

For Immediate Release



## **AUB engineering students dazzle with innovative solutions for common problems at annual student conference**

Beirut, Lebanon- 01/06/2012 - An electric umbrella with heating and cooling options, a smartphone app that tracks taxis around town, and recyclable concrete were just some of the dazzling engineering projects unveiled by AUB students at a recent research presentation.

Attended by some of the university's most prestigious members, students of engineering, architecture and graphic design came together to unveil their innovative solutions to everyday problems as part of the 11<sup>th</sup> Annual FEA Student Conference held on May 16-17, 2012. Several projects from among more than 40 submissions by about 100 students were on display.

Among the most impressive designs was a server that collects data such as location and passenger requests from smartphones to analyze the positions of taxis across the city.

After receiving clients' requests, the server finds the best suited taxi for the client, taking into account cost, fairness among taxi drivers and passenger waiting time.

"It impacts society by maximizing profit for all taxi drivers, shortening the wait time for the passengers, reducing traffic in Beirut and reducing pollution, because the volume of cars will be much less," said team member Nourhan Farhat, an electrical and computer engineering student.

The app is currently in its final test stage and is set to launch at the beginning of June. Farhat added that the app had received interest from developers in Germany and the United States.

Another group of engineering students created an eco-friendly power harvester designed in the shape of an umbrella. The co-called 'Eco-Brella' would provide its user with heating and cooling – depending on the weather – and allow them to charge a cellphone and laptop on the move.

Constructed with a solar thin film, the waterproof umbrella is ready to be seen on beaches, resorts, and public areas.

"We hope Eco-Brella, though a very small application, will allow us to be part of the "Energy Drivers" in our country through providing energy needs to our society and development in the field of energy for our nation as a whole," said developer Paul Houry.

In another project, students used a stationery fitness bike to create a renewable energy system that would convert the mechanical energy produced by the user's motion to electricity.

"The idea is to generate electricity while getting fit," said team member and electrical engineering student Amira Hachem. "It's estimated that a human being, in a decent shape, can generate about 100 watts during a one hour workout which can power about two laptops or five lighting bulbs."

Another project presented was about creating recycled concrete from construction and demolition waste.

"Construction and demolition waste is a big problem in Lebanon and is dumped illegally in the sea, landfills, and on the sides of roads and in valleys. Using recycled concrete aggregate can help alleviate this environmental problem," said team member Ziad Naous.

In his opening remarks at the presentation event, AUB President Peter Dorman outlined the importance research played in university life.

"Research is the lifeblood of academia, and having a chance to share research with your peers is really the essence of what we do," he said.

Also present was Said Fayez Khalaf, AUB alumnus and founder of SEDRACO, a major construction company based in Nigeria.

Khalaf advised students to "take non-engineering courses seriously."

He continued: "They're just as valuable as the engineering ones. Business knowledge, financial knowledge and cultural understanding – do not underestimate the importance of the three. Take every opportunity to sharpen your social skills."

Several other distinguished participants shared their knowledge with the students: Prof. Mohamed Harajli from the Civil and Environmental Engineering Department spoke about the implications of the recent discovery of the offshore thrust fault system on the seismic hazard to Lebanon. The Qatar Chair in Energy Studies, Professor Nesreen Ghaddar from the Mechanical Engineering Department presented her research on bio heat modelling and environmental control for comfort and air quality. Prof. Zaher Dawy from the Electrical and Computer Engineering Department discussed research for green cellular networks, and Prof. Robert Saliba from the Department of Architecture and Design, reflected on design teaching, practice, and research over the last few decades.

Dean Makram Suidan and President Dorman presented four alumni with the FEA Distinguished Alumni Award: Said Fayez Khalaf, Mohamed El Hendi, Issam Darwish, and Basim Ziadeh. Also in attendance was the Nigeria Ambassador to Lebanon Ajibaiye Opeloyeru.

The conference was generously sponsored by the Consolidated Contractors Company (CCC), International Building Systems Co. for Contracting, Mecanique, MTC Touch, Telus Technology Strategy, INDEVCO Group, Beirut International M.I. & C s.a.r.l; as well as by Hana Dib, George Kadifa, and Mazen Najm.

The winning teams received monetary prizes for their efforts during a reception and awards ceremony held on Thursday May 17, after a musical concert by Professor Pierre Azoury and his students.

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Note to Editors

### **About AUB**

Founded in 1866, the American University of Beirut bases its educational philosophy, standards, and practices on the American liberal arts model of higher education. A teaching-centered research university, AUB has more than 600 full-time faculty members and a student body of about 8,000 students. AUB currently offers more than 100 programs leading to the bachelor's, master's, MD, and PhD degrees. It provides medical education and training to students from throughout the region at its Medical Center that includes a full service 420-bed hospital.

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