



## **Section Report**

# **IEEE LAHORE SECTION ANNUAL REPORT 2015**

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## **PART A SECTION SUMMARY**

### **A. 1 Executive Summary**

IEEE Lahore Section was formed as a full-fledged Section in 1964. Currently, it has five society chapters, namely, Communication Society, Computer Society, Power and Energy Society, Industrial Application Society and Computational Intelligence Society. There are four affinity groups; YP (GOLD), WIE, CN and SIGHT. There are 22 active student branches in this section. Student branches remained vibrant throughout the year 2015 and organized a large number of activities.

The objectives of IEEE Lahore Section have been defined as under:

- To provide a platform for networking
- To help in sharing knowledge and expertise at local level
- To strengthen industry-academia links
- To encourage and guide students' activities
- To represent Lahore Section at international IEEE forums

The Annual General Meeting (AGM) of Lahore Section for the year 2015 was held on December 29, 2015 at the Lahore University of Management Sciences (LUMS) Lahore. Dr. Faqir Zarrar Yousaf, Senior Researcher at NEC Laboratories Europe, in Heidelberg, Germany, delivered a keynote address, the topic of his address was Network Function Virtualization (NFV) – A Technology Enabler for 5G Networks.

The affinity groups of Lahore Section namely YP, WIE and SIGHT were quite active and organized a number of activities. IEEE Consultants Network affinity group is newly formed in 2015.

The section membership was 834 in December, 2015, much higher as compared to the last year's total of 760.

During the year 2015, seven (7) Executive Committee meetings were held besides a number of administrative meetings and technical events.

There were two mega events of IEEE in the Section in 2015. The first one was the IEEE Pakistan Students Computer Society Congress (PSCSC). IEEE PSCSC 2015 was held in April 2015 at GC University Faisalabad and was attended by the participants from all over the country. The second one was the 9th International Conference on Open Source Systems and Technologies (ICOSST) organized by the Computer Society Chapter at UET Lahore in December 2015.

This year three awards were announced for Lahore section by IEEE global committees and three Awards by IEEE Region-10 (Asia & Pacific).

### **A. 2 Financial Report**

Financial reports are provided separately using NetSuit

### A. 3 List of Executive Committee Members for 2015

S#	Name of Nominee	Membership#	Address	Position Proposed by Section
1.	Dr. Shafay Shamail	SM-1855139	Associate Professor, CS Dept. LUMS, DHA, Lahore Cantt.	CHAIR
2.	Dr. Sobia Baig	M-92096967	Chairperson Electrical Engineering Department, COMSATS, Defense Road, off Raiwind Road, Lahore	VICE-CHAIR
3.	Mr. Amir Zahoor	M-85031258	Lecturer, Electrical Engineering Department, FAST-NUCES Faisalabad	SECRETARY
4.	Dr. Khaver Zia	M-85026639	Dean CS, Beconhouse National University, Zafar Ali Road, Lahore	TREASURER
5.	Mr. Usman Munawar	M-92404457	Research Associate, UET Lahore	Chair, Student Activities Committee
6.	Dr. Syed Amjad Hussain Shah	SM-41388554	Director & Professor Electrical Engineering, NUCES-Fast Lahore, B-Block Faisal Town, Lahore	Chair, Membership Development
7.	Mr. Usman M. Ali	M-92348200	Lecturer, Electrical Engineering Department, UoS Lahore Campus	Chair, YP Affinity Group
8.	Ms Sania Arshad	M-92305472	Works in Mobilink, a telecom industry	Chair, WIE Affinity Group
9.	Mr. Amir Zahoor	M-85031258	Lecturer, Electrical Engineering Department, FAST-NUCES Faisalabad	Chair, SIGHT Group
10.	Dr. Ghalib Asadullah Shah	M- 90839488	Associate Professor, Electrical Engineering Department, UET, G.T. Road Lahore	Chair, CN Affinity Group
11.	Dr. Noor M Sheikh	M-41533774	Oman Chair, Electrical Engg. Dept. UET, Lahore	Chair, Communication Society Chapter
12.	Dr. Suhail Aftab Qureshi	M- 90861712	KICS,UET Lahore.	Chair, Power and Energy Society
13.	Dr. Ali Hammad Akbar	M- 92257820	KICS, UET, G.T. Road, Lahore	Chair, Computer Society Chapter
14.	Dr. Jamshaid Iqbal Janjua	M-91246137	KICS, UET, G.T. Road, Lahore	Chair, Computational Intelligence Society Chapter
15.	Ms. Faiza Nasir	M- 93091304	Works in Zong, a telecom industry	Chair Industrial Application Society Chapter
16.	Ms. Jowaria Sohail	M- 92296022	Works in Warid, a telecom industry	Professional Activities Chair
17.	Mr. Ijlal Haider	M-90894796	Assistant Professor, Electrical Engineering Department, UoL, Lahore	Educational Activities Chair
18.	Engr. Shazeb J. Rathore	M-04673612	34-A, Sattelite Town, Gujranwala	Industrial Relations Chair
19.	Dr. Muhammad Irfan Abid	M- 90603902	Assistant Professor, Electrical Engineering Department, Ripah International University Faisalabad campus.	MEMBER
20.	Dr. Muhammad Tahir	M-40153160	Associate Professor, Electrical Engineering Department, UET, G.T. Road Lahore	MEMBER
21.	Ms. Asma Sajad	M- 92292394	Lecturer, Computer Science Department, GC University Faisalabad	MEMBER
22.	Mr. Anees ul Husnain	M- 92529220	Lecturer, Electrical Engineering Department, IUB, Bahawalpur	MEMBER
23.	Engr. Naveed Ahmad Khan	M-91284317	Assistant Professor, University of Lahore, 1 Km Raiwind Road, Lahore	MEMBER
24.	Mr. M. Aftab Waince	M-92656014	Student, GCUF Faisalabad	SSR

## PART B -ORGANISATIONAL ACTIVITIES

### B. 1 Membership Development Programs Efforts in Membership Development

During the year there were continual efforts to increase the membership and retain existing members. In particular the student branches organized a number of introductory sessions for new students.

The Petitions for the IEEE Faisalabad Subsection and Bahawalpur Subsection under Lahore Section have been approved. The establishment of these Subsections is in progress.

IEEE Computational Intelligence Society Chapter and IEEE Consultants Network Affinity Group in the Section were established.

Many new society chapters in student branches were established.

Student volunteers have conducted motivational seminars and presented talks on the benefits of joining IEEE and establishing student chapters.

IEEE Industrial Application Society (IAS) Chapters in student branches were established.

IEEE Power and Energy Society (PES) Chapters in student branches were established.

Three (03) student branches were established in the Lahore Section during the year 2015. Shareef College of Engineering & Technology Lahore Student Branch,, University of Gujrat Student Branch, BZU Multan Student Branch.

### Membership Statistics

There has been an increase in the overall membership from last year. At the end of the year 2015, the membership of the Lahore Section is given below in comparison to same for last 7 years (2009 to 2015).

Current Grade Description	Dec-2015	Dec-2014	Dec-2013	Dec-2012	Dec-2011	Dec-2010	Dec-2009
Affiliate	1	-	-	-	4	4	2
Associate Member	13	7	18	12	14	7	7
Fellow	1	1	1	-	-	-	-
Graduate Student Member	61	47	35	36	34	32	14
Life Member	-	-	-	1	1	1	1
Life Senior	-	-	-	-	1	1	1
Member	253	254	230	232	181	194	167
Senior Member	10	10	12	12	12	11	14
Student Member	495	441	274	204	264	270	344
<b>Total</b>	<b>834</b>	<b>760</b>	<b>570</b>	<b>497</b>	<b>511</b>	<b>520</b>	<b>550</b>

### **Current Student Branches:**

- 1 Beaconhouse National University, Lahore
- 2 COMSATS IIT, Lahore
- 3 FAST NUCES, Lahore
- 4 GCU Lahore
- 5 LUMS, Lahore
- 6 UET, Lahore
- 7 UCEST, Lahore Leads Lahore
- 8 University of Management and Technology, Lahore
- 9 University of Lahore
- 10 University of Central Punjab, Lahore
- 11 Lahore College for Women University, Lahore
- 12 Superior University Lahore
- 13 IEEE Shareef College of Engineering & Technology, Lahore (New, Formed in 2015)
- 14 University of Gujrat, Sialkot Campus
- 15 IEEE University of Gujrat (New, Formed in 2015)
- 16 FAST NUCES, Faisalabad
- 17 GCU Faisalabad
- 18 NFC Faisalabad
- 19 NTU, Faisalabad
- 20 The University of Faisalabad
- 21 Islamia University Bahawalpur
- 22 Bahauddin Zakariya University, Multan (New, Formed in 2015)

### **Student Branch Society Chapters**

- 1 Industrial Application Society chapter at UET Lahore  
Industrial Application Society chapter at UCET Bahawalpur  
Industrial Application Society chapter at FAST NUCES Lahore  
Industrial Application Society chapter at BZU Multan  
Industrial Application Society chapter at GCUF Faisalabad
- 2 Computer Society chapter at GCU Faisalabad  
Computer Society chapter at UET Lahore  
Computer Society chapter at Superior University Lahore
- 3 Power & Energy Society chapter at NFC Faisalabad  
Power & Energy Society chapter at COMSAT IIT Lahore  
Power & Energy Society chapter at UET Lahore  
Power & Energy Society chapter at UCET Bahawalpur  
Power & Energy Society chapter at Superior University Lahore
- 4 Robotics & Automation Society chapter at FAST NUCES Lahore  
Robotics & Automation Society chapter at UET Lahore
- 5 Circuit and Systems Society chapter at FAST NUCES Lahore
- 6 Communication Society chapter at UCET Bahawalpur

## Student Branch Affinity Groups

1	WIE Lahore College for Women University, Lahore
2	WIE FAST-NUCES Lahore
3	WIE GCU Lahore
4	WIE GCU Faisalabad
5	WIE NFC Faisalabad
6	WIE BZU Multan
7	WIE UCET Bahawalpur
8	WIE UET Lahore
9	WIE COMSAT IIT Lahore

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

A few seminars and technical/invited talks were held under the auspices of Lahore Section.

### B 2.1 Professional Activities Committee Activities 2015

IEEE Professional Activities Committee is led by Ms. Jowaria Sohail. She belongs to Warid Telecom, a telecom industry.

Activity No. 1

Event Name: Technical Industrial Visit to PTCL Corporate Data Centre

Project: IEEE Young Professional's beENG Program

Event Venue: PTCL Corporate Data Centre, Wafaqi Colony, Lahore

Event Date: Saturday, 2nd May, 2015

Timings: 1100 - 1500

Chief Guest: Mr. Aqleem Shervani (GM HRBP)

Description:

The principal aim of this tour was to bring people in academia and industry together and offer a collaborative platform for Students to make them learn and strengthen them to prepare well in their interested fields of Career. IEEE Young Professionals Lahore organized a technical industrial tour to "PTCL Data Center" for IEEE Members under prestigious collaborated project "IEEE beENG" of Region 8, 9 and 10. It's great to take start inter-region events with collaborations to transfer technology throughout world. The vision is building bridges between academia and industry and to reduce and ultimately diminish unemployment in the country. i.e. preparing the future employees and their meet up with the current Employers

The benefit for academia is University Students Grooming, like their coaching and preparing them to learn the latest tools and technologies. Disseminate timely, useful information and strengthen our young people to prepare well before their step-in-to-Corporate World with right choices in their Career moves. Providing them a platform for mentorship through our connected IEEE members due to strong network throughout the world. Professors can be part of IEEE distinguish program. The benefit for industry is businessperson & Industrialists can keep their CSR (Corporate Social Responsibility) alive.

There were multiple opportunities provided to students in this industrial tour like, exposure to real engineering world, provided them exclusive access to Pakistan's leading technology and service solution providers setup,

exclusive learning on Data Centre design (how service providers gives you 24/7 internet), how Cloud Computing works?, those who want to establish their career in field of networks were able to catch up live scenario, internship offers by PTCL HR.

First of all PTCL HR Manager, Muhammad Usman Nasir given an orientation session on PTCL Brand Image, PTCL as an Employer & its CSR program which is then followed by Data Center Overview by Manager Data Center (Technical), Muhammad Usman Khan following the Data Center facility Visit. Afterwards, Manager HR briefed the students with CV Do's & Don'ts and collected CVs from them and asked them to must register for their upcoming PTCL "EEE PROGRAM" which is their one year paid internship offer. Each of the above session included the Q/A's by students. They introduced the PTCL Products and Discount offers to students.

At the end, Souvenirs were distributed to PTCL officers by IEEE Lahore Section. The Selected Candidates were 46 and student branches which participated were 15 from Lahore Section, i.e. UET, BZU, IUB, LCWU, Superior, CIITLHR, CIIT Sahiwal, UOG, UOS, Imperial, UCP, UOL, LUMS, SCET, GCUL. As far as the future directions and ideas as to how to extend and enhance this technique is we are locating more regions and have plans to make this project more progressive in world. The Management Team of IEEE YP Lahore Section includes Dr. Khaver Zia (Treasurer IEEE Lahore Section), Usman Munawar (IEEE SAC Chair Lahore Section; IEEE YP General Secretary), Muhammad Usman Ali (Chair, IEEE YP), Rabail Khizar (Project Manager, IEEE beENG Program), Anum Tariq (Chair IEEE WIE; Project Coordinator IEEE beENG Program), Rana Hassan (Project Coordinator IEEE beENG Program), Hamza Mehboob (IAS Student Chapter Representative) and Saad Rind (Student Representative IEEE YP)

An important goal for IEEE YP is the empowerment of our Students. This experience would really be helpful in their learning experience plus will count in their decision making of career choices.

Activity No. 2

IEEE Lahore Section: Professional Activity 2

(IEEE Computer Society Secretariat, KICS, University of Engineering and Technology Lahore, Pakistan)

Title Development of Optimized Pragmatic Model for Empowerment of Support Staff in Organizations through Effective Trainings

Introduction: Proper education of administrative staff through well-designed trainings greatly influences their job involvement and commitment towards their host-organization. Once satisfied with their job with a true sense of fulfillment administrative staff eventually becomes an intangible asset. For this purpose their requirements must be duly recognized and effectively resolved to enhance work performance. Furthermore to achieve certain organizational goals staff should be trained accordingly to streamline their routine activities and ensure higher organizational production. With this vision a training session was planned on Wednesday Sept 16, 2015. 15 support staff members along with administrative and HR leads attended this workshop. IEEE guests were also present there. Following is a very simplified action plan.

As per plan, initial survey forms were distributed to collect general problems such as daily wages issues, rapid switching between tasks, wastage of time due to late lunch orders, tasks along with time limits should be planned and assigned, instead of emergency/urgent tasks all the time, difficult & new tasks should be assigned generally, performance should be acknowledged, incentives should be there. Staff suggested about the moral ethics such as staying united and positive, trusting fellow employees, good environment and behavior from seniors and believing in each other's capabilities, well educated about the tasks and job responsibilities. Presentations about all the categories were given to support staff and end of presentation their views were also collected where the staff wholeheartedly suggested for more detailed presentations on each of the separate categories.

Activities Performed: This single training session will be extended as a larger project and in future more session will be conducted as per following:

- 1) Preparation of basic empowerment plan, development of training materials & survey/feedback forms
- 2) Interactive training sessions each planned with four activities namely collecting ongoing problems, brainstorming for solutions, suggesting service improvement methods and formulating concrete action plan.
- 3) Supervised execution of the action plan to ensure that old problems are resolved



- 4) Take employee & management feedback surveys to observe gradual improvement in performance and to identify some new bottlenecks/problems, tune the empowerment model according to new findings
- 5) Five repetitions of above one week steps 2) to 4) are considered sufficient to deduce and optimize the action model for empowerment of support staff in any organization for any type of support service.
- 6) Optimization of Staff Empowerment Model and Generation of Final Report

Conclusion: End of training suggestions were to justify rules and regulations and develop a good team building environment with corporate members, become well-educated about the tasks and responsibilities. Such training sessions will be repeated in future as well.

### Activity No. 3

Event name: IEEE YP Summit 2015

Sessions: 1- Workshop on Industrial Safety

2- IEEE Student Transition and Elevation Program

Event venue: Comsats Institute of Information and Technology, Lahore

Event Date: Friday, 30 October, 2015

#### Description:

IEEE Student Branch, CIIT Lahore has arranged a one day IEEE Young Professionals (YP) Summit 2015. The vision of YP Summit was to encourage student to involve safety protocols in the field and promote IEEE memberships to the professionals. IEEE YP Summit 2015 designed of two sessions, one session was Workshop on Industrial Safety and other one was Student Transition and Elevation Program (STEP). The Workshop on Industrial Safety was organized in order for the different stakeholders in Industrial Safety and Research to confront their visions on what the state-of-the-art and the priorities are in this domain across the different sectors of Industry. The Industrial Safety has indeed identified safety as a crosscutting issue with potentially significant societal impact. Many challenges and opportunities have emerged during this workshop. The challenges and opportunities were also often similar throughout various industrial sectors and environments.

IEEE STEP (Student Transition & Elevation Partnership) program was created for local GOLD affinity groups to help facilitate the transition of student members as they graduate and become higher grade IEEE members. The program is intended to help introduce the opportunities and benefits of IEEE membership during the onset of a career. As Graduation is a time when students are going to take their first STEP into the new world of science and technology where they have to convert their skills, knowledge and efforts into something which can make difference in the society. As we know that an open panel discussion is always helpful and leads to great opportunities for students to clear their misunderstandings. So, this session was provided to the students in collaboration with IEEE Lahore Section which came up with great benefits. Moreover, a handicraft exhibition was arranged by our team for humanitarian activity.

The Speakers for Workshop on Industrial Safety was “Dr. Fahim”. The workshop was started by the welcome note by Owais Khalil (General Secretary, IEEE CIIT Lahore) and then Speaker introduced himself to the attendees. The session treats regulatory and policy affairs on industrial safety. Session two discusses state-of-the-art and future research and innovation issues regarding industrial safety on a European level, while safety within different industrial sectors of the contractual PPPs (that is, manufacturing, process industry and construction industry) is dealt with. Session four presents strategic priorities and industrial safety in biotech and nanotech industries. The workshop ends with a public debate and capturing attendees’ concerns, comments and suggestions.

The STEP session was developed to provide a dynamic program for facilitating the transition from Student member to young professional by introducing the opportunities and benefits of IEEE membership. The Usman Munawar (IEEE SAC Chair Lahore Section; IEEE YP General Secretary) was as a guest of honor for this session, Bilal Javed (Regional student coordinator of IEEE PES-YP R10, General Secretary IEEE PES Lahore Section), Faisal Usman (General Secretary in IEEE Consultant’s Network in IEEE Lahore Section), Shahid Zulfiqar (IEEE YP Bahawalpur Sub Section) and Arshad Mukhtar (IEEE Young Professional, Former Chair IEEE GCUF).

First of all Usman Munawar, given an orientation session on STEP, a short introduction about the benefits and opportunities of IEEE Student Transition And Elevation Program, Sir Shahid conduct an informative session on “powering your project” important points related to resume then Bilal Ghuman conduct his session on “Shaping Your career” and then Faisal Usman and Arshad Mukhtar shared the “Graduate story and their transition from

student to professional” with us “Each of the above session included the Q/A’s by students. A panel discussion for our participants were arranged by our speakers in which different kind of questions was asked by the moderator that were very beneficial for our faculty as well as the participants present in the auditorium. After panel discussion a Question/ Answer session was arranged for the students to get better understanding related to seminar. After this session a closing ceremony was arranged by the management team for distribution of certificated to their participants of STEP seminar.

## **B 2.2 Education Activities Committee Activities 2015**

IEEE Educational Activities Committee is led by Mr. Ijlal Haider. He is working as Assistant Professor in Electrical Engineering Department at University of Lahore.

### Activity No. 1

First EPICS Project submitted from Lahore Section

Looking at the current gap between teaching and research in Biomedical Engineering/ Neuroscience and its demand, MEDICS Research Lab at The University of Lahore has recently submitted a project for funding under Engineering Project in Community Service (EPICS) Program of IEEE. The objective of this project is to design a Mobile Biomedical Engineering/ Neuroscience labs for High School students such that this field may be presented as a career choice to them enabling them to get involved in Neurosciences.

### Activity No. 2

Collaboration with Zambia Section for another EPICS Project

Educational Activities Team, IEEE Lahore Section has recently met with members of IEEE Zambia Section, Dr. Ackim Zulu (Head, School of Engineering, University of Zambia) and Dr. Jackson Phiri (Head, School of Computer Science, University of Zambia) in Lusaka, Zambia to initiate a collaborative project with help of MEDICS Research Lab, The University of Lahore. The objective of the project is to design a remote ECG monitoring device to improve rural healthcare facilities in Zambia and Pakistan.

### Activity No. 3

Collaboration with UNESCO on Several Educational Activities Programs

EA Lahore is in communication with UNESCO Islamabad office for collaboration in education activities programs. UNESCO is already working on improving Science Education in Pakistan. Collaboration with UNESCO will help increase the impact of IEEE programs in community.

### Activity No. 4

Engaging High School Students in IEEE

EA Lahore has recently collaborated with Lahore Grammar School, Johar Town campus to engage their students in several IEEE projects. Mr. Abdul Rehman Moazzam (Patron, Robotics Club, LGS JT) is coordinating with EA for it. Currently, a team of 4 students is working on EPICS project and further students will be engaged in TISP in Lahore. YP Lahore is also interested to engage students from public sector schools and currently working on it.

Career Counseling Program by IEEE YP and EA team Lahore

YP and EA teams of Lahore Section are initiating a career counseling program with a very young social initiative named Ramz e Khudi, Lahore. They will provide support on preparation of material and facilitation of speakers and YP and EA, Lahore will arrange series of career counseling workshops under this program. YP Lahore will apply for IEEE Seed Grant for this program.

### Activity No. 5

Revitalizing Research & Development Program of Pakistan (RDPP)

RDPP was an initiative started by few members of YP and Student Branches back in 2011. Educational Activities team of Lahore Section is taking this initiative as its project. This program will be matured to hold research camps for young faculty members and graduate students to help them learn research and its fundamentals. EA Lahore will prepare a draft of activities under this program and their rationale based on a research being conducted by STEER Network at The University of Lahore with research grant from STEPI, South Korea. New Initiative Funding can be applied for this program.

Activity No. 6

Teacher in Service Program (TISP) in Lahore Section

EA team will be looking at the TISP in Lahore Section. Two trainings have already been conducted with the help of YP. Two proposals have been submitted to a private college in Sangla Hill and private school in Lahore.

### **Executive Committee Meetings of IEEE Lahore Section**

A total of seven (07) Executive Committee Meetings were held during 2015. Six (06) meetings took place at FAST-NUCES, B-block, Faisal Town, Lahore and one (01) meeting was held at SSE, LUMS, Lahore. These meetings have been reported at L31 meeting reporting system.

### **Administrative Meetings of 2015**

In addition to Executive Committee meetings, four administrative meetings were held during the year.

1. Combine Sections Meeting of Lahore, Karachi & Islamabad in COMSAT IIT Islamabad
2. Meetings with Karachi and Islamabad Section Officers during IEEE PSCSC 15 in GC University Faisalabad
3. Meeting with Lahore Section Auditors Aftab Zafar & Co
4. Meetings regarding the organization of 2015 ICOSST.
5. Meeting of Awards Committee.

### **Annual General Meeting of 2015**

The Annual General Meeting of Lahore Section for the year 2015 was held on December 29, 2015 at the Lahore University of Management Sciences (LUMS) Lahore. Dr. Faqir Zarrar Yousaf, Senior Researcher at NEC Laboratories Europe, in Heidelberg, Germany, delivered a keynote address, the topic of his address was Network Function Virtualization (NFV) – A Technology Enabler for 5G Networks.

## **B. 3 Awards and Achievements**

### **Section Awards**

In the past the Section has given awards to the Best Student Volunteer and Best Student Branch 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 in the form of shields and certificates.

The recipients of IEEE Lahore Section Awards for 2015 are:

1. Best Student Volunteer of the Year: Mr. Faisal Usman Sheikh (Superior University Lahore)  
Runner up Volunteer of the Year: Mr. Saad Rind (UCET Islamia University Bahawalpur)
2. Best Student Branch of the Year: UCET Islamia University Bahawalpur  
Runner up Branch of the Year: UET Lahore

3. Best WIE Student Branch Affinity Group of the Year: COMSAT IIT Lahore
4. Best WIE Student Volunteer of the Year: Ms. Anum Tariq Khan

### **Achievements in Section**

Three R-10 and Two Global awards were given to the volunteers of Lahore Section in 2015.

#### **A. IEEE Region 10 Awards:**

1. R10 Distinguished Section Awards - Lahore Section (Medium Section category)
2. R10 WIE Volunteer Award of the Year (Professional): Ms. Sania Arshad
3. R10 WIE Section Affinity Group of the Year: WIE Affinity Group Lahore

#### **B. IEEE Global Awards:**

1. Outstanding Section Membership Recruitment Performance- Lahore Section
2. Award of Excellence for Continuous Service for IEEE Computer Society: Ms. Asma Sajid
3. Outstanding Branch Counsellor's Award: Mr. Anees Ul Hassan

Eight volunteers of Lahore Section participated in a Region 10 Congress for Students, Young Professional and WIE in Colombo, Sri Lanka in July 2015.

Ms. Mehvish Zahoor, Volunteer from Lahore section is appointed as Region 10 Student Represented and participated in R10 Meeting in Nepal, R10 AGM in Bangladesh, MGA SAC meeting in USA

Mr. Saad Rind, volunteer from Lahore section participated in IAS Annual General Meeting in USA.

Mr. Usman Munawar, volunteer from Lahore section participated in PES meeting in Thailand.

Ms. Rohma Khalid, volunteer from Lahore section participated in WIE International Leadership Conference in USA

Mr. Amir Zahoor has been appointed as member of Education Activities Board in Continuing Education Committee (CEC).

## **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.

Here are highlights of student branches activities of IEEE Lahore Section:

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1. FAST NUCES, Lahore
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Major Activities are;

Mega Event IEEE Week 2015 – 15th – 16th May 2015

Senior talks / winter camp – 2nd – 4th February 2015

Workshop on Raspberry Pi – 10th – 11th February 2015

Elementary Robotics Workshop – 16th – 18th April 2015

Student Branch Orientation & Membership Drive – 1st September 2015

Workshop on Windows 10 Application Development by WIE NUCES – 30th – 3rd October 2015

Embedded Week by IEEE CAS NUCES – 6th – 10th October 2015

Elementary Robotics Workshop 3.0 by IEEE RAS NUCES – 17th October 2015

IEEE Day Celebrations – Humanitarian Activity – 6th October 2015

IEEE Day Celebrations – Humanitarian Activity – 6th October 2015

Seminar on Network Security Systems (Ebryx) by IEEE IAS – 19th November 2015

Hosting IEEE LHR Section Branch ExCom Development Workshop – 21st November 2015

Inauguration of Newly Formed Chapters – 21st November 2015

## List of chapters & affinity groups in Student branch

### Affinity Group

IEEE NUCES Women in Engineering Affinity Group (SBA61531)

### Technical Chapters

IEEE Robotics & Automation Society

IEEE Circuits & Systems Society

IEEE Industry Application Society

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## 2. **BNU, Lahore Student Branch**

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Following are major activities by BNU Lahore student branch:

### 1. Big Data by Oracle

IEEE BNU Branch held a workshop about Big Data on 27 February 2015. Team of Oracle Pakistan is welcomed to talk about Big Data.

### 2. Building Startup Not Just Apps

School of Computer and IT and IEEE BNU Branch organized a talk by Mr. Fahad Aziz on the topic Building Startup Not Just Apps. Mr. Fahad Aziz is a co-founder and CTO of technology startup, Careaxiom, based out of San Francisco. Mr. Fahad Aziz, in his talk, shared his own start-up experience and shared light on the scope of entrepreneurship in Pakistan.

### 3. Orientation session

IEEE BNU Branch and BNU Mozillian shield a combine orientation session for new students of School of computer and Information Technology. Last year students Zain Mukhtar and Farooq Saleemi talk about both societies and tell them how to join.

### 4. Seminar on Software Requirements Engineering by Coeus Solutions

The objective of this workshop is to discuss about Software Requirements Engineering. Our Guest speaker Mr. Sheraz Pervaiz from Coeus Solutions gave brief presentation about Requirement Engineering, Myths in requirement engineering and shares their experience with School of compute and IT, BNU Lahore students

### 5. Wordpress workshop

IEEE BNU Branch held Wordpress and web designing workshop for students of School of computer and Information Technology. Last year student Zain Mukhtar gave a complete overview of Wordpress.

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### 3. **COMSAT IIT, Lahore Student Branch**

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Following are major activities by COMSAT IIT, Lahore student branch:

1. IEEE SPREE'15
2. TECHNOHUNT SPREE'15
3. E-GAMING COMPETITION
4. Workshop on robotics
5. Entry level career essentials workshops
6. Antenna project exhibition
7. DSP Project Exhibition
8. Workshop on the applications and use of lab view
9. INNOFEST'15
- 10.Speed Marketing Competition
- 11.Excode Competition
- 12.Circuitix Competition
- 13.Technohunt

## B. 5 Chapter Activities

### B5.1 Computer Society Activities 2015

IEEE Computer Society has conducted and provided technical assistance and guidance for various activities throughout year 2015. In addition, IEEE Computer Society Lahore Section has coorganized a number of computers and IT related events together with Al Khawarizimi Institute of Computer Science. The mega events were ICOSST by UET 2015 and IEEE Students Computer Society Congress by GC University Faisalabad.

#### OFFICE BEARERS & EXCOM

- 1) Chair - Dr. Ali Hammad Akbar, CS, UET, Lahore
- 2) Vice Chair – Jamshaid Iqbal Janjua, KICS, Lahore
- 3) Secretary – Dr. Waqar Mahmood, KICS, Lahore
- 4) Treasurer – Dr. Farooq Ahmad, UCP, Lahore
- 5) Member ExCOM- Dr. Sarmad Hussain, CLE, UET, Lahore
- 6) Member ExCOM- Dr. Ghalib Shah, KICS, Lahore
- 7) Member ExCOM- Dr. Razi Iqbal, Leads University, Lahore

#### 1. ELANCE WORKSHOP

Dates: April 24th, 2015

Venue: KICS Seminar hall, Lahore

Strength: 50

#### About

IEEE CS Lahore organized workshop on Elance in. Coffee Shop Gurus is a social Enterprise of Social Media Expert. It is an incubator platform to promote entrepreneurship in Pakistan. Here young entrepreneurs would join hands with experts and bring to reality their entrepreneurial ideas. The basic focus is on e-entrepreneurship. This includes channels like websites and social media for promotion. It's also includes gurus from the industry. Gurus give knowledge on each n very small aspect of business. It ranges from starting business from scratch to hardcore sales and reaping large profits. Elance is one of a virtual site where freelancers and project owners meet to get the job done.

#### Target Audience:

This workshop broadly targets individuals who are working or intend to work. This workshop has two target audiences: freelance contractors seeking work online and clients of all sizes from startups, SMBs and enterprise businesses seeking to hire virtual staff on an hourly or project basis. There is a particular focus on freelancers in marketing and website development sectors, including SEO, web development and design, copywriting and site management.

#### Instructor profile

Mr. Rohan David

Mr. Rohan David Emmanuel is the C.E.O OF Coffee Shop Gurus and Executive Director for Green and White Pakistan. Mr. Rohan graduated in Computer Science from University of Central Punjab and pursued his entrepreneurial career after that. As a Social media and S.E.O expert, Mr. Rohan started his company, Coffee Shop Gurus. Coffee Shop Gurus is digital, social, creative and print media agency and a social enterprise as well. He is also working as consultant for number of Government departments and also is a visiting faculty member as Kinnaird College for Women. Mr. Rohan also has known E Paradigm a company responsible for digital media of Punjab Youth Festival. This company is rated it top 5% percent companies on entire Elance.com. E paradigm is working with number of international clients through business process outsourcing.

## 2. Technical Lecture Series-2015

### Lecture # 1

Title: Living the LTE era: Post deployment Emerging and Practicable Research and Development directions in LTE (4G and Beyond)

Date and Time: Tuesday, December 15, 2015 1400 Hrs – 1500 Hrs

Venue: New Castle Auditorium, Dept. of CS & IT, Superior University, Lahore.  
(Focal Person: Mr. Fareed ud din Khan - 0301.7852004)

Speaker: Dr. Ali Hammad Akbar, CSE, UET, Lahore.

#### Abstract:

The globalization, interdependence and digitalization of telecom networks, has resulted in unprecedented changes in our lives while presenting burgeoning challenges for the engineers, policy regulators, vendors and network operators. This talk focuses on the impact and implications of the Next Generation Mobile Services (NGMS) on the newer types of data producer and consumer markets and telecom sector of Pakistan facing the imminent issues that need redress. Especially issues of security, commercial monopoly and monopsony and business processes change would be addressed that are relevant to Pakistan.

#### Speaker's Biography:

Dr. Ali Hammad Akbar obtained his bachelor's degree with distinction in telecommunications from NUST, Pakistan in 1997. As an intern, he worked at Pakistan Communications Industries, wherein he proposed and incorporated enhancements in the Norwegian telephone set, VIVO-II and its in-circuit tester. Later in 1998, he was awarded merit scholarship for MS in UNSW Australia, which concluded with his research findings in DWDM systems in optical communication systems. While in Australia, he also worked as a consultant to Ezel Corporation, a telco that compares in service provisioning with giants like Optus and Telstra. In 1999, he joined his alma mater as a lecturer. For his academic accomplishments, he was declared as a star laureate by South Asia Publications® for the year of 2003. In 2004, he joined Ajou University for pursuing the PhD studies. He worked on the architectural issues of wireless sensor networks that define the role and mechanisms for addressing the constraints and challenges purported in these networks. After the completion of his PhD, he is currently working as an assistant professor at UET Pakistan, a premier university in engineering and technology. His topics of interest include wireless networks such as MANETs and sensor network. Dr. Ali Hammad Akbar has been conducting research in wireless networks, M2M networks and distributed systems. He has worked as a consultant at KICS for government organizations such as LTC, PTPP and RESCUE 1122. His current interests lie in telecomm nations networks, especially post-spectrum auction scenario that is endogenously evolving viz a viz Pakistan as an instance of developing economies.

### Lecture # 2

Title: Discovery and Forecasting of Trending Topics in Online Media

Date and Time: Thursday, 3rd Dec 2015 12:00 Hrs - 13:00 Hrs Venue:

Venue: Seminar Hall, KICS, UET, GT Road, Lahore (Focal Person: Dr. Shahzad Asif, 0345.4768857)

Speaker: Prof. Dr. H. C. Andreas Dengel

#### Abstract:

Among the vast information available on the web, social media streams capture what people currently pay attention to and how they feel about certain topics. Awareness of such trending topics plays a crucial role in multimedia systems such as trend aware recommendation and automatic vocabulary selection for video concept detection systems. Correctly utilizing trending topics requires a better understanding of their various characteristics in different social media streams. To this end, I present the first comprehensive study across three major online and social media streams, Twitter, Google, and Wikipedia, covering thousands of trending topics during an observation period of an entire year. Our results indicate that depending on one's requirements one does not necessarily have to turn to Twitter for information about current events and that some media streams strongly emphasize content of specific categories. As our second key contribution we further present a novel approach for the challenging task of forecasting the life cycle of trending topics in the very moment they emerge. Our fully automated approach is based on a nearest neighbor forecasting technique exploiting our assumption that semantically similar topics exhibit similar behavior. We demonstrate on a large-scale dataset of Wikipedia page view statistics that forecasts by the



proposed approach are about 9-48k views closer to the actual viewing statistics compared to baseline methods and achieve a mean average percentage error of 45-19% for time periods of up to 14 days.

#### Speaker's Biography

Professor Andreas Dengel is a member of the Management Board as well as Scientific Director at the German Research Center for Artificial Intelligence (DFKI GmbH) in Kaiserslautern where he is leading the Knowledge Management research department. In 1993 he was appointed Professor at the Computer Science Department of the University of Kaiserslautern where he holds the chair "Knowledge-Based Systems". Since 2009 he is also Professor (Kyakuin) at the Department of Computer Science and Intelligent Systems, Graduate School of Engineering, at Osaka Prefecture University.

#### Lecture # 3

Title: Energy Consumption Analysis and Wireless Energy Harvesting Techniques for Relay Networks.

Date and Time: Thursday, 26th Nov 2015 16:00 hrs - 17:15 hrs

Venue: Department of Computer Science, COMSATS Institute of Information Technology, 1.5 KM Defence Road, Off Raiwind Road, Lahore Pakistan

(Focal Person: Dr. Farooq Ahmad, 0332.4655020)

Speaker: Dr. Omer Waqar (EE Dept., & KICS, UET, Lahore.).

#### Abstract:

It is generally considered that the multi-hop relay networks can overcome the pathloss and hence has the ability to achieve higher energy efficiency. However, this conjecture is not completely true when the circuit power consumption and/or delay constraints are considered. In this talk, certain scenarios will be presented under which multi-hop relay networks are more energy efficient in comparison with the single-hop networks. Other than these scenarios, it will be better to employ single-hop networks in order to achieve the higher energy efficiency. Moreover, it will be shown that the joint optimization of the number of relays and the constellation size (when the error probability is the desired performance metric) results in more energy savings. As an example, up to 55% energy savings are possible when the optimized relay networks will be deployed.

#### Lecture # 4

Title: Natural Language Descriptions For Video Sequences

Date and Time: Tuesday, 3rd Nov 2015 14:00 hrs - 15:00 hrs

Venue: Seminar Hall, KICS, UET, GT Road, Lahore

Speaker: Dr. Usman Ghani, (KICS, UET, Lahore). (Focal Person: Mr. Kashif Bashir, 032-3448-0000)

#### Abstract:

This work is concerned with the automatic generation of natural language descriptions that can be used for video indexing, retrieval and summarization applications. It is a step ahead of keyword based tagging as it captures relations between keywords associated with videos, thus clarifying the context between them. Initially, we prepare hand annotations consisting of descriptions for video segments crafted from a TREC Video dataset. Analysis of this data presents insights into humans interests on video contents. For machine generated descriptions, conventional image processing techniques are applied to extract high level features (HLFs) from individual video frames. Natural language description is then produced based on these HLFs. Although feature extraction processes are erroneous at various levels, approaches are explored to put them together for producing coherent descriptions. For scalability purpose, application of framework to several different video genres is also discussed. For complete video sequences, a scheme to generate coherent and compact descriptions for video streams is presented which makes use of spatial and temporal relations between HLFs and individual frames respectively. Calculating overlap between machine generated and human annotated descriptions concludes that machine generated descriptions capture context information and is in accordance with human's watching capabilities. Further, a task based evaluation shows improvement in video identification task as compared to keywords alone. Finally, application of generated natural language descriptions, for video scene classification is discussed.

Speaker's Biography:

## Lecture # 5

Title: In Pursuit of Disease Therapeutics: a System Biology Perspective

Date and Time: Thursday, 29th Oct 2015 12:00 hrs - 13:00 hrs

Venue: Seminar Hall, KICS, UET, GT Road, Lahore

(Focal Person: Dr. Amir Mahmood, 030-094-19079)

Speaker: Dr. Bilal Wajid (EE Dept. TAMU, UK).

Abstract:

The focuses of innovation in current drug discovery is on new targets, yet compound efficacy and safety in biological models of disease — not target selection — are the criteria that determine which drug candidates enter the clinic. Systems biology aims to describe and to understand the operation of complex biological systems and ultimately to develop predictive models of human disease. Large-scale gene, protein and metabolite measurements ('omics') dramatically accelerate hypothesis generation and testing in disease models. A biology-driven approach is required for drug discovery, one that involves screening compounds by automated response profiling in disease models based on complex human-cell systems. Drug discovery through cell systems biology approach promises to improve decision making in pharmaceutical development.

### 3. 9th IEEE ICOSST-2015

Open-Source Software has emerged as a cross-disciplinary paradigm for a large spectrum of computing applications. It helps in many ways, keeping the software market away from monopolies and providing innovative solutions. It not only helps the organizations to keep a control on the cost of development and deployment but also kept them ahead in terms of technology and robustness. OSS has also changed the way software applications are architected, deployed, and consumed but also they are engineered to provide large distributed cross-platforms and frameworks.

This year conference theme is on BIG DATA.

Call for Papers was positioned to solicit papers presenting field reports, case studies, provisional data, analytical frameworks and key research questions, which serve our knowledge of the impact of open source product, method tools in a verity of application areas, with particular emphasis in the tracks followed as below;

Track A: Software Application and Systems

- Software Application
- Database Management
- Green Technology
- Human Computer Interface
- OSS Opportunities and Business Models
- Biomedical Engineering
- Artificial Intelligence
- Control System
- Power Electronics
- Power System
- Computer Engineering

Track B: Network, Security & Information Systems

- Information Security
- Open System Data and Interoperability
- Open Standards and Network Protocols
- Processor Architecture & Parallelization
- Parallel & Distributed Systems
- OSS and Social Innovation
- Kernel and Device Development
- Smart Grids

Track C: Mobile Systems and Application

- Mobile Applications
- Mobile Cloud Computing/ Platform Issue and Techniques
- Mobile Operating Systems
- Cloud and Mobile Information Technology(IT) for Enterprise
- Mobile Middle-ware

- Security of Mobile Platform and Devices
- Vehicular Network - Mobile Device Tracking
- Mobile Customer Relationship Management (CRM)
- Advance in Mobile Remote Access Technology
- Service Oriented Computing
- Open Mobile System and Frameworks
- Location Services and Mobile Tracking

#### 4. ICOSST-2015: Invited Talks

##### Session I

##### 1st Talk

Title: Cyber Security for Critical Physical Infrastructure in Pakistan

Speaker: Dr. Raziq Yaqub, Rowan University Glassboro, New Jersey, USA

Abstract:

This talk would begin with the definition of Cyber Security for CPI. CPI includes Power Grid, Nuclear Plants, Oil and Gas Refineries, Water Supply System, Emergency Services Infrastructure, Transport, Telecommunication infrastructure, Manufacturing and other Industrial Control Systems (ICS). The talk would also emphasize on how the tight coupling between information and communication technologies (ICT) and CPI introduces new security concerns, and provides adversaries with powerful tools and makes it vulnerable to new security challenges.

The agenda of this Keynote speech would also include (a) Real insight into Cyber Security Concepts, (b) Security Requirements for ICS; in contrast to ICT, (c) Architecture of Industrial Control Systems (ICS) including Distributed Control Systems (DCS) and SCADA, (d) Emerging Threats and Vulnerabilities in CPI Specific to Pakistan because of its Location and Strategic Role, (e) Failure of Interlocks, Permissives and Remediations, and (f)

Recommendations to Address the Challenges, especially the challenge areas where previous recommendations never existed or not been fully addressed.

##### 2nd Talk

Title: Image retrieval in the compressed JPEG domain

Speaker: Dr. Gerald Schaefer, University, Loughborough, UK

Abstract:

Content-based image retrieval (CBIR) has been an active research area for more than two decades. However, while almost all images are stored in compressed form, the vast majority of CBIR algorithms operate in the (uncompressed) pixel domain. This not only leads to a computational overhead for feature calculation, it can also be demonstrated that image compression has a negative effect on retrieval accuracy, especially at extreme compression rates. In my talk, I will discuss efficient and effective CBIR techniques that operate directly in the compressed domain, hence not requiring full decompression for feature extraction. In particular, I will focus on the JPEG domain since most images are compressed using JPEG. I will show, how CBIR features can be extracted from DCT coefficients, from differentially coded DC data, and from tuned information contained in the JPEG headers. I will also discuss JIRL (JPEG Image Retrieval Library), an open source library we have developed for JPEG compressed-domain image retrieval.

##### 3rd Talk

Title: Generating perceivable small diagrams for big data sensemaking

Speaker: Dr. Tony Huang, University of Tasmania, Hobart, Australia

Abstract:

A great deal of real world data has a relational or graph structure. Data sets of such a structure are often visualized into node-link diagrams for a better understanding of them. However, the same graph can be drawn in indefinitely ways by simply changing the layout and different layouts affect human graph comprehension differently. In graph drawing, drawing principles, or aesthetics, have been proposed to produce quality layout. Among those aesthetics, edge crossings have been identified as the most important, having the greatest negative impact on humans.

Subsequently, much effort has been devoted to crossing minimization in the design of graph drawing algorithms. However, crossing minimization is NP-hard. Further, algorithms that are designed for crossing minimization are often difficult to understand and implement, limiting practical use. A question that has long been asked is: is it

possible to achieve a better or the same level of layout quality if we do not minimize the number of crossings?

#### 4th Talk

Title: Real Time Data Mining

Speaker: Dr. Joao Gama, University of Porto, Porto, Portugal

Abstract:

Nowadays, there are applications in which the data are modelled best not as persistent tables, but rather as transient data streams. In this article, we discuss the limitations of current machine learning and data mining algorithms. We discuss the fundamental issues in learning in dynamic environments like learning decision models that evolve over time, learning and forgetting, concept drift and change detection. Data streams are characterized by huge amounts of data that introduce new constraints in the design of learning algorithms: limited computational resources in terms of memory, processing time and cpu power. In this talk, we present some illustrative algorithms designed to taking these constraints into account. We identify the main issues and current challenges that emerge in learning from data streams, and present open research lines for further developments.

#### Session II

1stTalk:

Title: The Brain Imitation Game --- Are We Winning It?

Speaker: Dr. Tariq Jamil, Sultan Qaboos University, Muscat, Oman

Abstract:

The ultimate achievement of the computer architects of tomorrow will be judged based on our success in winning the brain-imitation game. During 1940s when World War II was wreaking havoc in Europe, Alan Turing, the famous British mathematical genius who broke the code for the Enigma Machine used by Germany and helped bring an early end to the War, had predicted that within 50 years, we'll be able to build a machine which will mimic human brain.

2nd Talk

Title: An In-Memory Object Caching Framework with Adaptive Load Balancing

Speaker: Dr. Ali R. Butt, Virginia Tech, Blacksburg, USA

Abstract:

The extreme latency and throughput requirements of modern big data and web applications are driving the use of distributed in-memory object caches such as Memcached. While extant caching systems scale-out seamlessly, their use in the cloud — with its unique cost and multi-tenancy dynamics — presents unique opportunities and design challenges. In this talk, I will introduce MBal, a high-performance in-memory object caching framework with adaptive Multi-phase load balancing. Mbal supports not only horizontal (scale-out) but vertical (scale-up) scalability as well. Mbal is able to make efficient use of available resources in the cloud through its fine-grained, partitioned, lockless design.

#### Session III

1st Talk:

Title: Computer Imaging and Impact on Society

Speakers: Dr. Zulfiqar Habib, COMSATS Institute of Information Technology, Lahore, Pakistan

2nd Talk

Title: Stream Analyzer: An Automated Video Stream Analysis in Cloud Data Centres

Speakers: Dr Ashiq Anjum, University of Derby, UK

#### Session IV

1st Talk

Title: Sentiment Analysis Impact in Businesses

Speaker: Dr. Kumar Padmanabh, Infosys Labs, General Motors, Robert Bosch Corporate Research, India

Abstract:

Generally data from internet of things are considered very small. Mostly information could be embedded into a single packet and many a time in few bytes only. Therefore there is a little difference between packets and messages of Internet of Things (IoT) data. However, recent deployment revealed that although individual data sizes are small however since frequency of sensing could be very high therefore even a simple deployment generates tera bytes of data. In this talk, speaker would describe how a practical deployment of IoT generates big data taking real life examples. Subsequently speaker would throw lights on potential challenges dealing with these data and opportunity

therein.

#### 2nd Talk

Title: New Technologies in Education: Applications for Visualizing 3D Objects using Pseudo Holographic Images

Speaker: Dr. Antoanela Naaji, Vasile Goldis Western University Arad, Arad, Romania

#### 3rd Talk

Title: Efficient and Scalable Metadata Management in Cloud-Scale File Systems

Speaker: Dr. Quanqing (QQ) X, DCT, Singapore

Abstract:

Efficient and scalable distributed metadata management is critically important to overall system performance in large-scale distributed file systems, especially in the Cloud-scale (EB-scale) era. Hash-based mapping and subtree partitioning are state-of-the-art distributed metadata management schemes. Hash-based mapping evenly distributes workload among metadata servers, but it eliminates all hierarchical locality of metadata. Subtree partitioning does not uniformly distribute workload among metadata servers, and metadata needs to be migrated to keep the load balanced roughly. Distributed metadata management is relatively difficult since it has to guarantee metadata consistency.

#### 4th Talk

Title: Crowd-sensed big data and algorithms

Speaker: Dr. Imre Lendak, Faculty of Technical Sciences, University of Novi Sad, Novi Sad Serbia

Abstract:

The goal of this paper is to overview open source data, applications and algorithms used for collecting, sharing and analyzing crowd-sensed (big) data. In crowd-sensing the 'crowd' is a loosely coupled network of people who are collecting, i.e. 'sensing' certain phenomena in their environment. Such sensing activities are made possible by the ever increasing number and power of the modern mobile devices.

#### 5th Talk

Title: Social Media in our Lives

Speaker: Dr. Daniela Gîfu, Romania

Abstract:

The presentation focuses on the impact of Social Media in our lives, starting with the online civic profile. With other words, who is behind the message? Social media (SM) - the most appreciated online media, which includes Social Networks (e.g. Facebook), Blogs (online journals), Wikis (e.g. Wikipedia), Podcasts (audio and video), Forums, Content Communities (e.g. Flickr), Microblogging (e.g. Twitter) - is a constant in our life, influencing the way we think, interact, learn, consolidate relationships and understand society. As a result of the rapid worldwide acceptance and usage of SM, more and more content is becoming available with each day. Both because of its importance and its increasing volume, it is not surprising that information from Social Media is rapidly becoming an essential source for natural language processing (NLP) research. It suggests ways of the automatic identification, in the benefit of editors of media institutions, specialists in public communication, intelligence agencies, political structures, etc.

#### 6th Talk

Title: Security and Internet of Things

Speaker: Dr. Peter Langendoerfer, Germany

#### 7th Talk

Title: Big Data

Speaker: Dr. Syed Ismail Shah, Chairman PTA

#### Session V

##### 1st Talk

Title: Infrastructure condition monitoring Trends

Speaker: Dr. Iqbal Gondal, Federation University Australia

## 2nd Talk

Title: Open Source Software Opportunities in Infrared Imaging

Speaker: Dr. Ricardo Vardasca, Faculty of Engineering, University of Porto, Porto, Portugal

Biography:

He is currently supervising 3 PhD students, as second supervisor, and 3 MSc students (1 of them as first supervisor), has successfully been second supervisor of 1 PhD and 4 MSc graduates. He has edited a book of proceedings and is currently editing a reference book in thermal imaging applications in medicine and biology, has edited 1 book and published 14 book chapters, 11 international peer reviewed journal papers, 25 peer reviewed conference proceedings papers.

## 3rd Talk

Title: Signal Processing

Speaker: Dr. Amjad Hussain, Director FAST-NU

Abstract:

Blends important UNIX concepts, like inter-process communication and I/O redirection, with shell commands to enhance understanding of both. Chapters are organized so readers focus on a small set of related topics. The book begins by providing a "UNIX Quick Start" for readers who want to immediately start using the book as a reference and begin working with UNIX. Then, the book tours the UNIX application interface, guiding readers through operating system utilities. The second edition of this book also includes additional coverage of UNIX software development tools. This book is designed for operating system programmers who want to familiarize themselves with the UNIX environment. Knowledge of OS concepts is needed for this book, but no prior knowledge or experience of UNIX itself is required.

## Session VI

### 1st Talk

Title: Second-guessing: A Critical Attribute for Success in R&D in Engineering

Speakers: Dr. Sisil Kumarawadu, University of Moratuwa, Moratuwa, Sri Lanka

Abstract:

Completing an R&D or postgraduate research project requires stamina, determination, and willingness to stretch your intellectual and emotional capabilities. An unmistakable initial momentum is vital to avoid stall out at some point when working on a research project as it may lead to feel as if there is no light at the end of the tunnel, or encounter disappointments or unexpected setbacks, or even embarrassments.

### 2nd Talk

Title: Coordination Mechanisms in Multi-Layer Clouds: Architecture and Applications

Speaker: Dr. Omer F. Rana, Cardiff University, UK

Abstract:

Many applications require data to be captured and processed in real time, as the migration of all the data to a central site prior to analysis can create significant overhead. Examples include the variety of sensor network-based applications where sensors interface with real world artifacts and must respond to physical phenomenon that cannot be predicted a priori. The amount of data likely to be generated by a sensor and processing requirements in such applications can not be pre-determined (as they are often dependent on the rate of change of the physical phenomenon being measured and potential occurrence of "trigger events" which are non-deterministic).

rd Talk  
Title: Modeling of Complex Systems using Automata Theory and Formal Methods

Speaker: Dr. Nazir Ahmad Zafar, CIIT Sahiwal, Pakistan

### 4th Talk

Title: Data Storage Challenges for Next Generation Mobile Technologies and Applications

Speakers: Dr. Mudasser Wyne, National University, San Diego, USA

Abstract:

I have been in academics for more than 25 years with 2 years at High Energy Physics institute (Germany), served in 5 countries and 7 different academic institutes, including National University that I joined in 2008 as Professor of Computer Science. I am currently serving as the Chair of Department of Computer Science, Information and Media Systems. I enjoy working on academic related activities hence served as chair of graduate council Program review and undergraduate program review committees in addition to serving on program assessment committees. I served with ABET for accrediting Computer Science and Information system programs since 2001 and retired as

Commissioner for ABET Computing accreditation Commission (CAC) July 2015. I am also actively involved in other numerous professional activities. Served as Chair/co-chair of 14 International Conferences/workshops, Panel chair for 7 International Conferences/workshops and have given 21 invited talks at International

5. Open Source Series Workshops (OSSW-2015)

<b>Venue: Seminar Hall, KICS, UET, Lahore, Pakistan.</b>				
<b>Sr. No</b>	<b>Time* (Hrs)</b>	<b>Title</b>	<b>Presenter Name</b>	<b>Affiliations</b>
1	0900-1000	Implementation of SOA In JAVA EE Framework	<a href="#">Mr. Jamshaid Iqbal Janjua</a> Mr. Atiq Saber	KICS, UET, Lahore
2	1015-1115	EBPF and IO Visor: The What, How and What Next!	Dr. Affan Syed	PLUMgrid, USA
<b>Short Break [1115-1145]Hrs</b>				
3	1145-1245	Earn Money With a Twist Freelancing	Ms. Amna Zafar	SA Developers. Lahore
<b>Break [1245-1345]Hrs</b>				
4	1350-1420	Indian Language Processing: Situation, Challenges and Solution	Dr. Vishal Goyal Invited Talk :: IEEE ICOSST 2015	Punjabi University Patiala, Patiala, India
5	1430-1530	Search Engine Optimization in Wordpress	Mr. Rohan David	Digital Media Gang, Lahore
<b>Venue: Embedded System Lab, Ground Floor, KICS-HUAWEI Building, UET, Lahore, Pakistan.</b>				
<b>Sr. No</b>	<b>Time* (Hrs)</b>	<b>Title</b>	<b>Presenter Name</b>	<b>Affiliations</b>
7	(08:30-1230) hrs.	Network Modeling and Simulation using OMNET++ Framework	Dr. Ali Hammad Akber Ms. Amna Zafar Ms. Beenish Ms. Ayesha Akram	CE Department, UET, Lahore
<b>Break [1230-1330] Hrs</b>				
8	1330-1600	Hands-on Workshop on ARM Embedded Systems	Dr. Muhammad Tahir Mr. Abdullah	KICS, UET, Lahore
<b>Venue: Android Lab, Ground Floor, KICS-HUAWEI Building, UET, Lahore, Pakistan.</b>				
<b>Sr. No</b>	<b>Time* (Hrs)</b>	<b>Title</b>	<b>Presenter Name</b>	<b>Affiliations</b>
9	(0900-1300) hrs.	Design of Virtual Machine on MIPS64 Systems	Ms. Qurratul Ain Mr. M. Ateeb Akber Dr. Amir Mehmood	KICS, UET, Lahore
<b>Break [1300-1330] Hrs</b>				
10	1330-1600	Design, User Experience and Usability (DUXU)	Dr. Javed Anjum Sheikh Ms. Aneela Abbas	University of Lahore, Gujrat Campus, Gujrat

6. BRAINIAC-2015

**Tuesday, 15<sup>th</sup>December 2015**

Event	Time[hrs]	Venue
Think Different	[1200-1300]	Electrical Department Ground, UET Lahore

**Wednesday, 16<sup>th</sup>December 2015**

Event	Time[hrs]	Venue
Gaming Competition	[1400 - 1800]	SE4 & Seminar hall of SE Centre for Finals, UET Lahore
Project Idea Competition	[1100-1500]	New Auditorium Basement, UET Lahore

**Thursday, 17<sup>th</sup>December 2015**

Event	Time[hrs]	Venue
Clue Quest	[1200-1300]	Electrical Department Ground, UET Lahore
Speed Solder	[1500-1800]	Basic Electronics Lab, EE Dept. UET Lahore
Hours of Code	[1000-1700]	SE4 lab SE Centre UET Lahore
Circuit Mania	[1500-1800]	Digital Electronics Lab, EE Dept. UET Lahore

**Friday, 18<sup>th</sup>December 2015**

Event	Time[hrs]	Venue
Unity 3D Workshop	[1100-1400]	SE4 Lab, SE Centre UET Lahore
Brain Games	[1400-1600]	Metallurgical seminar hall, UET Lahore



## **B5.2 Communication Society Activities 2015**

IEEE Communication Society Chapter is revised in 2015 and now led by Mr. Kashif Bashir, Assistant Manager Research / Team Lead in KICS at UET Lahore.

The IEEE Communications Society is a community comprised of a diverse group of industry professionals with a common interest in advancing all communications technologies. To that end, the Society sponsors publications, conferences, educational programs, local activities, and technical committee meetings.

## B5.3 Computational Intelligence Society Activities 2015

IEEE Computational Intelligence Society Lahore Section is approved for operations in Dec 2015 in order to accelerate and strengthen the linkage between the academia, research and industry with an objective to maximize the collaborative potential between the society members, professions and students.

CIS is to be one of leading area in a world in the advancement of technology thereby branching its roots in Computational intelligence, Deep Learning, Intelligent Hybrid Systems, Swarm Computing, Bio Computing, Evolving System Intelligence and Industrial Outreach. It provides a solution with blend of technical solutions and disseminates technical information to support professionals engaged in the applications of engineering to industry. Our vision is to bring advancement of expert systems and intelligence oriented algorithms in Pakistan.

The objective of the chapter of the Computational Intelligence Society is to organize and promote local activities that contribute to the professional advancement of its members and to advance the knowledge and application of Computational Intelligence in our region. We foresee a vibrant chapter, and researchers, active practitioners active in the field to join and contribute to the activities of the chapter, will be invited.

IEEE CIS chapter will arrange lot of workshops and seminars to meet initial goal of people to get knowledge and for capacity building of IEEE members. Later on Industry based Internship programs may be initiated through this chapter in the region. We look forward for a vibrant & beneficial operations of this chapter of IEEE CIS Lahore.

The newly established IEEE Computational Intelligence Society in joint collaboration with IEEE Computer Society and KICS UET Lahore has conducted a special Seminar from Foreign Expert on Computational Intelligence forecasting trends in social media and also partnered for the annual IEEE Conference 9th ICOSST 2015, OSSW 2015 and BRAINIAC 2015. The Conference was an overwhelming success, attracting 70 delegates, invited speakers, paper presenters, workshop speakers & sponsors from 12 countries and provided great intellectual & social interaction for the participants.

### OFFICE BEARERS

- 1) Interim Chair - Jamshaid Iqbal Janjua, KICS, UET, Lahore

### SOCIETY CHAPTER MEMBERS

	Jamshaid Iqbal Janjua
40153160	Dr. M Tahir
40295624	Dr. Waqar Mahmood
91268391	Dr.Sarmad Hussain
92257810	Dr. Shahid Mahmood
92685239	Dr. Razi Iqbal
90362443	Mr. Asim Tanwir
92292394	Ms.Asma Sajid
92808479	Mr. Zeeshan Rana
93068044	Mr.Muhammad Mukhtar
92401438	Mr.Yawar Sheikh
92173402	Mr.Omer Malik
93004127	Faisal Usman

### ACTIVITY DEC 2015

Title: Discovery and Forecasting of Trending Topics in Online Media

Date and Time: Thursday, 3rd Dec 2015 12:00 Hrs - 13:00 Hrs Venue:

Venue: Seminar Hall, KICS, UET, GT Road,  
Speaker: Prof. Dr. H. C. Andreas Dengel

Abstract:

Among the vast information available on the web, social media streams capture what people currently pay attention to and how they feel about certain topics. Awareness of such trending topics plays a crucial role in multimedia systems such as trend aware recommendation and automatic vocabulary selection for video concept detection systems. Correctly utilizing trending topics requires a better understanding of their various characteristics in different social media streams. To this end, I present the first comprehensive study across three major online and social media streams, Twitter, Google, and Wikipedia, covering thousands of trending topics during an observation period of an entire year. Our results indicate that depending on one's requirements one does not necessarily have to turn to Twitter for information about current events and that some media streams strongly emphasize content of specific categories. As our second key contribution we further present a novel approach for the challenging task of forecasting the life cycle of trending topics in the very moment they emerge. Our fully automated approach is based on a nearest neighbor forecasting technique exploiting our assumption that semantically similar topics exhibit similar behavior. We demonstrate on a large-scale dataset of Wikipedia page view statistics that forecasts by the proposed approach are about 9-48k views closer to the actual viewing statistics compared to baseline methods and achieve a mean average percentage error of 45-19% for time periods of up to 14 days.

Speaker's Biography

Professor Andreas Dengel is a member of the Management Board as well as Scientific Director at the German Research Center for Artificial Intelligence (DFKI GmbH) in Kaiserslautern where he is leading the Knowledge Management research department. In 1993 he was appointed Professor at the Computer Science Department of the University of Kaiserslautern where he holds the chair "Knowledge-Based Systems". Since 2009 he is also Professor (Kyakuin) at the Department of Computer Science and Intelligent Systems, Graduate School of Engineering, at Osaka Prefecture University.

Formerly, he was the German representative in the ICT Prize Executive Jury of the European Council of Applied Science (Euro-CASE), a lecturer of the Joint Executive MBA course at the Johannes Gutenberg University at Mainz, the University of Texas at Austin, and the Dongbei University of Finance and Economics at Dalian, China. From 1997 to 2001 Prof. Dengel was a member of the METTREC Planning Committee (Metadata/Text/Retrieval Conference Committee) of the National Institute for Standards and Technology (NIST) in the United States.

Prof. Dengel is Member of the Editorial Board for international journals like IJDAR, Intelligent Decision Technologies or Future Internet. Moreover, he is founder or initiator of several successful start-up companies, e.g. Insiders Technologies where he also acted as a CEO between 1999 and 2001. In 2005 he received a "Pioneer Spirit Award" for one of his start-up concepts. He is co-editor of various international computer science journals and has written or edited 10 books and is author of more than 160 peer-reviewed scientific publications. He supervised more than 120 PhD and master theses. In 2004, Andreas Dengel has been elected a Fellow of the International association for Pattern Recognition (IAPR) and has been honored for his work several times. Most prominent prizes are the ICDAR "Young Investigator Award", the Nakano Award, the Technical Communication Award of the Alcatel SEL Foundation, the Multi-Media Award of the State Rhineland-Pfalz as well as a Document Analysis Systems Achievement Award. His main scientific emphasis is in the areas of Knowledge Management, Artificial Intelligence, and Document Understanding. Prof. Dengel is founder or initiator of several successful start-up companies.

## **B5.4 Power and Energy Society Activities 2015**

IEEE Power and Energy Society Chapter is revised in 2014 and now led by Dr. Suhail Aftab Qureshi, Dean Faculty of Electrical Engineering at UET Lahore.

The IEEE Power and Energy Society is a community comprised of a diverse group of industry professionals with a common interest in advancing all communications technologies. To that end, the Society sponsors publications, conferences, educational programs, local activities, and technical committee meetings.

## **B5.5 Industrial Application Society Activities 2015**

IEEE Industrial Application Society Chapter is newly established in 2015 and led by Ms.Faiza Nazir. He is working in ZONF Telecom, a telecom industry in Pakistan.

IEEE Industrial Application Society Chapter is a community comprised of a diverse group of industry professionals with a common interest in advancing all communications technologies. To that end, the Society sponsors publications, conferences, educational programs, local activities, and technical committee meetings.

## B. 6 Affinity Group Activities

### B6.1 Young Professional Affinity Group Activities 2015

Below is the activity list, events conducted under different YPs program

1. Advance FPGA based Embedded and Digital System Designing Webinar

Date: 2nd February 2015      Participation: 30

Participant Learned how companies are reducing FPGA design cycle time by 33-50% or more by adopting workflows based on MATLAB and Simulink. In this webinar speaker demonstrated how MATLAB and Simulink are used to design FPGAs for applications such as signal processing, image processing, communications, and control systems.

2. Invention to Innovation Summit

Date: 4-5 March 2015      Participation: 15 Projects

Two days Innovation summit organized in collaboration with IRP (Institute of Research Pakistan) and The University of Punjab. Where students and professionals show cased their projects having the potential for commercialization.

3. Build Startup, not Just APP

Date: 1st April 2015      Speaker: Fahad Azia      Participation: 55

Workshop was arranged in collaboration with TICK. The core objective of this workshop was how to build a startup with APP development. Covering the topics like; Prototyping, Customer acquisition, Increasing sales, Raising funds

4. Industrial Tour of PTCL Data Center

Date: 2nd May 2015      Trainer: Usman Khan      Participation: 50

This visit helped students to develop better understanding about internet service provider. Exclusive visit to biggest data center in Pakistan, worthy knowledge shared by the trainer on data center design, cloud computing and technologies related to data center.

5. Participation in IEEE R-10 Congress

Date: 9-12 July 2015

IEEE YP Chair participated in R-10 congress; the event was full of very productive activities such as award receiving ceremony, seminar and social networking sessions.

6. Startup Weekend

Date: 15-22 August 2015 Participation: 20 startups

Speakers: Dr. Shahid Zia, Omair Bangash, Husain Haider, Javed Akhtar, Saida Vine, Daniyal Shahid, Ali Raza, Farhan Riaz, Adeel Haider, Faisal Wahab, Azam Roomy, Saira Ishtiaq, Zaydan Khan

This event was organized in collaboration with Startup Pirates Portugal. In this one-week program, participant dived in the startup world and had the opportunity and the tools to develop a business idea from scratch. We gathered the most promising aspiring entrepreneurs and experienced guests to share and learn together in a combination of workshops, mentoring and inspirational moments.

7. STEP Event

Date: 11 October 2015 Speaker: Usman Munawar Participation: 60

The Student Transition and Elevation Partnership (STEP) Program is a membership activity created to help improve members retention as students graduates. In this event students were introduced to their new community Young Professionals.

8. Writing Winning CV; Best Practices

Date: 15 November 2015 Speaker: Muhammad Waqas Participation: 20

In this webinar speaker focused on how to enhance and optimize the impact of CV. He discussed job searching and getting techniques in UAE.

9. IEEE Orientation Events

Students need guidance to evaluate their career goals, polish their professional image and create the building blocks of a lifelong and diverse professional network. IEEE orientation events conducted in various universities

- FAST Lahore
- LEADS University Lahore
- UOG, Sialkot Campus
- Sharif Engineering College Lahore

10. Graduate Placement & Assistance Program

Assisting the fresh graduates and students in internships, jobs

- 22 internship created in various organizations; PTCL, Hisel Power, MedicsLab, OWCareers, OrviSoft, FiberSol,

## B.6.2 Women in Engineering Affinity Group Activities 2015

### 1. Inauguration Ceremony Of IEEE NUCES Chiniot – Faisalabad

Inauguration ceremony of IEEE NUCES Chiniot campus Faisalabad was held on March 20, 2015 aiming to empower women in our under developed societies. The vision is to make, WIE Lahore section, a primary resource for inspiring, supporting and connecting female leaders so they grow in a capacity to lead and serve. The ceremony commenced with the lighting of lamp by a group of dignitaries of IEEE-WIE Lahore Section Dr. Amjad (Former Chair of IEEE Lahore Section), Dr. Shomail (Current Chair of IEEE Lahore Section), Sania Arshad (Chair of WIE Lahore Section) and Mr. Amir Zahoor (Coordinator of IEEE Lahore Section).

The proceedings started with the ribbon cutting ceremony and then Dr. Amjad formally welcomed all the volunteers in IEEE – WIE on behalf of IEEE-WIE committee. Dr. Shomail then briefed about the importance of WIE and our esteemed resource persons and also wished for the success of the new branch. The session is followed by short presentation on IEEE WIE Student branch by Ms. Sania Arshad who told about the vision and objectives of IEEE- WIE and the aims of IEEE WIE NUCES Student branch (New Branch). IEEE WIE (Women in Engineering) Lahore Section had successfully and officially inaugurated another WIE Affinity Student Branch.

### 2. IEEE Cares' 15

IEEE Cares as the name suggests was another initiative put forward by WIE Lahore section which again revived the sense of volunteerism and charity among students and members long after SIP. In the Holy month of Ramadan, while fasting themselves, students along with members and volunteers went out to serve the humanity through charity giving activities.

#### 2.1 IEEE Lahore Section:

Under the banner of IEEE Cares, Lahore section has spent over 80,000 PKR on series of 3 activities; Ration distribution among people of slum area in Lahore on May 27, 2015. Ms. Sania Arshad (Chairperson WIE Lahore), Mubashra Manzoor (Documentation Head WIE Lahore), Safoora Saleem (Treasurer WIE Lahore), and other volunteers made ration packets for the families of slum area where they've distributed them in the needy families so that they can spend the month without worries of basic needs. They were satisfied with that ration and told us that ration will make their month very easy because they would have no worry for food. Ration includes rice, floor, baisan, sugar, cooking oil and some other important stuff.

Next activity was to buy shoes for Eid for the children of Jannat-ul-Firdous (the orphanage). This activity was real fun when the members went to the venue on June 4, 2015 and after conducting a few activities with them, take them to market to buy each of them shoes of their own choices. A last activity was conducted in an orphanage on Eid when children were provided with new dresses for Eid

#### 2.2 IEEE Islamabad Section:

Under the banner of Islamabad section, 2 activities were conducted during Ramzan and one on Eid day. They've spent more than 87,000 PKR in total on the activities.

Farrukh Jamal (Chair YP Islamabad Section), Ahsan Farroqui (SAC Chair Islamabad Section), Mujtaba Anwar Chaudhary (ASSR Islamabad Section) had taken care of the project and taken care of it. In first activity, needy families were identified and were given packets of ration consisting of necessary food items. 2nd activity necessary food items under the name "Eid Gifts" were presented to the identified needy



families. They also distributed Eid gifts among street children and hawkers. In third activity students from that section visited an old home on second day of EID and spent time with them to make them smile and feel at home on Eid day.

### 2.3 IEEE Karachi Section:

IEEE Karachi section, under the supervision of Ahsan Saeed (Chair YP Karachi Section), conducted a visit to Eidhi Old Homes. They haven't only spent time with the homeless senior citizens but also distributed Eid gifts among them.

This series of events seemed successful when needy people were provided with Iftar food (Breaking fast), rations for their houses in slum areas, Eid gifts for orphanages, street children and gifts and bonding for elders in old homes. Here WIE Lahore has set a new example that not only used things are for those in need, they deserve equal as we do. WIE Lahore section organized these events, and supported throughout by providing networking, arranging visits, and identifying right places and people in need of donations.. IEEE Cares was the initiative taken by WIE Lahore section and IEEE Mentors Forum. The idea was so appealing that other sections i.e. WIE Karachi section and Islamabad section also replicated it in collaboration with all affinity groups and chapters.. Following student branches participated in the activities;

IEEE GCU Lahore WIE SB  
IEEE GIKI WIE SB Topi

IEEE Bahria University Islamabad SB  
IEEE and WIE SB UET Taxila  
IEEE MAJU SB  
IEEE YP and WIE NED University Karachi

More than 30 volunteers from each section conducted this activity and hundreds of donors provided them with funds and food items to make this activity possible.

### 3. All Pakistan Computer Science Congress Faisalabad

A purely tech based event, All Pakistan IEEE Computer Science Congress Faisalabad was a

huge and daring effort by the WIE IEEE Lahore section and GCUF affinity group. The event was a joint effort by IEEE, WIE Lahore section and GCUF AG. Congress aim was to work on how we could introduce new inventions and technology in all over Pakistan and how we could initiate new Computer Society Chapters in old and new IEEE branches. This 3 days long event with the theme "Computing for Pakistan" included various activities and sessions including Competitions for students: Gaming of three types, Poster and Hackathon competitions. and three Panel Discussions:. These sessions were conducted by 35 Guest Speakers & practitioners from Software, IT and Computer industry. 25 universities from all over Pakistan participated namely; MAJU, Hazara University, MUET Jamshuru, FAST Faisalabad, Virtual University, Lahore Leads University, University of Education, University of Gujrat, Comsats Lahore, Comsats Islamabad, Comsats Sahiwal, Comsats Abbotabad, High-Tech University, Superior University Lahore, Riphah University, BZU Multan, UET Lahore, UET Taxila, Gulam Ishaq Khan Institute (GIKI), Bahria University, University of Agriculture Faisalabad, Government Post Graduate College Samanabad, University Community College & Government College University Faisalabad.

### 4. WIE Day' 15

WIE Day was celebrated on June 6, 2015 in University of Management and Technology Lahore, hosted and organized by WIE Lahore UMT affinity group with the theme of Celebrating Being Women Engineer. The motivation behind organizing such an event is to promote WIE activities and encourage participation of maximum students in it. Joweria Suhail conducted the ice breaking session followed by a panel discussion on the topic "Problems Faced by Women Engineers in our Society". The panelists included Dr. Amjad Hussain (Former Chair of IEEE Lahore Section), Dr. Sobia Baig (Vice Chair IEEE Lahore Section and Head of Electrical Engineering

Department COMSATS Lahore), and Dr. Ghulam Mehdi (Assistant Professor Computer Science COMSATS Lahore). Followed by lunch, a “Banner Activity” was conducted to provide the participants with the opportunity to share their views on a banner. A competition of branch presentations was organized which was judged by Ms. Joweria Sohail (Mentorship Program head), Ms. Sania Arshad (Chair WIE Lahore) and Ms. Ayesha (Branch Counselor). This competition was won by the team of Government College University Lahore.

A session of “Mock Interviews” was conducted by Ms. Sania Arshad and Ms. Joweria Suhail, followed by the note of worthy chief guest Dr. Khawar Zia (Head of Electrical Engineering Department Beaconhouse University Lahore) and award ceremony.

As the topic of the discussion suggests, WIE provided a platform for the women to share and discuss issues they’re facing in their professional life in an open and healthy environment. The effectiveness of the session is evident from the fact that it promotes freedom of speech for all and sharing problems with other professional women makes it easy to find solution. This is how WIE is empowered women to discuss and resolve their own problems with confidence.

UMT student branch under the guidance of WIE Lahore section organized this event.

#### 5. Workathon7.0

Workathon7.0, a project by IEEE WIE Lahore Section & Pakistan WIE Forum, is a workshop management competition which is meant to ensure quality trainer-trainee interaction and hence corresponding learning. Personal development accompanied by professional development is necessary element for any individual to grow in any organization. Event management is one the powerful techniques that teaches both these features in a significant manner. Student Women in Engineering (WIE) members need to understand the basics of team work, leadership and all necessary management skills which they can learn by conducting technical activities followed by evaluation of its corresponding output. This initiative is meant to improve quality of the technical/non-technical events execution to enhance participants’ learning phenomena.

Workathon7.0 is divided into two phases. In phase-1, different WIE student AGs organized different workshops in or outside their campuses. Phase-2 is still on going.

IEEE Women in Engineering NUCES affinity arranged a workshop by Zohaib Ahmed Butt, who is a Microsoft Student Partner. Prior to this, Zohaib has also worked as an intern at Microsoft innovation center, Plan 9 and square 63. Around 45 participants attended the workshop. It was a four day project oriented workshop. The event introduced the participants to windows 10 app development by covering a basic project. The topics which were speared over the four days are:

1. Introduction to Windows 10
2. Introduction to XAML (Data Class)
3. Introduction to C#
4. Introduction to data binding

WIE GCUF organized a workshop on Arduino from basic to advance level. This workshop is informative for Electrical engineering students as well as computer science students. Programming and how we install program in Arduino (chip) was taught.

This workshop was delivered at a local orphanage where we taught them how to recycle thing to make useful stuff, origami and different paper stuff.

IEEE WIE UET Taxila in collaboration with IEEE Pakistan Women in Engineering Forum (PWF) arranged a workshop on Erasmus Mundus. Mr. Rizwan Mumtaz was the guest of honor who is the representative of Erasmus Mundus, South Asian Chapter. The event covered the following aspects: - How to hack Erasmus Mundus scholarships? - How to go on exchange programs fully funded by EU? - Startup of AIESEC in UET Taxila.

It was a three day workshop where the basics of MATLAB were covered in detail along with some advanced operations. The main objective of the workshop was to lay a solid foundation to help participants further enhance their skills. Students from different institutions of the Rawalpindi/Islamabad region took part in the workshop. Efforts were made to attend participants individually in the limited time available. On its conclusion, certificates of participation were awarded to the participants.

#### 6. WIE ILC REPRESENTATION 2015

IEEE WIE Lahore section sponsored and supported its representative Ms. Rohma Khalid (SSR WIE Lahore section) so that she can get exposure and can bring new and innovative ideas, for the training of WIE student branch training groups. It also provided the WIE Lahore an opportunity to show its representation in the international community

#### 7. WIE for YOU

IEEE WIE GCUF in collaboration with IEEE WIE Lahore Section held a tech and non-tech talk session named WIE FOR YOU on 25th April, 2015 in GCU Faisalabad. The event started with the talk of Ms. Mubashra Mansoor (Documentation Head WIE Lahore Section) on the tech topic “Supercomputing – An Overview”. She gave an in-depth knowledge on computing and parallelism and the need and significance of super computers, applications of computing. She further went on to discuss the research opportunities NUST University is providing after installation of Pakistan’s Fastest Super Computer which has a Research Centre to provide students with opportunities to work on projects related to it. Ms. Sania Arshad (Chairperson WIE Lahore) conducted the session on “Women in Engineering” by introducing the attendees with WIE in general and WIE Lahore section in particular. She also elaborated WIE levels, how it is divided from region to section level and then went on to the benefits of joining it.

A non-tech motivational session “Soch Sey Taqdeer – Way of Thinking Determines Your Destiny” was conducted by Miss Nafeesa Mazhar (Chair PWF). She elaborated the ways to succeed and have dreams fulfilled. She talked about how we are the ones responsible for our destiny and how we can achieve our aims by working hard and believing in ourselves and becoming useful for the society in particular and humanity in general.

#### 8. Inauguration ceremony and IEEE Orientation session of IEEE SCET Student Branch

An inauguration ceremony and IEEE Orientation session of IEEE SCET Student Branch was planned and conducted at Sharif College of Engineering & Technology Lahore on April 14, 2015. Guest speaker Ms. Rohma Khalid (SSR WIE Lahore Section) shed light on the topic “IEEE Women in Engineering (WIE)” by stating its mission, reason of existence, and its whole structure from Region to Affinity Group level. To inspire girls and motivate them to form a WIE affinity group at their branch she highlighted the benefits of joining this platform. She explained how volunteers can participate and earn travel grants to attend different conferences and congresses and how there are different awards to recognize their efforts at section and region levels. She further elaborated about how WIE could be beneficial to help people around us as WIE at region level provides funding for humanitarian, tech and non tech projects. She inspired the audience with her own story and journey with WIE.

#### 9. Empowerment of Women in Engineering

The objective of the seminar is exactly overlapping the agenda of IEEE Women in Engineering i.e. to promote engineering and inspiring girls around the world to follow their academic interest to a career in engineering. This seminar was held on 5th Dec, 2014. The guest speaker, Ms. Sania Arshad (Chairperson IEEE WIE Lahore Section), illustrated the audience about the details of Women’s role in industry and engineering. She encouraged and motivated women to opt for engineering as career and explain to them the insights and objectives of IEEE WIE forum. Another guest Miss Hibba (News writer IEEE Lahore Section) conducted some activities related to our topic including an activity ‘Plan an event on paper’ to make understand real WIE environment, motivate students, and engage them

The seminar was conducted to launch and introduce Women in Engineering UMT chapter to students and to encourage girls’ participants throughout the section. Also activities and achievements of WIE Lahore section were discussed in detail in a sitting and the performance was analyzed. 20th anniversary of IEEE WIE chapter global was also celebrated at the end of the session. Chairperson WIE Lahore Section’s presence was a source of support and encouragement for the newbie. The members and participants of WIE University of Management and Technology (UMT) got a chance to meet and network with executive members. Over 50 students participated in the one day event.

#### 10. WIE Promotional Seminar NFC- Faisalabad

With new intake in the universities come new students and knowing the fact WIE NFC – IEFER (Institute of Engineering and fertilizers Research), like every year, had arranged a WIE promotional seminar on May 6, 2015 in the Electrical Engineering department. The promotional session was kicked off with the address by Ms. Asma

Adeel, Branch Counselor – NFC student branch, who gave a brief out look of the branch and past activities at NFC Faisalabad. The guest speakers; Mr. Usman Munawar (Chari SAC, Chair IEEE PES), Asma Sajid (Branch counselor IEEE GCUF, member of Lahore section Excom), Aftab Wanice (SSR Lahore Section), Hira Mughal (Member of Excom WIE Lahore Section) precisely introduced IEEE and WIE to the young lot. The session also included a few activities, a quiz competition, and question answer session by IEEE NFC SB. The session concluded with the distribution of membership forms.

Promotional Seminar by WIE is a consistent effort of WIE Lahore section in introducing IEEE, highlighting its objectives and to encourage maximum participation of the students, members, professional and researchers. This was another successful session. IEEE and WIE have achieved the objective to get more memberships from new students.

## 11. Womengineers'15

On 30th October, 2015 and 6th November,2015 IEEE-WIE CIIT Lahore arranged WOMENGINEERS'15, a multifaceted event that encapsulated the very spirit of empowering women engineers to inspire them to join engineering, to enable them to adapt to all sorts of workplace environments, to break stereotypes associated with women in engineering, to bring together women from all over the world to allow mutual cooperation through networking and in essence advance technology for the betterment of women and humanity. The event consisted of 3 competition and 3 talks; named as

1. Seminar on Breaking Stereotypes about Gender Disparity in the STEM fields
2. The Ada Lovelace Workshop on Career Essentials
3. The Lubna of Cordoba Engineering Entrepreneurship workshop.
4. The Marie Curie Essay Writing Competition
5. Junkart 4.0-Bridge Building Competition
6. Eggstravaganza 2.0-

The great Egg drop challenge was a huge and daring effort by the WIE IEEE Lahore section and GCUF affinity group. The event was a joint effort by IEEE, WIE Lahore section and GCUF AG. Congress aim was to work on how we could introduce new inventions and technology in all over Pakistan and how we could initiate new

Computer Society Chapters in old and new IEEE branches. This 3 days long event with the theme “Computing for Pakistan” included various activities and sessions including Competitions for students: Gaming of three types, Poster and Hackathon competitions. and three Panel Discussions:. These sessions were conducted by 35 Guest Speakers & practitioners from Software, IT and Computer industry. 25 universities from all over Pakistan participated namely; MAJU, Hazara University, MUET Jamshuru, FAST Faisalabad, Virtual University, Lahore Leads University, University of Education, University of Gujrat, Comsats Lahore, Comsats Islamabad, Comsats Sahiwal, Comsats Abbotabad, High-Tech University, Superior University Lahore, Riphah University, BZU Multan, UET Lahore, UET Taxila, Gulam Ishaq Khan Institute (GIKI), Bahria University, University of Agriculture Faisalabad, Government Post Graduate College Samanabad, University Community College & Government College University Faisalabad.

### B6.3 Special Interest Group on Humanitarian Technology (SIGHT) Activities 2015

SIGHT Lahore was inaugurated in PSYWC at FAST NU Lahore in 2014. This ceremony was included introductory session and cake cutting ceremony. Since then SIGHT Lahore conducted a bunch activities.

1. Inauguration Ceremony of SIGHT Lahore at FAST NU Lahore
2. Participated in 5G Emerging Technologies Workshop for Disaster Management in Higher Education Commission Pakistan
3. SIGHT session in IEEE Karachi Section Student Congress in Indus University Karachi
4. SIGHT session in Islamia University Bahawalpur
5. SIGHT Poster Presentation in IEEE Region 10 Congress in Colombo, Sri Lanka

Other activities of SIGHT Lahore Chapter includes:

6. Meeting SIGHT Lahore Team with Former Chairman National Disaster Management Authority Pakistan, Maj. Gen.(R) Muhammad Saeed Aleem in Islamabad
7. SIGHT Lahore Session in IEEE Pakistan Student, Young Professionals & WIE Congress 2016 in COMSAT IIT, Islamabad
8. Green FAST Project - An Environmental-Friendly and Sustainable Energy Model Institute

The Green FAST Project co-sponsored by SIGHT Lahore is an expression of the University's long-standing and continuing commitment to environmental consciousness and sustainable development in our own lives, at our own campus, and beyond of all these boundaries. Our goal is a sustainable and environmental-friendly institution with continuing improvement that seeks to minimize its own environmental impact and to improve our collective understanding of the practice of sustainable development.

Project Goals are;

- Minimize its own Environmental Impact
- Improve our collective understanding to Save Energy
- Practice of Sustainable Development
- Cost Benefit Analysis
- Future Energy Consumption Models
- Transition from Conventional Energy Models to Efficient and Economical Energy Models

9. Focus of SIGHT Lahore Chapter in its first year was to educate people of Pakistan about Disaster Preparedness. As Pakistan contains many glaciers in its northern region where three major mountain ranges of Asia are merged. These glaciers are melting and causing floods in Pakistan on annual basis. Apart from these floods Pakistan has faced major earth quakes in recent times and these caused huge life losses. SIGHT Lahore Section chapter identified the problem that people needs to be trained on how to prepare and reduce chances of life loss in disaster situations.

10. To train these people SIGHT Lahore started a Project "Train The Trainers" at NUST Islamabad. In this project our pioneer batch of 15 Trainers were trained about Disaster Preparedness and Response by Dr. Irtaza Ali who is head of NUST Community Service Program, Islamabad. In this training trainers were trained about necessary steps required to reduce vulnerability and prepare for disaster response/relief and self-sustainability in case help does not arrive. These trainers will be replicating this training to their institutes.

#### **B6.4 Consultant's Network Affinity Group (CN) Activities 2015**

IEEE CN Affinity Group Lahore section is newly established affinity group in 2015 and it is led by Dr. Ghalib Asadullah Shah from University of Engineering and Technology Lahore. There are exciting actives are planned for the year 2016.

## **PART C -GOALS AND PLANS**

### **C. 1 Goal(s)**

1. Drive Technology for solving problems of society and humanity
2. Dissemination and Sharing of Knowledge for collective benefit
3. Develop Professional Values
4. Strengthen Industry-Academia Linkages

### **C. 2 Detailed Implementation Plans**

1. Organization of Professional Development Activities
2. Bring together members in different institutions
3. More active support for the student branches.
4. Develop closer ties with R10 management.
5. Increase membership through a concerted drive and activate dormant members
6. Offer value for membership.
7. Effective use of web and social media presence for realization of goals
8. Invitation to industry professionals
9. Developing Calendar of Events and Activities

## PART D -OTHERS

### D. 1 Special Events

- The following were the special events held by **IEEE Lahore Section during the year 2015:**
- First IEEE Pakistan Students Computer Society Congress (PSCSC) 2015 at GC University Faisalabad (April 2015).
- 9<sup>th</sup> IEEE 2015 ICOSST at UET Lahore (December 2015)
- Participation of Lahore Section Students in IEEE R-10 Congress in Sri Lanka (July 2015).
- Participation of Lahore Section WIE volunteer in WIE International Leadership Congress in California.
- Participation of Lahore Section volunteer in R10 Meeting in Nepal, R10 AGM in Bangladesh, MGA SAC meeting in USA.
- Participation of Lahore Section volunteer in IAS annual general meeting in USA.
- Participation of Lahore Section volunteer in PES meeting in Thailand.
- Secretary Lahore section has been appointed as member of Education Activities Board in Continuing Education Committee (CEC).

### D. 2 Problems Anticipated

The following problem could be anticipated:

- Resource constraints in organizing events.
- Security situation in Pakistan for organizing events and/or inviting foreign speakers.

This report is prepared by Secretary Lahore Section, Amir Zahoor and reviewed by Chair Lahore Section, Dr. Shafay Shamail.