



كلية الهندسة  
College of Engineering  
QATAR UNIVERSITY جامعة قطر

Department of Civil and Architectural Engineering

# Civil and Architectural Engineering Department NEWSLETTER

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## Newsletter Editors:

Dr. Alaa Al-Hawari

Eng. Muhammad Shekaib Afzal



<b>Message from Head of Department</b>	<b>1</b>
<b>Competitions</b>	<b>2</b>
- 4 <sup>th</sup> Wooden Bridge High School Competition 2017	2
<b>Events and Workshops</b>	<b>4</b>
- Fire Symposium	4
- Outreach Programs	6
- Engineering Week	7
<b>Students News</b>	<b>8</b>
- 2017 ACI concrete cylinder competition in Qatar	8
- Student Achievements	9
- CENG Football Cup 2017	11
- Site Visits	11
<b>Faculty News</b>	<b>12</b>
- Faculty Awards and Achievement's	12
- Awarded Research Projects	13
- Departed Faculty and Staff Members	14

## Message from Head of Department

### **Dr. Mohammed Hussein**

Associate Professor, BSc (Hons) PhD (Cantab) MIIAV PGCHE FHEA



It is my pleasure to present this new issue of the Department of Civil and Architectural Engineering newsletter for the academic year 2016-2017. The target of the newsletter is to highlight the major events and activities of the Department and the achievements of our academics and students for this academic year. This year has been full of activities and involved large effort from our faculty members, teaching assistants and lab technicians.

The academic year witnessed large effort from all the department members in important events such as the ABET accreditation visit at the end of the calendar year 2016 beside the organization of important events such as the Fourth Symposium and Workshop on Design for Fire Safety in Buildings and Built Infrastructure, and the High School Bridge Competition, in the second half of the academic year. The department has continued its strong support to student activities whether academic or extracurricular. Our students took part in a number of competitions at university and international levels and they demonstrated high capability and intellectual merits. This newsletter highlights those competitions and the awards that our students achieved. The newsletter also presents the achievements of our academic members which demonstrate the high quality work whether in teaching, research or engagement with the community and industry.

I hope that this newsletter gives you a good idea of the activities in our department and I hope you enjoy reading it.



## 4<sup>th</sup> High School Wooden Bridge Competition 2017



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This competition was organized for the fourth time to promote “Engineering” in general, and “Civil Engineering”, in particular, among the high school students in Qatar. Small scale wooden bridges were designed by the students of high schools and were tested on the day of the competition. The Event took place on April 6<sup>th</sup>, 2017 in Ibn- Khaldoon Hall at Qatar University. Fifteen Independent High Schools participated in this competition.



## Wooden Bridge Competition 2017 Winners:

Sr. No	School Name	Load Capacity (kg)	Position
1	Banking Studies and Business Administration	85	1 <sup>st</sup> Place
2	Smaisma Independent Secondary School	67	2 <sup>nd</sup> Place
3	Hamad Bin Abdullah Bin Jassim	43.5	3 <sup>rd</sup> Place





## Fourth Symposium and Workshop on Design for Fire Safety in Buildings and Built Infrastructure



Department of Civil and Architectural Engineering



The event took place on March 7<sup>th</sup> and 8<sup>th</sup> 2017. This two-day symposium focused on the theoretical and practical aspects of engineering fire safety in buildings and built infrastructure. The speakers introduced the concepts of fire safety engineering and presented recent technological advancements. The design of active and passive fire protection systems were discussed, along with strategies for enhancing their reliability and performance. The first part of the symposium focused on design and maintenance of active and passive fire protection systems.

The second part of the symposium focused on the design, behavior and analytical modeling of structural systems under extreme fire conditions and properties of materials at elevated temperatures.



**Pictures from the fourth symposium:**





## Outreach Programs

Faculty members from the Civil and Architectural Engineering Department and the Mechanical and Industrial Engineering Department visited Al Wakrah high school as a part of the outreach program. The main objective of the program was to visit several high schools in order to give detailed information about the Engineering Programs at Qatar University and to highlight the importance and roles of Engineers to high school students in Qatar.





## Engineering Week

Engineering week was held from the 17<sup>th</sup> to the 20<sup>th</sup> of April 2017 in the Library Building at Qatar University. The event aimed to introduce high school students as well as first year students about the principles and fundamentals of engineering. Each department from CENG had its own booth with different models and activities.

Several models were presented in the Civil Engineering Booth which attracted a lot of students. A model was presented to highlight the effect of vibration coming from ground rail on bridges as well on the surrounding structures. Another model showed the effect of different frequencies on a plate surface. The booth was very successful and students were interested to learn more about civil engineering topics.



## 2017 ACI CONCRETE CYLINDER COMPETITION IN QATAR



The Department of Civil and Architectural Engineering at Qatar University collaborated with Advanced Construction Technology Services (ACTS) Doha in running a student competition as part of the Future Concrete Conference which was held in Doha on 16/5/2017. The conference and the competition was supported by a number of organizations including ACI (American Concrete Institute) Qatar Chapter. The competition was carried out for the Civil Engineering students taking CVEN 320 course “Design of Reinforced concrete members and it involved twenty students of ten groups.

The aim of the competition was to produce concrete cylinders with an average compressive strength of 7000 psi (48.3 MPa) and a saturated surface-dry density of 150  $lbft^3$  (2.39  $kg/l$ ) with the highest cementitious efficiency and the lowest cost. The competition was supervised by the course instructor Dr Usama Ebead with support from the teaching assistant Eng. Nasser Alnohmi and with help of our technicians Engs Abdul Azeez Kilayli and Siju Joseph. ACTs had a representative during the test of concrete samples. The conference was held at the Grand Hyatt Doha Hotel. At the conference, the award was announced and it went to group 09: Rabeah Almashhadani and Mohammed Abdesalam. The students won a fully-paid trip to The USA, California Anaheim to attend the ACI Concrete Convention and Exposition during the period 15-19 October 2017.

As part of the conference program, two of our academics delivered key note lectures. The lectures were delivered by Dr Usama Ebead and Dr Wael Al Nahhal.





## Students Achievements:



- **Baraa Al Ahmar** won the 1<sup>st</sup> award in the 4<sup>th</sup> International Competition for Universities Debate in Arabic Language.
- **Mohammed Hassan Rabie** and his team won the 3<sup>rd</sup> place in the Enterprise Qatar Challenge 2017.
- **Mohamed Hassan Rabie** has secured 3<sup>rd</sup> Place for *“The Best Project Competition Award in Honor’s Program”*
- **Mohammed Hassan Rabie** was selected to be honored at the Student Activities Recognition Ceremony (**Takreem 2017**) for his outstanding efforts and achievements during the academic year 2016 - 2017.



- Our Undergraduate team consisting of six members won the First Place in Qatar National Research Fund's (QNRF) 9<sup>th</sup> Annual Undergraduate Research Experience Program (UREP) **Poster Competition** for the poster entitled ***"Flexural Behavior of Fiber Reinforced Concrete Beams with Basalt FRP Reinforcing Bars"***. The same team was also honored during the annual research forum at Qatar University. This project was supervised by our faculty member Dr. Wael Al Nahhal.



- **Mohamed Amin Ibrahim** won the Oryx GTL's Best Honor Student Thesis Award.
- **Mohamed Amin Ibrahim** got 2<sup>nd</sup> Place for *"The Best Project Competition Award in Honor's Program"*
- **Ahmed Maher Elmasry** participated in Dubai International Open Men for Rugby Sevens and won the tournament. This tournament was considered as one of the biggest Rugby Seven competitions worldwide.





## College of Engineering Football Tournament (2017)

CENG Football Tournament 2017 took place on 05/04/2017. Each team consisted of mixed players from faculty members and students. The Civil Engineering team got the second place.



## Site Visits

Civil and Architectural Engineering students visited the manufacturing unit of Qatar National Cement Company located in Al-Bidaa on April 8<sup>th</sup>, 2017. Qatar National Cement Company is a major producer of Ordinary Portland Cement, Sulphate Resistant Cement, Hydrated Lime, Calcined lime and Washed Sand in State of Qatar.

The students had the opportunity to see the manufacturing process and the different types of the materials used in that process. This visit was organized by the ASCE Student Chapter at Qatar University.



## Faculty Awards and Achievements

- **Dr. Alaa Al Hawari** got the Excellence award from the College of Engineering in recognition for Excellence in Academic/ Research.
- **Dr. Wael Al Nahhal** got the Excellence award from the College of Engineering in recognition for Excellence in Services.
- Civil and Architectural Engineering Department congratulates **Dr. Khaled Shaaban** for being promoted to Associate Professor.
- **Dr. Khaled Shaaban** won the best paper award in the 8<sup>th</sup> International Conference on “*Ambient Systems, Network and Technologies*” organized by ELSEVIER.
- **Dr. Riyadh Al-Raoush** was appointed as an Adjunct Professor at the Department of Earth and Environmental Sciences at the University of Waterloo, Canada.
- **Eng. Nasser Al-Nohmi** got the Excellence award from the Civil and Architectural Engineering Department in recognition for Excellence in Services.



## Awarded Research Projects:

Project Number	Project Title	LPI/PI
Industrial Funding from Qatar Rail	Framework for Railway Research	Dr. Mohammed Hussein
NPRP10-0117-170176	Forward Osmosis Seawater Pretreatment for High Performance Thermal Desalination Plants	Dr. Alaa Al Hawari
GCC-2017-008	Performance of Basalt Fiber Reinforced Polymer "BFRP" Reinforcing Bars under the GCC Harsh Environment	Dr. Wael Alnahhal/ Dr. Nasser Alnuaimi
PDRA3-0402-17003	Towards a Flexi-Concrete: CNTs' Reinforcement Alternative	Prof. Ramzi Taha
UREP19-042-2-016	Characterization of soil profile and properties by Spectral Analysis of Surface Waves.	Dr. Mohammed Hussein
UREP19-038-2-015	Signalized Roundabout: Safety and Operational Performance Case Study in Doha	Dr. Mohammad Ghanim
UREP20-043-2-010	Effective Treatment of Dewatered Construction Water Using Waste Steel Slag	Dr. Alaa Al Hawari/ Prof. Ramzi Taha
UREP20-065-2-013	An integrated solution for the treatment of produced water: electrocoagulation and forward osmosis.	Dr. Alaa Al Hawari

## Departing Faculty and Staff Members

The Civil and Architectural Engineering Department would like to thank two of its Faculty members, namely **Dr. Mohammed Ghanim** and **Dr. Onur Avci** and one of its Staff members **Mrs. Fatma Bejia** for their hard work and efforts in the department. The Department wishes them best of luck in their future endeavors.

