



كلية الهندسة  
College of Engineering  
QATAR UNIVERSITY جامعة قطر

DEPARTMENT OF CHEMICAL ENGINEERING

# CHE NEWSLETTER

September 2016



Issue 6

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## ChemE Car Competition (April 23, 2016)



The Department of Chemical Engineering initiated and organized the ChemE Car Competition 2016 in the State of Qatar on Saturday, April 23, 2016, in collaboration with its AIChE (American Institute of Chemical Engineers) Student Chapter and sponsored by OryxGTL Qatar. It was the first time for the competition to be held in Qatar – being a competition held annually by the AIChE for undergraduate chemical engineering students in the US.

University teams AlBarQ Group (Aliya Banu, Arwa Ahmed Alahtem, Haneen Saeed Ahmad, Malaz Abbas Maki, Merna Wafiq Aziz, Nada Moawia Babiker, Nour Khaled Mardini, Sarah Malik Shahid, Waad Hafiz Elamin, Tasneem Mohamed Hussain) and Al Annabi Group (Badar Abdul Rehman, Housameldin Omar Ahmed, Jabr Al Obaidly, Majed Mahmoud Munasser, Mehamedsalih Abdela Ali, Mohammad Saad Anis, Mohammad Hamza Usmani, Selim Ben Zakour) placed first and second in their category and Tariq Bin Ziyad Independent Secondary School and Jassim bin Hamad Independent Secondary School were named first and second place winners in their category.

In all, 5 university teams and 6 high school teams participated in the competition.



The department's aim was to encourage creativity and innovation among its students and also to reach out high school students to motivate them towards studies in chemical engineering.

The competition required participants to design and race a small car that is operated through chemical processes and carrying a load of water (0-500 g) for a distance of between 15-30 meters. Teams were given information of the load amount and distance about 2 hours before the competition.

In the lead-up to the competition that started in January this year, the high school teachers were oriented on competition requirements, provided safety training, and worked collaboratively with university personnel at the QU laboratory facilities. Competition organizers in turn visited the high schools in February to follow up on their progress and respond to questions and concerns.



**CENG Dean Dr Khalifa Al-Khalifa** applauded the effort and support the principals and teachers provided their students, noting that the competition is part of the College's ongoing activities to promote STEM subjects and engineering majors among secondary school students. "We look forward to making this an annual event on the CENG calendar", he said.



**Department Head Prof. Ramazan Kahraman** said: "By including high school students in this university event, we aimed to expose them to the engineering experience and spirit of innovation to motivate them towards becoming the next generation of engineers".

## أبحاثي - My Gateway to Research (May 15, 2016)

The Department of Chemical Engineering at Qatar University organized the 2<sup>nd</sup> annual student research event called "أبحاثي – My Gateway to Research" which was held on Sunday, May 15<sup>th</sup>, 2016 at Qatar University Research Complex. The research day is as a showcase of ongoing research activities and targeted student body of the Department of Chemical Engineering including both undergraduate and graduate levels.







The event attracted over 100 students and faculty members. The event's this year's addition, ChE Research Cluster discussion panel was the kick off of the event and faculty members representing the ChE Research Clusters presented the ongoing research and interests of each cluster and encouraged students looking for research opportunities.



There were also oral presentations delivered by the graduate students and post-doctorate research fellows covering wide range of exploration from basic science to chemical and environmental engineering. The work reflects not only the scholarly interests of individuals, but the close relationship between academia and industry in Qatar.

The event also had poster presentations of the students. The Poster Presentation and Competition session represent the strong commitment of our faculty and students to scholarship and it is an opportunity for the CHE faculty and undergraduate students to present and share posters of their current research, industrial collaboration and new achievements. Over 30 posters were presented which are related to the categories of graduation projects, capstone design course outputs and design innovation in chemical engineering, student individual research projects and undergraduate research experience program (UREP).







The winners and their poster titles are: 1<sup>st</sup> place- Reem Sameer Azzam (Supervisor: Dr. Rahul Bhosale; Title - Terbium Oxide Based Solar Water Splitting Cycle for Thermochemical Hydrogen Production); 2<sup>nd</sup> place- Shiva Yousef, Daren Dardor, Mariem Chamakh, Baraa Anaya (Supervisor: Dr. Essa Al-Musleh;

Title – Synthesis and Optimization of Gas to Liquid (GTL) Process); 3<sup>rd</sup> place- Moustafa H. Ali (Supervisor: Dr. Rahul Bhosale; Title - Erbium Oxide Based Solar Thermochemical Water Splitting Cycle) and also sharing 3<sup>rd</sup> place- Mohammad Adams, Moustafa H. Ali, Mohamed Ibrahim, Mohamed Salem (Supervisor : Dr. Fadwa; Title - Hydrofin Overview).



## 13<sup>th</sup> Annual ChE Plant Design Contest



The 13<sup>th</sup> Annual Chemical Engineering **Plant Design Award Contest** took place on Saturday 28<sup>th</sup> May, 2016 in the Conference Hall at the Admin Building, Qatar University. Ten groups from our graduating students showcased their design and presentation skills in front of an audience of people from industry, parents and members of Qatar University. Plant design is an important component of the chemical engineering curriculum and we made it our **flagship of excellence in teaching and learning** with input from our industry partners who have been supporting this design competition for the past 13 years. The industrial judging panel included Mr. Abdulla Al-Hajri from Qatar Gas, Mr. Saleh Abdulla from QChem, Mr. Abdulaziz Al-Mohannadi from OryxGTL and Mr. Thamer Al-Mannai from QVC.







The first prize winners of 2016 were the **"GTL-Oryx"** group that is made up of Baraa Anayeh, Shiva Yousefi, Daren Dardor and Mariem Chamakh. The groups that won the second and third prizes were the **"GTL-Shell"** team (composed of Manar Ali, Mona Gulied, Tohfa Yasmin Ahmed and Aichatuo Sid Ahmed) and the **"Ethylene+"** team (composed of Mohamed Salem, Mohamed Hosni Ibrahim, Moustafa Ali and Mogammad Maimoon Adams). The recipients of the first prize were also awarded the prestigious Qatar Gas prize on 8<sup>th</sup> June 2016 at the company's headquarters in Doha.

## ChE Traditional Cuisine (March 6, 2016)



The Department of Chemical Engineering and the AIChE Student Chapter organized and hosted the fifth annual "ChE Traditional Cuisine" on March 6, 2016. This annual event has become a ChE family tradition that creates a blissful atmosphere for faculty, staff and students to have a friendly meeting all together to share country traditions and delicious food.





This year was the fifth time this successful event took place. It is a great chance for getting student and faculty to interact and to meet some of our newest students who just joined us and to share a culture via food and customs. The number of countries and cultures that represent who we are as a department is amazing. We encourage everyone to bring a dish from their country and some choose to dress up as well.



## Healthy Life Style Kickoff March 24<sup>th</sup>



QU AIChE Students Chapter and the Department of Chemical Engineering organized the Healthy Life Style Kickoff event as a sports, health and fun activity on March 24<sup>th</sup>, 2016 for male and females separately. The event aimed to encourage ChE faculty and students to engage sport in their daily routine and to adapt balanced and healthy life style.

The male event included a mini football tournament where faculty and student teams competed in a football match. The female event included a series of sport fun games such as: volleyball, basketball and squash tournaments. It was a super active day, energy boosting and most importantly an encouraging step to a healthier life style. We were just sorry that the Head of the Department, Prof. Ramazan Kahraman, had an injury during the event but the blame goes to him since he was away from sports for quite time 😊 .





## Qatargas Sponsored the Best Overall Prize for the 13<sup>th</sup> Annual Plant Design Competition



Qatargas sponsored the **Best Overall Prize for the 13<sup>th</sup> Annual Plant Design Competition** of the Department of Chemical Engineering.

A total of eight teams participated in the competition with a wide range of projects. The Projects presented by the teams were evaluated by a panel of judges comprising industry representatives.

Abdulla Radi Al-Hajri, Surveillance Engineering Division Manager, represented Qatargas on the judging panel. The students presented detailed reports and 15-minute presentations before taking questions from the judging panel. The competition was a culmination of two semesters of work for the students.

The **winning team** comprised of four students: Shiva Yousefi, Dareen Dardor, Mariem Chamekh and Baraa Anayah. They presented a proposal for a Gas-to-Liquids (GTL) project. The proposed plant is capable of producing affordable sulfur-free liquid fuel as an alternative to fossil fuel and coal by utilizing natural gas. Qatargas officials, Alae Sadic Al Hassan, Engineering Advisor, and Abdulla Radi Al-Hajri, Surveillance Engineering Division Manager, presented the prizes to the winning team at a special ceremony held at Qatargas Doha Head Office. Dr. Fares Almomani, Associate Professor of Chemical Engineering at Qatar University, also attended the event.

The award was introduced by Qatargas in 2004 in partnership with Qatar University in order to provide Chemical Engineering students at the university the opportunity to work on a plant design project relevant to industry. Supporting and encouraging education is a core element of Qatargas' corporate social responsibility initiatives. Qatargas believes that partnerships such as these between universities and industry will help students on their journey to becoming professionals, thereby meeting the future needs of industry in Qatar.

## ChE Students Won the Best GTL Themed Competition and Best Honor's Research Poster at Honor's Program End of Year Event

Undergraduate senior Chemical Engineering Honors students took part in the Qatar University Honor's Program End of Year Event that took place on the 26<sup>th</sup> May 2016 in Ibn Khaldoun Hall at Qatar University. In this flagship event the students took part in the oral competition related to GTL ORYX industries in addition to poster competition. Student team: Shiva Yousefi, Dareen Dardor, Mariem Chamekh and Baraa Anayeh won the first prize while student Moustafa Ali won the third place. Awards and certificates were given to our students by ORYX GTL representatives.

In addition, student Baraa Anayeh won the first price in the poster completion. 53 posters were competing and 5 judges from different university and industrial departments selected Baraa's poster for its excellent quality and presentation. Dr. Essa Almusleh was her main supervisor in the project.

Congratulation to our high achieving students.



## Successful MSc Defense of Eng. Amira



Chemical Engineering Alumni Eng. Amira Al Khatib has passed her environmental engineering master thesis defense with flying colors on May 29<sup>th</sup>, 2016.



Supervised by Prof. Farid Benyahia, she has successfully conducted her experiments in the Department of Chemical Engineering labs and submitted a thesis titled “An Experimental Comparison of Performance Between Flat Sheet and Hollow Fiber Membrane Modules in Direct Contact Membrane Distillation System for Desalination of Seawater.” The Chemical Engineering family congratulates Eng. Amira on the MSc award and wishes her the best.



## Award taken by Alumni Eng. Aida “ChE Alumni Became the First Runner Up in Fame- Lab Competition Worldwide”



Eng. Aida Rafat Abu El-Ola who graduated from the Department of Chemical Engineering top of her class in 2012 has recently participated in the British Council FameLab competition sponsored by Qatar Foundation. Aida made it to the finals that took place in London on June 10<sup>th</sup>, 2016 with her semi-final 3 minutes speech about graphene and ended up the first runner up in the final worldwide after she delivered an exquisite 3 minutes speech about desalination.

FameLab competition is a contest in which a contestant speaks to the audience for three minutes about a high impact subject for humanity. The competition was held for the first time in the UK 2005. In 2007 a partnership with the British Council was started to help in the organization of the competition. The contest has become global with thousands of young engineers and scientist participating form over 25 countries around the world.

Congratulations to Eng. Aida on the great achievement. The Chemical Engineering family is proud of her success.





**Faculty Highlight:** A certificate of outstanding contribution in reviewing for Desalination was awarded in November, 2015 to Dr. Farid Benyahia in recognition of the contributions made to the quality of the journal.

## Department Faculty Participation at the Qatar - UK Research Networking Program (Q-UKRNP)



Drs. Anand Kumar and Rahul Bhosale from the Department of Chemical Engineering participated at the Qatar – UK Research Networking Program (Q-UKRNP) on May 8-10, 2016. Q-UKRNP is a joint funding program based on the QNRF's Conferences and Workshops Support Program (CWSP) and the UK's Science and Innovation Network (SIN) supported by British Council's Researcher Links Programme.



Workshop themes had been selected to align with Qatar's National Priorities through the four pillars of the Qatar National Research Strategy: 1) Energy and Environment, 2) Computer Sciences and ICT, 3) Health and Life Sciences, 4) Social Sciences, Arts and Humanities. The presentation title for Dr. Anand Kumar was "Combustion Synthesis of Catalytically Active Nanopowders"; whereas, Dr. Rahul Bhosale presented his research work entitled "Solar Fuel Production via Metal Oxide Based Two Step Thermochemical H<sub>2</sub>O/CO<sub>2</sub> Splitting Cycle".





## Celebration of Eng. Shaden's Masters Graduation



The Department of Chemical Engineering family joined in the celebration of one of its teaching assistants **Eng. Shaden Daghash's MS degree graduation** on May 17, 2016. Eng. Shaden was awarded a Master of Science degree in Chemical Engineering from Texas A&M University in Qatar.

To share the happiness of the achievement and to celebrate her success, Eng. Shaden offered a cake specially made for the occasion on which she dedicated a thanks note for her department family for their support.

The Chemical Engineering family wishes Eng. Shaden the brightest future. Congratulations!

## Best Poster Award for Post Doc of Drs. Majeda and Mert

Dr. Mohammad Tariq, postdoctorate research fellow in the Department of Chemical Engineering, has been honored with Best Poster Award at the Qatar University Annual Research Forum 2016 with his research work titled "Ionic Liquids: Novel Inhibitors for Natural Gas Hydrates". This work was supervised by the Department of Chemical Engineering faculty members Prof. Majeda Khraisheh and Dr. Mert Atilhan. Event took place on May 3<sup>rd</sup>, 2016 at the Qatar University Research Complex.

## Best Faculty in Teaching/Research and Best Faculty/TA in Services at the CENG End of Year Event 2016

College of Engineering (CENG) end of the year celebration event took place this year on June 16<sup>th</sup>, 2016 Thursday evening in Ibn Khaldoun Hall at Qatar University. Achievements of the CENG were briefly highlighted and awards for faculty and staff were announced by the Dean, Dr. Khalifa Al-Khalifa, during the event. **Dr. Mert Atilhan** received the "Best Faculty in Teaching/Research" and **Eng. Shaden Daghsh** received the "Best Faculty/TA in Services" in the Department of Chemical Engineering for the 2015-2016 academic year.





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