckland.

Here is a summary of the activities and achievements of the IEEE-GCUF.

**Orientation Sessions**

Three orientations were arranged for the 1st semester students, 2 at the start of the year for the 2010 batch and 1 at the end of the year to create awareness among the newly enrolled students.

**E-WAR**

The annual quiz competition for the Telecom Department was arranged for the 1st semester students to help them revise their course. The other objective was to develop a healthy competitive environment in the department.

**GEN WAR**

Genetic war was arranged in the bio informatics department for the 1st semester students to help them integrate their thoughts and make them technically sound.

**Project Exhibition**

Project exhibition was conducted by IEEE-GCUF on 2nd Feb. 2011. Students from other universities like UET Faisalabad, NFC IEFR Faisalabad participated in exhibition. Feedback given by visitors was encouraging. Another project exhibition was held on 20th June to help the students in improving their technical skills innovation.

**IEEE GOLD Congress Participation**

IEEE GCUF participated in IEEE GOLD Congress held at The University of Faisalabad on 12th march, 2011.

**Officers Training**

A training was conducted on 13th march, 2011 to develop professional skills of the office bearers of the student branch. The speaker of this workshop was Mr. Saad Zafar (Ex-Chair and Participant of YLC SOL). New Executive body attended this session.

**PHP Workshop**

IEEE GCUF arranged a workshop on PHP on 8th April, 2011. This was conducted by Mr. Aqeel Ahmed. Forty students from different departments like software engineering, computer sciences, electrical engineering and bio-informatics attended this workshop.

**SOFTECH Participation**

Students of GCUF and IEEE GCUF members participated in softech held at FAST NUCES Lahore on 9th and 10th April.

**PCB Design Workshop**

IEEE GCUF conducted PCB Design workshop on 19th and 20th April, 2011 by Mr. Moazzam (lecturer GCUF).

**TECHNO-WAR Participation**

IEEE GCUF participated at Techno-WAR held at NFC Faisalabad on 5th and 6th May, 2011.

**International Representation**

One of the most active members of the WIE GCUF, Mehvish Zahoor, was selected to represent Pakistan in the R10 Congress in Aucklan. It was a really big achievement to represent Pakistan and the branch at the international level. She is thankful to IEEE Lahore Section and sponsors of the visit.

**Visit to a Government School**

The IEEE GCUF branch as part of their social activities arranged a trip to a school in the rural areas to help the students of the government school technically and build in them confidence to face the world and instill in them the fact that they are no less than others.

**IEEE Day with GCUF**

IEEE DAY with GCUF was a two-day mega event held On 5th and 6th October, 2011. In this international event IEEE GCUF conducted the following activities:

* **Competitions:**
  + - Gamester
    - Draw your world
    - Coding Fever
    - Quiz competition
* **Workshops:**
  + - Asp.Net
    - Web Development
    - MATLAB
* **Seminars:**
  + - CISCO career Guide
    - Just believe in your dreams (online)
    - Women inspiration and empowerment (online)

**IEEE-UET Activities 2011**

**TECHNOFEST’11**

Technofest’11 was a Mega Event arranged by 5 of the major societies of UET. IEEE UET collaborated with ACM, IET, ASME and EC to organize TechnoFest’11. It was a first of its kind event and the largest event held in UET during the academic year 2011. It included technical and non-technical competitions in which students of universities from all over Pakistan participated. TechnoFest’11 also included conferences, workshops, and seminars. TechnoFest’11 was held in UET from 18th May to 21st May 2011. The S-PAC and WIE Explorer TE’11 were the most noticeable events.

Some of the events are as follows:

* The S-PAC
* Breaking the Logician’s Code
* Control the Controller
* Guess the Sketch
* MATLAB Mantra
* Tour de Electrical
* WIE Explorer TE’11

**MATLAB Workshop**

A workshop on the introduction to the usage of MATLAB was conducted by WIE, UET. This was a hands-on workshop on image processing and EMT toolbox.

**S-PAC 2011**

The IEEE Student’s Professional Awareness Conference, an annual event organized by the IEEE-UET Chapter, serves as an exciting forum for scientists, engineers and practitioners throughout Pakistan to present and discuss the issues regarding professional development and further techniques to nurture self-confidence.

This year SPAC was held on 20th&21st May at UET, Lahore.

**WIE Explorer TE’11**

For the first time in the history of UET, IEEE UET’s WIE Affinity Group organized a national event: UET WIE EXPLORER TE ’11 on 19th May 2011. Events include:

* Footsteps of Illustrious
* Snap the Idea
* Dodge the snake
* Conceptualize the Notion
* On the Ground of Paper

**Lecture on Career Opportunities in Industrial Control and Electrical Applications**

A talk on Tapping Career Opportunities in Industrial Controls and Electrical Applications was given by Mr. Shahid Bashir, an alumnus of UET, on 18th of August, 2011. The talk was about Growth potential in a relatively obscured field and the benefits of higher education in career growth.

**IEEE Day**

Just like the IEEE student branches around the world, IEEE UET also celebrated IEEE day on 6th October, 2011 as an opportunity to pay homage to our local leaders, and also to give a proper farewell to the last year’s Executive Committee.

**IEEE XTREME**

IEEE UET made special arrangements (computers, internet, food, rooms) for IEEE members for participation in IEEE Xtreme on the 22nd of October. Around 30 students from UET participated in this event.

**Workshop on MATLAB Basics and Control Toolbox**

A two day workshop was conducted on MATLAB and Control Toolbox for students of EE department on 1st and 2nd of December. Mr. Mohsin Javed, a faculty member of EE department was the instructor.

**DISCOVER IEEE**

Discover IEEE was a one day event held on 27th October, the purpose of which was to introduce the new batch of Electrical Engineers to the setup and working of IEEE-UET, and IEEE international.

Presentations were given on the History of IEEE, the functionality of IEEE and the benefits of joining IEEE. Later on a quiz was conducted to check the general knowledge and prior know-how of the students about IEEE.

The top scorers were offered free membership of IEEE (sponsored by IEEE-UET).

**Lecture on Communication and Information Theory,**

A **lecture on Communication and Information Theory, Data compression and Minimum Description Length Principle** was given my Mr. Bilal Wajid, a faculty member at EE department, UET on 29th of November, 2011.

**Cure Rayan Drive**

Cure Rayan was a drive launched by three-year old Rayan’s parents, Sarah and Farhan, after he was diagnosed with acute lymphoblastic leukemia. An urgent transplant of bone marrow was required. IEEE UET conducted tests for more than 100 students inside UET.

**IEEE-UMT Activities 2011**

**General Body Meeting**

It was held on January 20, 2011 and also included certificate distribution ceremony. Students were provided certificates for Electronic Projects completed in Fall 2009. Addressing on the occasion**,** Col Khan M Nazir, Head Patron IEEE UMT branch, encouraged students to join IEEE and Engineers Forum. He said it would help them in completing their final year projects.

**Winners of Techno War at Faisalabad**

Students from UMT, Lahore participated in NFC Techno War Competition 2011 held at the NFC IFER, Faisalabad. Teams participated in four competitions and succeeded in three, securing the first and third positions in an engineering quiz called Mind Wobble. They also won Future Ideas, Boom Strike, E-Gaming and Need for Speed Competitions.

**MATLAB Workshop**

The Session 1 of the Matlab Workshop was delivered by Assistant Professor SST. He gave details of the basic concepts of Matlab to the students from EE and CS Department. Session 2 was about the concepts of plotting 3D-graphs, integration, derivations and matrices. Head of EE Department was the special guest on this occasion. He also encouraged the IEEE-UMT core team to arrange such kind of events in future as well.

**Workshop**

It was held on 1st & 8th of Apr, 2011. The workshop had four sessions totaling 14hours. The basic aim was to familiarize students with the PIC Microcontroller and share the speakers’ experiences with the final year students so they can get help in implementing their ideas in projects. The first session (Introduction to Micro Controller) gave the basic knowledge about Micro Controllers and Micro Processors. The 2nd session (Introduction PIC Microcontroller) delivered a brief introduction on hardware architecture and registers, detail of Serial Programming, Analog to Digital Conversion and Timers. Practical experience on tackling run time errors was also shared. The 3rd session (BASIC Language, Proton IDE Compiler, Programming Techniques, and Proteus 7 Professional) the basic ideas of Programming methods, use of Proton IDE (PIC Micro Controller Compiler) and Introduction to Proteus 7 Professional were described in it. The Final session (Projection Simulation & Hardware Designing) described the basic ideas of Hardware Designing and Project Simulations and tried to address the students’ problems regarding projects and guided them about innovative ideas and their implementation.

**IEEE DAY 2011**

It was celebrated at UMT on 6th Oct, 2011. Rector UMT was the Chief Guest. The event was attended by Chairperson Electrical Engineering Department, Dean SST, more than 20 faculty members and more than 100 participants. Electrical engineering Students displayed electronics, robotics and power energy projects in it. A special cake cutting ceremony was arranged on this occasion. In his closing remarks Rector UMT appreciated the core team of IEEE UMT. He also advised to arrange such events in future. The proceedings included:

* Recitation of some verses from the Holy Qur'an
* Welcomed note for new students.
* Briefing on the branch activities and past achievements of SST students by the Branch Counselor.
* Presentation by the Patron IEEE UMT on the history of IEEE.
* Motivational speech by the Head Patron WIE- UMT and a faculty member SST, to the female participants to take part in IEEE.
* Distribution of the certificates and shields by Dr Abdul Aziz Bhatti among the participants of MATLAB Workshop, Pic Micro Controller Workshop and NFC Faisalabad Winners.

**Seminar on “How To Become an IT Entrepreneur"**

Mr. Hasan Metla, Senior Vice President Omnix Group, UAE was invited to give a lecture on "How to become an IT Entrepreneur". The lecture was attended by a large number of students from the SBE and the SST. Those who were present on the occasion included Rector UMT, and Pro-Rector UMT. Mr. Hasan Metla discussed the phenomenal growth of the Chinese market and its impact on the global economy. He also explained the dynamics of online shopping, consumer behavior and various Mobile Operating Systems. He shared the processes for developing Android and Iphone Applications. On an important note, he encouraged students to take the road to entrepreneurship and gave them useful tips for raising capital for investment. He also discussed the increasingly popular social marketing concept in Pakistan. At the end of the lecture, a question and answer session was also held. Dr Hasan encouraged the team to arrange more seminars of this kind in the future.

**IEEE-NFC Activities 2011**

**IEEE Membership Promotional Seminar**

IEEE membership Promotional seminar was held on 15, January 2011 under the supervision of Madam Asma Adeel in auditorium of electrical engineering department. In this seminar a large number of students participated .The goal of this seminar was to aware students of batch 2010 about IEEE, its uniqueness significance and its scope in future. Before starting the seminar, pamphlets were given to the students containing useful information regarding IEEE.

**“HUM KISI SE KAM NAHI”**

Joint event with TUF “HUM KISI SE KAM NAHI” was held on 10, august 2011. It was a joint venture with university of Faisalabad. The main goal of this venture was to help the flood victims. For this, different groups in our society were made, they were assigned a task only to collect the money.

We were successful in getting hand some money. This money was given to TUF for buying household items like sugar, cooking oil etc. These all items were purchased by TUF.

**IEEE-UCET Activities 2011**

**IEEE AEPEX**

IEEE AEPEX (Annual Engineering Project Exhibition) was the biggest event organized by IEEE UCET-IUB. It included 40 projects of the students, including 3 research publications in international conferences of IEEE related to the fields of Electronics and Computer Systems Engineering. The event was visited by more than 800 visitors from U.E.T, Lahore, UET Taxila, BZU, Multan and other institutions. The event was covered by local and national media.

**Talk on “Applied Means of Communication in Pakistan”**

UCET successfully conducted this talk, On 25th February. The invited speaker, Eng. S. M. Fasih ur Rehman elaborated the means of communication and discussed his experiences and guided students who wanted to continue their career in the field of communication.

**Workshop on “Mobile Computing”**

(14th–17thJune) An intensive workshop of 3 days was one of the major events of our IEEE SB that gathered almost 300 students related to Computer engineering, computer sciences and its related fields. Mr. Sajid Ali Anjum, CEO SajiSoft, and one of few Nokia Forum Champions in Pakistan, delivered this workshop excellently.

**Workshop on CV Writing & Interview Skills**

On 19th June IEEE-UCET organized a workshop based on the need of the upcoming graduates. Here, involvement of Career Development Center of Islamia University Bahawalpur brought remarkable benefits for the 100 plus students who attended the workshop.

Students participated with great interest. Marvelous Lecture on Interview and CV Writing Skills are delivered that created much interest among the participants and enhances our abilities toward

* Proper dressing for an interview
* The do’ s & dont’s of an interview
* What knowledge you must have before appearing in interview.

**Experience Sharing about IEEE R10 Student Congress**

This was very first time that student Muhammad Saqib Jamil from our Student branch has participated in IEEE R10 Student Congress 2011 in Auckland, The University of Auckland. On returning from Congress, he shared with the students his personal experience of attending event in Auckland. The audience was comprised of students and faculty of the engineering college. He discussed in detail the inside of IEEE and its benefits. The faculty appreciated him well for presenting the university at such a wonderful platform. He thanked the IEEE Lahore Section and other sponsors for providing such a wonderful and unique opportunity to participate and represent the branch, the Section, and Pakistan.

**Talk on “Research Publications Methodologies”**

This talk was conducted in November for the young researchers to help them in publishing their research work in international conferences by IEEE. The reason for conducting such event was due to remarkable improvement in the number of publications by the students and faculty members in IEEE conferences. Specifically, for the past two years, the publications by students and faculty were increased to **32** by 2011 in IEEE international conferences. The talk as expected brought positive results in motivating students for increasing research activities.

**IEEE-CIIT Activities 2011**

IEEE-CIIT is continuously working to bring out value for the students of CIIT since the day it was established. Several workshops, seminars and tremendous events were organized by it. Since the day of its inception, IEEE-CIIT has had huge growth. It started with 5 IEEE International members. The number quadrupled in a year, and kept increasing exponentially. IEEE-CIIT organized IEEE Membership Rise Seminars, IEEE Orientation & Motivational Seminars, to encourage students in selecting IEEE as their mentor society. These seminars proved to be fruitful enough to raise the number of memberships to 100-members per year. For providing benefits to the IEEE Member students, many technical and non-technical events were organized, as IEEE-CIIT admits that education and recreation must go side by side.

**APTEC 2011**

ALL PAKISTAN TECHNICAL PAPER/POSTER COMPETITION was a forum to bring some of the best student engineers together from all over the country. It was an undergraduate final year project based on paper/poster competition that aimed to provide an occasion to exhibit original and innovative work carried out by the young engineers during their final year projects in the form of scientific papers/posters. It also gave the involved students, faculty and industrialists from all over Pakistan the opportunity to learn from the best and interact with their fellows in the field of Electrical, Electronics and Computer Engineering. It a full day event held on 19th April 2011.

**Digital Communications Workshop Using Matlab & Simulink**

As MATLAB is one of the most important tools in Engineering, this two day event was held to provide skills and hands on experience to students, who were taught from the basics to the high level programming and modeling of engineering ideas in MATLAB and SIMULINK. Counselor IEEE-CIIT and her research group explained the technical tools through various examples, simulations and interactive sessions.

**Workshop on RTOS**

A workshop on Real Time Operating Systems was organized by IEEE-CIIT in order to keep pace with the changing trends and technology. Dr Faheem Sheikh, and Mr Ahmed Yousaf from Mentor Graphics, educated the attendees about the changing trends and provided technical tools for the RTOS development.

**Final Year Project Seminar**

Taking in view the fact that selection of FYP can prove to be very critical in a student’s carrier, IEEE-CIIT organized second FYP seminar focusing on the importance of FYP, the execution plan of an FYP and keeping the pace with time. This seminar was of great interest to the students of final year. Dr Ali Nawaz Khan, Head of Project Advisory Committee Electrical Engineering Department, COMSATS Institute of I.T, and Mr Usman Rafique, Lecturer E.E. guided the students with their experiences. This seminar was held on 13th October, 2011.

**IEEE-CIIT Gaming Competition**

IEEE-CIIT Lahore organized a gaming competition on 3rd, October 2011. 4 hours of nail biting matches and at the end one team took home the title of Counter Strike Champs.

For future we have a series of events to be organized, some of which are:

* The “Circuiteers” first ever speed wiring and circuit solving techniques competition
* MATLAB Workshop
* Mobile Application Development Workshop
* APTEC 2012
* Optical Fibre Communication Workshop
* Series of seminars

Under the vigilant leadership of its Counselor the IEEE-CIIT Student Branch hopes to prosper, advance and grow in the near future. IEEE-CIIT will, God Willingly, ensure the fulfillment of IEEE motto, “Advancing Technology for Humanity”.

**IEEE-TUF Activities 2011**

**IEEE GOLD Congress 2011**

The major event organized by the IEEE-TUF Student Branch was this year’s IEEE GOLD Congress. It was attended by dignitaries of the IEEE Lahore Section as well as those from other domains. The team received many congrats for its successful handling and the effort put behind it. As it was a GOLD event, it is briefed in the GOLD Section of the report.

**IEEE Orientation**

An orientation session was held for the new comers at The University of Faisalabad headed by Engr. Ubaid Umar xChair IEEE TUF. Purpose of this event was to inspire the students to join IEEE. This interactive session was started with the name of Allah followed by naat shareef. After the formal starting of the session Mr. Ubaid presented an interactive presentation about IEEE benefits and explain why an engineer should join IEEE and hoe to get benefits from this platform.

**Workshop on Computer Programming Basics**

Workshop on basics of computer programming was held for new comers to get them familiar with computer programming and importance of computer programming in engineering. This workshop was headed by students of final year. This was good interactive session between seniors and juniors of EE department. This was not only an educational workshop but also a good chance to teach newcomers that they should seek guidance from their seniors. It went great, not only the students but faculty also appreciated this kind of workshop and wished that this kind of activity should be continued for the better interaction among the students.

**Paricipation in IEEE XTREME**

IEEE Xtreme is a global challenge in which teams of IEEE student members – supported by an IEEE Student Branch, advised and proctored by an IEEE Member – compete in a 24-hour time span against each other to solve a set of programming problems. This year **1,510 teams comprising** **4,022 Students** from **65 countries** around the globe participated in **IEEE Xtreme 5.0**. IEEE LUMS student branch participated in IEEE Xtreme 2011. LUMS did really well. Congratulations to the top teams, their instructors and their friends.  One of the LUMS teams grabbed 30th position and another team from LUMS was placed 87th.

## B. 5 Chapter Activities

**Computer Society Activities 2011**

The IEEE Computer Society, Lahore Section organized 7 events during 2011. The details of these events are as under:

1. **A Panel Discussion on “TRENDS AND AVENUES IN IT SECTOR IN PAKISTAN”** was held on Saturday May 21, 2011. The Venue of the event was Faisal Auditorium, UET, Lahore. The Panel Discussion was held in collaboration with IEEE Student Chapter of UET, Lahore. The panelists were:

* Dr. Jawaid Abdul Ghani, Chairman, Punjab Information Technology Board
* Dr. Salman Iqbal, Managing Director, Softech
* Mr. Sajjad Kirmani, Director, Netsol, Lahore.
* Mr. Muhammad Aslam Saqib, Senior Engineer, Warid Telecom
* Dr. Khaver Zia,  Dean, School of IT, Beaconhouse National University (MODERATOR)

The outcome of the discussion was that the future of IT sector in Pakistan is quite bright and there are many opportunities of growth of IT in Pakistan. The existing IT companies are doing well and a large number of smaller companies have been established in the last few years. However, there was need to have closer collaboration between industry and academia to modify the curriculum and mode of instruction, so that IT students are equipped with a job relevant skills upon their graduation.

1. A Talk on “LEADERSHIP SKILLS” was held on Saturday May 21, 2011. The Venue of the event was Faisal Auditorium, UET, Lahore. The speaker was Air Commodore Khalid Farooq Chisti. The talk was organized in collaboration with IEEE Student Chapter of UET, Lahore, and was moderated by Dr. Khaver Zia, Chair IEEE Computer Society, Lahore Section.

The speaker emphasized the importance of leadership for the success and advancement of any country. He stated that the core characteristics of a leader were integrity, sincerity and vision. He gave examples of great leaders from the history of the world. He narrated incidents from the life of Quaid e Azam Muhammad Ali Jinnah and ranked him as one of the greatest leaders of modern times.

1. **A Panel Discussion on “COMPUTER SCIENCE RESEARCH: STATE OF THE ART AND FUTURE DIRECTIONS”** was held on Saturday June 11, 2011. The Venue of the Panel Discussion was the Auditorium, University of Central Punjab, Lahore. The Panel Discussion was held in collaboration with Student Society of University of Central Punjab. The panelists were:

* Dr. Sarmad Hussain, Director Language Engineering Labs, Al-Khawarizmi Institute of Computer Science, UET, Lahore
* Dr. Fakhar Lodhi, Professor, FAST National University, Lahore.
* Dr. Sohaib Khan, Professor, LUMS, Lahore.
* Dr. Zulfiqar Habib, Professor, COMSATS Institute of Information Technology, Lahore.
* Dr. Ali Afzal Malik, Head of CS Department, University of Central Punjab, (MODERATOR)

The panelists gave presentations on the research carried out in their respective institutions. The panelists were of the view that research in IT required a great deal of dedication and commitment. Research should be carried out for its sake and it was not necessary to have an immediate application of the research. It was also agreed that a lot depended upon the facilities and encouragement provided by the host universities. It was pointed out that proper management of student final year projects could result in promoting the research culture in universities besides preparing students for advanced research work.

1. A Panel Discussion on “ENTREPRENEURSHIP: CHALLENGES AND OPPORTUNITIES” was held on Tuesday July 5, 2011. The Venue of the event was Auditorium, Department of Computer Science, UET, Lahore. The panelists were:

* Mr. Fahad Khalil, Gray Math, Lahore.
* Mr. Saad Khawaja, Director, Maximal,
* Mr. Haider Ali Aslam, Data Arc Solutions
* Mr. Muhammad Ali, Director, LSE
* Dr. Syed Muhammad Ahsan, Associate Professor, UET, (Moderator)

All the panelists were entrepreneurs who had set up their own companies. They gave an account of their experiences and the challenges faced by them in their ventures. They advised the students to be good at software development if they wanted to set up a software company. In their view, good communication skills and networking were important ingredients for success. Further, the prospective entrepreneurs should honor their professional and business commitments so as to gain the trust and confidence of their clients.

They agreed that there were a number of problems in Pakistan, like lack of infrastructure and load shedding but these could be overcome provided one had had the qualities of resilience and determination. Finally, the panelists recommended that the curriculum of undergraduate program should contain courses on entrepreneurship. These courses should be case-based and include entrepreneurs as guest speakers.

1. A Talk on “Characterizing the Performance of Multi-Core Architectures” was given by Dr. Abdul Waheed of CISCO, USA. on Friday July 15, 2011. The Venue of the talk was School of Science and Engineering, LUMS, Lahore. The moderator was Dr. Waqar Mahmood, Director, Al-Kawarizmi Institute of Computer Science, UET, Lahore.

The talk was about performance issues related to Multi-core processors. These processors are used in a wide variety of computer applications i.e. desktop, server, embedded, and mobile. Due to parallelism there exits challenges in harnessing the full potential of multi-core processors. Software development is unable to solve the complexities of the situation. In order to achieve performance potential, the gap between underlying multi-core architecture and inherently sequential application code has to be bridged. Characterizing the performance of multi-core processors based systems is an essential step toward that goal.

The speaker and his team have characterized leading multi-core architectures including: X86, PPC, MIPS, and ARM. These characterization efforts were part of performance tuning objectives for specific applications from embedded, networking, storage, and distributed computing industries. As a by-product of these efforts, the speaker developed and released Multi-core Processor

Architecture and Communication (MPAC) benchmarking suite in open source. The processors can now be characterized through MPAC benchmarks.

1. A lecture on “CASE-BASED REASONING: A LAZY LEARNING APPROACH” was held on Thursday October 6, 2011. The Venue of the lecture was University of Lahore. The speaker was Dr. Muhammad Awais of Department of Computer Science, LUMS, Lahore. The talk was organized in collaboration with Student Society of University of Lahore. The moderator was Mr. Naveed Ahmed Khan, Treasurer, IEEE Computer Society Lahore Section.

The talk was related to Case-Based Reasoning (CBR) which is a problem solving approach that exploits past experiences stored in the form of problem-solution pairs, called cases. CBR works on the notion that ‘Similar Problems have Similar Solutions’. The CBR solution paradigm assumes that regular, repetitive and similar problems arise in the application domain under consideration. This makes CBR an attractive problem solving strategy for software systems developed with the intention of having autonomic capabilities.

A built-in learning process in CBR improves the case-base to incorporate new and to update previously captured experiences. As a result the case base grows and thus reduces the case retrieval efficiency. To overcome this problem, a clustered case-base approach has been developed. This approach reduces the search complexity by confining a new case to a relevant cluster in the case-base. Clustering the case-base is a one-time process and does not need to be repeated regularly. The clustered approach has been applied to numerous applications showing promising results.

1. Celebration of IEEE Day (Thursday October 6, 2011). The event was held at Auditorium of the University of Lahore. The speakers at the event were Dr. Shafay Shamail, Chair IEEE Section, Dr. Khaver Zia, Chair IEEE Computer Society Lahore Section and Ms. Syeda Synnia Tanveer, Section Student Representative (SSR), Lahore Section.

Dr. Shafay Shumail gave an overview of IEEE and the worldwide organization of the IEEE Society. Dr. Khaver Zia informed the gathering about the IEEE Computer Society, its mission and benefits of membership. Ms. Synnia Tanveer informed about the various IEEE student chapters that were functioning in different universities under the purview of Lahore Section. She also informed about the IEEE Student Conferences which had been held during the year.

The speeches were followed by cake cutting ceremony to mark IEEE day.

**Communication Society Activities 2011**

The Communication Society organized six technical talks during 2011. The Communication Society has also planned a number of activities for the next year.

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| --- | --- | --- | --- |
| **Date** | **Title of Event/Talk** | **Speaker & Affiliation** | **Venue** |
| 10-Feb-2011 | WIMAX TUTORIAL | Mr. Muhammad Muneeb Sheikh, Motorola | Seminar Room, Al-Khwarizmi Institute of Computer Science (KICS), UET |
| 12-Mar-10 | On The Energy-Efficiency of Small Cell Deployments in Cellular Networks | Dr. Imran Ashraf, Bell Labs | Auditorium 10-301 SSE Building, LUMS, DHA, Lahore Cantt. |
| 07-Apr-2011 | ANTENNA SELECTION, A PLAUSIBLE OPTION FOR MULTIPLE-INPUT MULTIPLE-OUTPUT COGNITIVE RADIO SYSTEMS | Muhammad Faizan Hanif, PhD in Electrical and Electronics Engineering from the University of Canterbury, Christchurch, New Zealand | Lecture Room E3, Department of Electrical Engineering, UET Lahore |
| 29-Dec-2011 | PROSPECTS OF HIGHER EDUCATION IN GERMANY - I | Dr. Abid Ali | Lecture Room E3, Department of Electrical Engineering, UET Lahore |
|  |  |  |  |
| 13-Oct-2011 | PROSPECTS OF HIGHER EDUCATION IN GERMANY - II | Mr. Mukhtar Farooq | Lecture Room E3, Department of Electrical Engineering, UET Lahore |
| 29-Nov-2011 | LECTURE ON COMMUNICATION AND INFORMATION THEORY | Mr. Bilal Wajid, Ph.D. student at the Texas A&M University. | Room E-3, Department of Electrical Engineering, UET Lahore |
|  |  |  |  |

**SUBJECT: WIMAX TUTORIAL**

Date: 10th February 2011

Venue: Seminar Room, Al-Khwarizmi Institute of Computer Science (KICS)

This year, the IEEE Student Branch FAST NUCES arranged IEEE Week from 7-11 February, 2011. IEEE UET was also invited to co-host the event along with IEEE FAST and the invitation was graciously accepted. One day (10th February) was allocated to IEEE UET in which to hold various seminars about technologies related to Electrical and Computer Engineering.

The third seminar of the day was on Wimax, from 4:00 pm to 6:00 pm. This seminar was arranged and organized by IEEE-UET Communication Society. The speaker for the event was Mr. Muhammad Muneeb Sheikh from Motorola. He had prepared a presentation which would go through all the fundamental concepts of Wimax. The presentation covered basic introduction to WIMAX as a last mile technology for the deployment of high speed broadband in urban as well as remote populations. To get consistent performance and high throughputs over the air, WIMAX deploys many technologies. Used together, these technologies provide one of the most advanced air interfaces in the world today. To improve performance, WIMAX uses advanced antenna technologies, adaptive modulation, scalable OFDMA, advanced power control and power management. Although, 802.16 defines both Line-of-Sight and Non-Line-of-Sight operation, this presentation was limited to the air interface characteristics of Non-Line-of-Sight system.

The presentation was very interactive as Mr. Muneeb encouraged students to ask questions at any point where they did not understand. Questions were also put to the students so that they would be encouraged to participate in the seminar.

The Chair of IEEE UET presented a shield to Mr. Muneeb in acknowledgement of his participation.

**SUBJECT: ANTENNA SELECTION, A PLAUSIBLE OPTION FOR MULTIPLE-INPUT MULTIPLE-OUTPUT COGNITIVE RADIO SYSTEMS**

Date: April 07, 2011

Venue: Lecture Room E3, Department of Electrical Engineering, UET Lahore

On the 7th of April, 2011, a lecture on the topic of antenna selection was delivered by Muhammad Faizan Hanif, PhD in Electrical and Electronics Engineering from the University of Canterbury, Christchurch, New Zealand. His research interests include statistical aspects

of design and analysis of wireless communication systems, cognitive radios, applied information theory and optimization techniques in communications and signal processing. He was the recipient of the Best Student Paper Award at IEEE CROWNCOM, France, 2010.

In the start of the lecture he described Cognitive Radio (CR) systems which are being considered as a viable solution to the so-called ‘spectrum scarcity’ issue that can potentially hinder the growth rate of modern wireless communication networks. He also discussed various strategies including, over- lay, interweave and underlay, that have been proposed for the coexistence of CR systems with the primary user (PU) devices. Later in the lecture he explained the benefits of Multiple-Input Multiple-Output (MIMO) systems like high spectral eﬃciency and better link reliability. He also discussed that the cost we have to pay is the numbers of bits per unit frequency known to proportionally increase with the number of antennas used. More antennas mean more radio-frequency chains and this in turn implies an increase in the cost, volume and weight of the wireless devices. Interacting with the audience he then asked the question: “Antenna selection is a well-known solution to this problem in PU systems. Can we expect the MIMO techniques to oﬀer similar advantages in conjunction with one of CR access methods while also maintaining manageable complexity?”

In the end, Mr. Hanif discussed that we look at this query by formulating the antenna selection problem in underlay CR systems as a mixed integer program and to solve this problem, we propose three schemes, exhaustive search, convex-approximation and a heuristic in order of decreasing complexity. For the scenarios considered, our results reveal that antenna selection based MIMO-CR systems can form a plausible option especially if we select a subset system from a greater search space.

**SUBJECT: PROSPECTS OF HIGHER EDUCATION IN GERMANY**

Venue: Lecture Room E3, Department of Electrical Engineering, UET Lahore

IEEE UET COMSOC, in an attempt to illuminate students about prospects of higher education in Europe, especially Germany, arranged two lectures during last month. The first was delivered by Dr. Abid Ali on 29th September 2011, and the second was delivered by Mr. Mukhtar Farooq on 13th October 2011. Dr. Noor Muhammad Sheikh, Chair COMSOC, IEEE Lahore Section, took this initiative, and invited both these worthy gentlemen (also his old students) to brief final year students about the benefits of higher education, and its prospects in Germany. Both of them, although belonging to different institutions Ruhr University Bochum and Technical University Munich, had almost the same things to say. They highlighted the importance of research and how to develop a habit of doing so, education pattern and curriculum in Germany, living costs and facilities, and most important of all, the benefits one can get by availing this opportunity.

Dr. Abid Ali's lecture was more about how to choose a university in Germany, how to avail scholarships, and in general, about how to get into the right university without being a burden on one's parents back home. He suggested some tips, the most important of them being, choosing one's major field beforehand, and then familiarizing oneself with that particular discipline in the university chosen by one.

**SUBJECT: LECTURE ON COMMUNICATION AND INFORMATION THEORY**

Day: Tuesday, 29th November 2011

Venue: Room E-3, Department of Electrical Engineering, UET Lahore

Mr. Bilal Wajid is a Ph.D. student at the Texas A&M University. He has done his Masters from Texas A&M University, USA and Bachelors from UET, Lahore. Currently, Mr. Wajid is a Lecturer at Department of Electrical Engineering, UET Lahore.

On the 29th of November, 2011 Mr. Wajid gave a lecture on Communication and Information Theory. In this lecture, topics covered were: Introduction to Communication and Information Theory, Data Compression and Minimum Description Length (MDL) Principle. Main focus of speaker was on MDL Principle.

This principle, introduced by Jorma Rissanen in 1978, is helpful in determining the statistical model of a problem that requires minimum new assumptions as well as minimum code-length. It can be called an-other form of Occam’s razor.

MDL Principle finds its applications in Probability Theory and Information Theory. The principle has been used successfully in different medical researches’. For example, it has been implemented successfully in inferring the structure on regulatory networks of gene, for compression of DNA sequence, target detection for micro-RNA, gene clustering, analysis of genes for transcription of factor binding sites and many more.

The lecture was 2-hours long. It was attended by the Telecommunications majors of Department of Electrical Engineering, UET Lahore. The lecture proved to be very informative and helpful for the Telecommunication students.

## B. 6 Affinity Group Activities

**GOLD Activities 2011**

This year the GOLD Affinity Group hosted five events.

|  |  |
| --- | --- |
| IEEE Lahore Gold Congress 2011 - Lahore Gold Affinity Group | 12-Mar-11 |
| Opportunities In It & Telecom Industry - Lahore Gold Affinity Group | 10-Apr-11 |
| Cloud Users Meetup - Lahore Gold Affinity Group | 23-Jul-11 |
| Farewell Cum Iftar Dinner - Gold Team 2009 - 2011 - Lahore Gold Affinity Group | 24-Aug-11 |
| IEEE Day - Lahore Gold Affinity Group | 6-Oct-11 |

**IEEE GOLD CONGRESS 2011**

The first ten years after graduation can be challenging for young professionals. Employment search, new jobs, professional growth, career development, and life status changes are common experiences for many recent graduates. IEEE Graduates of the Last Decade was formed with a vision to help students transition to young professionals within the larger IEEE community.

This Congress was meant for the recent graduates and graduating persons to interact with industry leaders and entrepreneurs. It included sessions on several themes such as innovation, entrepreneurship, resume and career building. It featured talks and panel discussions by eminent industry leaders as well as several team building, expertise sharing activities. All of the sessions were very interactive and different strategies had been fruitfully implemented to maintain the interest of the audience.

This was first activity of its type in any university in Faisalabad. The University of Faisalabad in collaboration with IEEE GOLD Lahore section arranged this congress for graduates in Faisalabad.

The Congress was attended by many esteemed figures from all over Pakistan:

**Mr. Badar Khushnood** (Pakistan Country Consultant, Google)

**Mr. Farhan Masood** (CEO Solo Smart Inc.)

**Mr. Nabeel Akmal Qadeer** (Co-Founder and COO, Technopsis – A Shapes Group Company)

**Mr. Irfan Shahid** (CEO, Awami Labs, Aeon Technologies and Former Country HR Manager, Brain Telecom)

**Mr. Yousuf Jamshed** (Country HR & Communication Manager ABB Pvt. Ltd.)

**Ms. Maryam Nasim** (CEO, Pixcil)

**Mr. Rohan David Emmanuel** (President, Green & White Pakistan)

**Mr. Haris Nadeem** and **Mr. Muhammad Alam** (Bloggers)

**Mr. Noaman Saeed** (Dep. Component Leader at Chemonics International)

**Lt.Col( Rtd) Saddiq ur Rehman** ( Head of Department of Electrical Engineering and Campus Coordinator)

**Ms. Syeda Synnia Tanveer** - Section Student Representative IEEE Lahore Section

Among the last events of the Congress, all the participants were given certificates to appreciate their participation and enthusiasm, and to encourage them to keep looking forward for such events and opportunities of exploiting the benefits of the IEEE platform.

As mentioned in the beginning, clever strategies were employed to make the experience more and more interactive and alive, and maintain the flare of participation in the audience. Apart from the smart use of words and facts, souvenirs and giveaways were also given to those members among the audience who were actively participating and contributing with their knowledge and ideas.

A question answer session was at the end of each session, and on appreciable and useful questions and reasonable answers Mr. Rafaeel presented Chocolates, IEEE Pencils, IEEE stickers and IEEE giveaways

Also, Lahore Section GOLD got the 2011 IEEE GOLD Affinity Group Hall of Fame Award. The award was globally given to only three groups and Lahore GOLD was one of the recipients.

Apart from this, Lahore Section GOLD collaborated with student societies at NUCES and LUMS for "Opportunities in IT & Telecom Industry" and related entrepreneurship events.

Lahore GOLD Representatives couldn't participate in R10 GOLD Congress 2011 in New Zealand as well as GOLD Summit 2011 in San Francisco, USA.

A farewell Iftar cum Dinner of GOLD Team 2009-2011 was held on 24th August 2011.

**IEEE Pakistan WIE Forum**

PWF was created with the vision to integrate females from all Science and Technology institutes in Pakistan, to create opportunities for them and to promote them as members of a progressing nation. The first Executive Committee was formed a year later in March, 2011. This is a Pakistan level affinity group that interacts with all the three Sections. The following projects have been created and initiated since the first introductory meeting.

**QUARTERLY NEWSLETTER**

It was unanimously decided that IEEE PWF would publish a newsletter every four months. A newsletter team was formed under the leadership of Newsletter Editor, Rabia Khalid (IEEE Karachi Section) which includes Fatima Faruq (IEEE Islamabad Section), Hudaisa Afzal (IEEE Karachi Section) Elia Nauroz Ali (IEEE Lahore Section). The team plans to publish its second quarterly issue next month.

**IEEE PWF WEBSITE**

Pakistan WIE Forum intends to initiate a website in order to help keep WIE groups in Pakistan connected and updated. A web team has been created under the leadership of IEEE Karachi Section which includes Sehrish Asif, Madiha Khalid, Faiza Sajid and Fatima Asif. A temporary webpage currently hosting here: http://ieeepwf .weebly.com

**R10 CONGRESS DELEGATES SHARE EXPERIENCE AT WIE-NED MEETING**

A meeting was held at WIE NED, Karachi that gathered the delegates of R10 Congress 2011, who shared the success of their participation in the Congress as well as the WIE events. They appreciated and congratulated by the IEEE Gold and IEEE Karachi Sections present at the meeting.

**MEMBERSHIP DRIVE (DISCOVER WIE)**

Membership Drive was initiated under the leadership of IEEE Islamabad Section in May, 2011 to increase IEEE WIE memberships in Pakistan. It was created with the following agenda points in mind:

* Aim existing IEEE student branches and promote WIE memberships through Discover WIE Sessions.
* Promotion through presentation and videos about IEEE and WIE by a PWF representative.
* PWF representatives and other IEEE members talk to the audience about their experiences in IEEE.
* Promotion also includes an activity session to help engage students and help create an idea of the IEEE environment.
* On the spot, feedback forms will be filled for improvement in the Membership Drive initiative.
* **DISCOVER WIE – EPISODE 1**

The first Discover WIE session was held at NFC Faisalabad on 6th May, 2011 and was hosted by IEEE NFC-IEFR. The event photos can be found here: <http://on.fb.me/liK8nb>

* **DISCOVER WIE – EPISODE 2**

The second Discover WIE session as held at UET Lahore on 19th May, 2011 at the ‘Footsteps of Illustration’ event by IEEE UET, Lahore. The event photos can be found here: <http://on.fb.me/m1q8Y4>

**PROGRESS PROJECT: PAKISTAN MISSION TO PROGRESS (PMP)**

This project has been initiated under the leadership of Anum Javed (IEEE Lahore Section) in response to the R10 WIE PROGRESS PROJECT Support Fund 2011. A formal proposal was submitted earlier this month with the objective to provide Gender Equal Societies in Science, awareness to common man about science, engineering and technology (SET) and also to increase the networking in members by connecting all the WIE affinity groups. An estimate budget and number of participants was attached with the proposal. The proposed activities and programs include:

1. Survey of the current gender-equality status through questionnaire
2. Gender equality promotion in co-operation with rural areas
3. Conduct seminars in the three IEEE Sections of Pakistan to change mind sets

**JUST BELIEVE IN YOUR DREAMS – IEEE DAY PROJECT**

“Just Believe in Your Dreams” was conducted on 6th July 2011 during the celebrations of “*IEEE Day with GCUF*” with collaboration of IEEE Pakistan WIE Forum. Presentations and activities were held by Miss Mehvish Zahoor; President IEEE WIE Forum. A session on “Wanna be… Making Your Dreams Come True” was held via a video conferencing by Muhammad Saad from the University of Massachusetts. A team activity followed along with a session on “Women Inspiration and Empowerment”.

# **PART C - GOALS AND PLANS**

## C. 1 Goal(s)

Develop a “***member”*** and “***Value”*** focused organisation.

## C. 2 Detailed Implementation Plans

1. Make IEEE more relevant for its members.

* Professional development activities
* More broad-based participation from various related industries
* Telecom
* Power
* Electronics
* Computing – Software development

1. More active support for the student branches.
2. Serve as a forum for discussion of professional and policy issues that are of interest to our members.
3. Organise at least 6 educational seminars on topics of interest to IEEE members.
4. Increase membership through a concerted drive and activate dormant members.

* Seek institutional support
* Offer value for membership (Institution and individual level)
* Establish a process for converting student members into regular members

1. Organisational strengthening

* Establish processes for providing information and services to existing and new members
* Dues payment support
* Information dissemination through newsletter, e-mail and website
* Establish a standard calendar of events and activities

· Meetings

* Seminars

1. Financial Aid for deserving students
2. Motivating members to upgrade to senior member

# **PART D - OTHERS**

## D. 1 Special Events

The following were the special events held by **IEEE Lahore Section during the year 2011:**

* Student participation in the R10 Student Congress Auckland
* IEEE Section Student Congress 2011, GCU Lahore

## D. 2 Problems Anticipated

The following problems could be anticipated:

* The fluctuations in exchange rate is adversely affecting the paying power of members.

It is suggested that plans and goals be realistic keeping in view the available time to office holders and limitation of human resources for voluntary work.