

## **REPORT ON EE STUDENTS' ACTIVITIES & ACHIEVEMENTS**

Students of Electrical Engineering have been participating in numerous national and international, technical and non-technical events. They have proved their expertise and knowledge consistently on various prestigious platforms and earned recognition. Some of the major activities and achievements are listed below.

### **UAE AI and Robotics Award for Good, Dubai, January 2016**

A team of three talented EE graduates won the first prize of AED 1 Million with their project titled, *A Blind Guidance System*. International experts in the field of robotics judged the competition, and HH Sheikh Mohammed Bin Rashid Al Maktoum, Vice-President and Prime Minister of UAE awarded the prize. It is worth mentioning that the 1<sup>st</sup> Runner-up Team was a group of EE students from AUST with their project titled, *Brain-Controlled Wheel Chair*.

### **Microsoft Imagine Cup, Dubai, April (2013 – 2016)**

EE students participated and won the Microsoft UAE Imagine Cup for four consecutive years since 2013 and represented UAE in the Pan-Arab Semi Finals. In 2016, two AUST teams received prizes (1<sup>st</sup> and 3<sup>rd</sup> Place) on national level. Microsoft Imagine Cup is an annual event, organized by Microsoft, where students participate from all over UAE in one of the following three categories: Innovation, World Citizenship and Gaming.

### **Undergraduate Research Conference (URC), Dubai, April (2013 – 2016)**

URC is an yearly gathering of undergraduate students from all over UAE and GCC, in different majors, participate and compete with their undergraduate research work. AUST EE students have been regularly participating since 2013 and winning prizes. In 2016, AUST EE students won five of eleven prizes. The list of winning research paper titles (since 2013) is given below.

<b>Year</b>	<b>Research Title</b>	<b>Presentation Type</b>
2016	Airport Luggage Protection System	Live Demo
2016	Assistive Technology for Integrating the Visually-Impaired in Mainstream Education and Society	Poster
2016	Smart Nutrition Shopping Cart	Poster
2016	Wireless System for Water Quality Monitoring and Control in	Poster

	Aquaponic Systems	
2016	Smart Wheelchair for Elderly People	Poster
2015	Innovative Tracking System for Indoor Navigation	Poster
2014	Mindwave Alert System	Poster
2014	Solar Panel Maintenance System	Oral
2014	Design and Implementation of an Efficient Renewable Energy Water Pumping System	Poster
2014	Smart Home Energy Management System for Optimal Scheduling of Home Appliances in UAE	Poster
2013	Vehicle Average Speed Measurements using Radio Frequency Identification	Oral
2013	A Zigbee Based Wireless Healthcare Monitoring System	Oral

### **Under-Graduate Student Research Conference (UGSRC), Abu Dhabi, May (2014 – 2016)**

UGSRC is another annual event of undergraduate students, in different majors, from all over UAE, in which students participate and compete with their undergraduate research work. EE students have been regularly participating since 2013 and winning prizes. Below is the list of winning research papers.

Year	Research Title	Presentation Type
2016	Airport Luggage Protection System	Oral
2015	Assistive Technology for the Hearing Impaired	Oral
2014	Brain-Controlled Wheelchair	Oral

### **Akoun Best Business Idea Award, Abu Dhabi, October 2014**

Yearly, national level competition, where participants from all over UAE in the age range of 18-28 years, compete with their business ideas and receive cash prizes for winning one of top three positions. AUST Engineering students won Third Prize (AED 10,000) for their community service project, *Smart Home for Challenged Children*.

### **IEEE Student Branch Activities & Achievements**

The AUST IEEE Student Branch (SB) was established in June 2005 with 20 students. The strength increased to over 100 student members in its first year. It further grew when the IEEE Women in Engineering Branch (WIE SB) was established in May 2006. The WIE SB at AUST has the highest number of female student members in the UAE and is by far the most active WIE group in the United Arab Emirates.

*“AUST WIE Affinity Group is definitely the fastest growing branch in Middle East” – Paola Bringas, Chief Editor, July 2012*

*“The UAE has three WIE student branches and Ajman University’s branch members are the highest in number” – Keyana Tennant, WIE Global Manager, August 2014*

*“Seeing AUST WIE members excelling in global competitions is delight! Keep it up!” – Karen Panetta, WIE Chair Person (USA), November 2014*

### **IEEE Student Day, UAE, May (2011 – 2016)**

IEEE Student Day is an annual event where students from all IEEE Student Branches in UAE compete in various categories, namely, Common Design, Senior Design, Software Design, Engineering Design and Community Service Competitions. It is the biggest IEEE activity on national scale. The EE students of AUST have actively participated in all events held so far and on many occasions they have won prizes for various categories. It is worth mentioning that AUST SB has been winning the most number of awards on national-level for six consecutive years. In 2016, AUST students secured eight out of fifteen prizes and maintained their lead.

### **Global IEEE Day Photo Contest, October (2013 – 2015)**

This is a yearly global event, organized by IEEE Head Quarter - USA. Student branch members participate in various categories, namely, Technology for Humanity, Technical Seminars and Young Professionals by organizing related activities and submitting the pictures and event report for evaluation. The AUST SB has won first prize in the world for three consecutive years.

### **IEEE Most Active Student Branch of the Year Award 2014, Dubai, March 2014**

AUST SB was recognized and awarded as the *Most Active Student Branch of the Year 2014* on UAE Section Level.

### **IEEE – WIE Most Active Student Branch of the Year Award 2012**

AUST IEEE Women In Engineering Student Branch received an honorable mention recognition award from IEEE Head Quarter, USA, for being the *Most Active Student Branch 2012* in the world.

### **CAUSE (Community Activities by Undergraduate Students in Engineering)**

This program was initiated by EE students of AUST in 2005. As part of this program, students have designed, developed and implemented various projects to serve the community. This program has gained international recognition and appreciation. The title of few of the projects are:

- Educating children with special needs
- Helping elderly in Old Age Homes
- Working with the visually impaired
- Monitoring and controlling the pollutants in the environment

### **SMART (Student Mentors for Awareness Raising Tasks)**

This program was also initiated in 2005 by EE students of AUST. They designed and developed simple projects to promote Science and Engineering among local school students. The university students act as mentors to their juniors and school students to create awareness and encourage them to join the field of Science and Engineering. They visit schools and conduct seminars and invite school students to visit the Engineering labs at AUST. This excites school children and gives them a feel of various opportunities in this field of study.

### **IEEE Engineering Students' Ethics Competition (ESEC), Sharjah, April (2009 – 2014)**

Started in April 2009, ESEC is an annual UAE -level competition. IEEE student members from AUST have regularly participated in this competition and have bagged at least one of the top three national-level prizes every year.

### **Other Activities:**

- Participation in various international conferences, seminars, workshops and exhibitions
- Industrial Visits (Etisalat, Ducab, TV Stations, etc)
- Social gatherings like picnics, BBQ, pizza parties, etc.

### **IMPACT**

The EE students gained valuable experience by participating in conferences, workshops and competitions. Such activities provided students an opportunity to share their work, results and ideas in a number of national and international forums. EE students participated in a number of competitions and interacted with attendees to share ideas, gained new insights and further enhanced their technical, communication and interpersonal skills. By winning various prizes and scoring the highest rank in many of the events, the students have high morale and confidence. Such activities helped students to boost their self-confidence, provided them with a platform to expose their talent and hence step forward in building their career. It also helps students in finding

internships and jobs. Serving back to the community brings along sense of satisfaction and contentment.