



July 2018

ALUMNI CLUB EL GOUNA WORKSHOPS AND ACTIVITIES

ENERGY ENGINEERING DEPARTMENT

Campus El Gouna

An insight to the Energy Engineering department

By Mohamed Noaman and Sarah Hamdy

The energy engineering department is not only in preparation of this year's new intake of students in October 2018, but also in preparation of the Graduation ceremony that will be taking place together with the Semester opening on October 13th.

This year, for the first time, students will graduate from the programs M.Sc. IT for Energy and M.Sc. Business Engineering: Energy dignitaries and honored guests are invited to celebrate the graduates, the new intake and the expansion of the campus.

This newsletter is dedicated to give an introduction on the Alumni Club El Gouna, give information on our most current excursions in Berlin, give an insight on student profiles and alumni statistics.

The Alumni Club El Gouna

The Campus El Gouna has its own Alumni association. Using the funding of the DAAD, the association successfully organized two workshops already. In February 2017, the first alumni seminar titled "Urban Agriculture and Urban Gardening" has successfully been completed at TU Berlin Campus El Gouna, Egypt. The second topic was of greater interest to the energy engineering alumni and

discussed "Smart Cities" from the 22nd to the 29th of April 2018 at TU Berlin main Campus in Berlin.

The focus was especially the energy, urban and water issues of future cities. The workshops target two diverse groups- One is comprised of 18 alumni from TU Berlin Campus El Gouna and another group comprises the 14 alumni of different generations from TU Berlin central alumni.

The general goals of the Alumni Club El Gouna are:

- ✓ Maintain **contact** between the alumni, their former university lecturers, companies, and funding organizations.

- ✓ Place an emphasis on **Energy, Water and Urban development** sector.
- ✓ Focus on topics relevant to **us and the region**
- ✓ Conduct **seminars and summer schools** for students and alumni in Berlin and abroad.
- ✓ **Career Service**, mentoring for graduates and students.
- ✓ Be ambassadors of the **TU Berlin Campus El Gouna**

Moreover, the TU Berlin Alumni program enables members to take advantage of a range of interesting services e.g. access to the alumni portal and networking with fellow TU alumni in Germany and 138 other countries. More at <https://www.alumni.tu-berlin.de/en/home-alumni-engl/>



This summer's excursion to Reuter West power plant

On the 13th and 20th of June 2018, our Energy Engineering students visited one of the main heat and power plants that was erected to support the economic development of West-Berliners around 2 years before the fall of the Berlin wall. 30 years later, during our excursion we were informed that Vattenfall (the plant's owner) started to further invest in transforming the plant more into a thermal heat provider rather than a power producer. This is due to the increased deployment of renewable energy power plants in Germany, which is currently forcing coal-based power plants to stop production, due to their relatively high electricity cost compared to renewables (which are more favoured economically and socially in Germany).

The Reuter West cogeneration plant is located in the northwest of Berlin. It consists of two identical power plant units which were commissioned in 1987 and 1989. Electricity and heat are generated simultaneously according to the environmentally friendly principle of combined heat and power generation. This increases the fuel utilization rate to 80%. The steam boilers are fired with hard coal and are equipped with efficient flue gas cleaning systems. Residues from the combustion process and flue gas cleaning are



processed and returned to the economic cycle as high-quality raw materials.

This visit comes as a very good add on for the student's knowledge inventory especially before they travel back to El Gouna campus to continue with their 3rd semester. This semester includes a team work project that will allow the students to design and simulate various power plant configurations assuming any location around the world.

Our trip to the technical museum

The annual trip to the technical museum follows the slogan, back to the roots. The technical museum of Berlin shows the first computer technology, steam engines, cars, ships and planes starting from their origin to their developed version. A true must see for every engineer. The technical museum, located across from Potsdamer Platz, is significantly marked with a C-47 airplane on the new main building. It is one of the so called "Raisin Bombers" which were the only connection between western Berlin and West-Germany for around one year (June 1948 to May 1949). Inside, the museum offers around 20'000 m² of exhibition area starting in the entrance building with the first mechanical computer Z1 by Konrad Zuse, built in 1936 in Berlin. The Z1 was running with a speed of 1Hz (1 cycle per second). His son Horst Zuse was a professor at TU Berlin until he retired in 2010.

In the new building, a large collection of aircrafts, beginning with Otto Lillienthal as the first flying human, and a collection of ships and models from all over the world, to show how technology changed the nature of transportation as well as the whole society. In the building of the old ice factory, the group was walking up the old horse staircase to the stables in the second floor and learned how paper was produced in former times. There are so many things in the museum that a couple of hours is too little to see the whole exhibition, which also includes a section for film and photo technology, a historical brewery, an automotive collection, etc.



Our Energy Entrepreneurs

On the 27th of June 2018, our MBE students wrapped up their "Energy Entrepreneurship" module course with pitching their entrepreneurial ideas in front of a group of consultants from Microenergy international. The students divided in teams and were able to develop new and innovative ideas thanks to the direct and constructive supervision from the course' instructors. This helped them to unleash their entrepreneurial skills and employ such skills in creating business cases which are based on real economic and social constraints. One of the groups presented an idea to enter the developing markets as a provider for clean water, based on distributed PV installations coupled to mobile water

treatment facilities. The poor communities could pay the cost of such systems using a pay as you go financial service. Another group pitched a water vortex distributed hydro power plant, that can provide energy from water flow in rivers especially for under developed communities. A third group considered the energy demand factor and had the idea of selling customized, affordable and sustainable educational tablets (at a cost of 35 USD per tablet) that could help the children in isolated communities living off grid to access data provided from other partners. Such tablets would cost 1 USD per month.

Microenergy international is currently based in Berlin. It has a strong background in energy engineering, energy economics,

microfinance, management and social sciences and has over ten years of experience in more than 30 countries in Latin America, Africa and Asia.



More on this: <http://www.microenergy-international.com/de/>

Manisha Kaur, intake 2016

Manisha Kaur, at present is on her way to write her master thesis in the area of wind energy forecasting. Prior to her master's, Manisha studied electrical and electronics engineering and worked in a market research company in the power and petrochemical sector for three years. As a market research Analyst, Manisha has expertise in carrying out syndicated & customized power and Petrochemical reports targeted towards meeting client and market needs. Her studies were conducted across a broad range of company profiling, product types, plants, products, equipment, market estimation & market engineering across the globe, and latest market trends.

Manisha was a part of the first intake at Campus El Gouna in IT for Energy. As a part of her master studies, she also conducted her internship in innovation management.



Currently, Manisha is working as a student intern on the topic 'wind energy forecasting' under the collaboration of DAI-LABOR (distributed artificial intelligence laboratory) and 4-cast GmbH in Berlin. The tasks of this internship mainly focus on integrating the artificial intelligence and machine learning concepts with wind energy. According to Manisha, pursuing the IT for Energy program was a major career shift for her.

"This shift would have never been accomplished without the enormous support and supervision of the professors of TU Berlin Campus El Gouna and the modules are highly interdisciplinary which allows to choose from a wide range of future prospects," Manisha stated. TUB Campus El Gouna has provided the international platform to learn, showcase, and enhance her professional skills.

Alumni statistics

The Alumni Club El Gouna lately gathered information on their members. It revealed, that more than half of the Campus El Gouna graduates are currently employed in Germany. Recent graduates are still looking for work, but more than 60 percent of all graduates found a job within the first six months after graduation, and graduates from Campus El Gouna most commonly pursue a career in industry while some alumni continued with their PhD.

