

Technology Day 2010

On 27th Oct 2010, the Electronics Design Technology Development Centre (ED TDC) from the School of Engineering at Republic Polytechnic (RP) held its annual technology event with the theme 'Innovative Technology Towards a Greener Future'. It is positioned to look into a diverse array of technologies which have the propensity to reduce our carbon footprint in the coming years.



The event marked another momentous occasion in the history of the ED TDC and it is a culmination of many months of planning and coordination by staff from the School of Engineering. The Technology Day 2010 is a huge success as the event saw a large turnout from the green technology industry.

Professionals from the private and public sectors gathered at the event to exchange ideas on their various innovative approaches towards a sustainable future. There were 13 industry booths showcasing a huge array of technologies to support many different industries.

Deputy Principal (Industry Services), Mr Seto Lok Yin delivered the opening speech to a packed lecture theatre. His speech addressed Singapore's commitment in reducing its carbon footprint by the year 2020, as well as some of the steps which RP has taken to assist in the country's efforts in going green and churning out environmentally friendly initiatives.



Mr Seto enlightening the audience on the significance of green technology and how RP has played an active role in this exciting area

The Tech Series was also a platform for RP to seal its commitment to collaborate with the industry. A total of 2 MOUs were signed at the event. The MOU with Singapore Semiconductor Industry Association (SSIA) will allow the Diploma in Micro and Nano Technology (DMNT) to tap on the industrial network of SSIA for student

internship programmes, student final year projects and staff R&D projects. RP in turn will get to play an instrumental role in training and nurturing the right talents for this crucial industry.



Mr Ulf Schneider (left) and Mr Seto in the MOU signing ceremony

The second MOU signing took place between RP and GP Batteries International Limited. The scope of the agreement covers the area of staff and students' development. One of the projects which could be initiated as a result of this MOU is the testbedding of the Vectrix electric bike. RP will look into the possibility of playing the role of a testbedding partner for the electric bike. This is part of the TIDES scheme which is jointly administered by EDB and LTA and it is designed to encourage R&D activities in the field of electric vehicles.



Chairman and Chief Executive of GP Batteries International Limited, Mr Andrew Ng Sung On (left) and Mr Seto Lok Yin at the signing ceremony

The President of SSIA, Mr Ulf Schneider then delivered the keynote speech on the semiconductor industry's efforts in going green. Given the semiconductor industry's rapid growth over the last decades its carbon footprint is also on the rise and there is an urgent need for us to explore into new technologies to mitigate this rise in CO₂ emission which is clearly detrimental to our future.



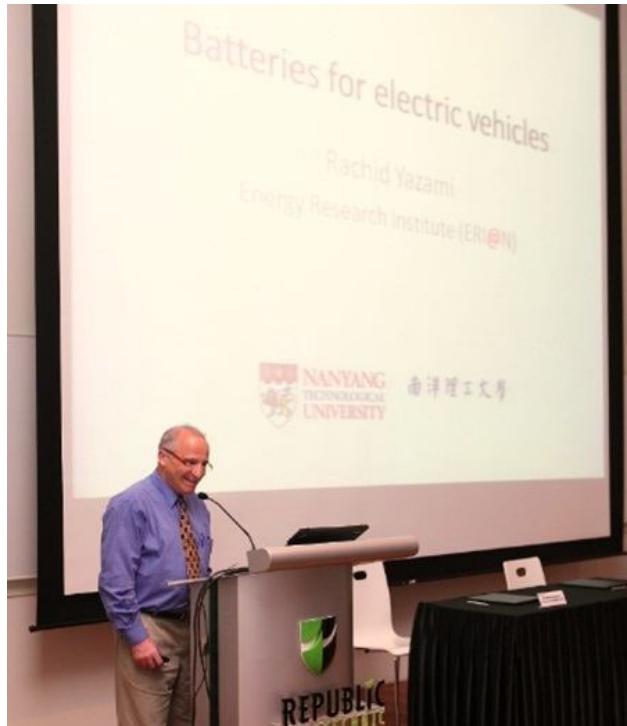
Mr Ulf Schneider delivering his keynote speech on why the semiconductor industry needs to go green

The Assistant Head of Cleantech at EDB, Mr Lim Teck Yong delivered a highly informative presentation on the future of the clean and renewable energy industry. There is a huge demand for talents in this area and there is no doubt that it will be one of the high growth sectors in the coming decades.



Mr Lim Teck Yong presenting on the strength of the clean energy industry in Singapore

Electric vehicles are expected to affect our lives in a big way in the coming years and the Energy Research Institute (ERI) at NTU has been conducting various forms of research to support this industry. Professor Rachid Yazami shared his findings on batteries for Electric Vehicles (EV) with the audience. This presentation was particularly interesting as GP Batteries is one of the participating companies which also focuses on the same technology.



Professor Rachid Yazami sharing his findings with the rest of the audience on batteries for EVs

Last year RP signed a collaboration agreement with the Solar Energy Research Institute of Singapore (SERIS) to allow them to study into the performance of our 30kWp solar farm. The Project Manager of Solar Energy Systems Cluster at SERIS, Mr Andre Nobre was next in line to speak on the performance of RP's very own system. Just as expected the presentation clearly shows that the system has performed extremely well over the last one year.



Mr Andre Nobre from SERIS speaking on the performance of RP's solar farm as well as the research institute's role in the Singapore's solar energy roadmap.

Many of the clean energy facilities in the industry rely heavily on a complex network of data acquisition and monitoring systems to ensure the proper functioning of all components. National Instruments (NI) is one of the companies which provides this technology for the green industry. Field Sales Engineer from NI, Mr Froinand Fajardo presented on the strength of LabVIEW as well the latest developments in data acquisition systems which can elevate green technology to the next level.



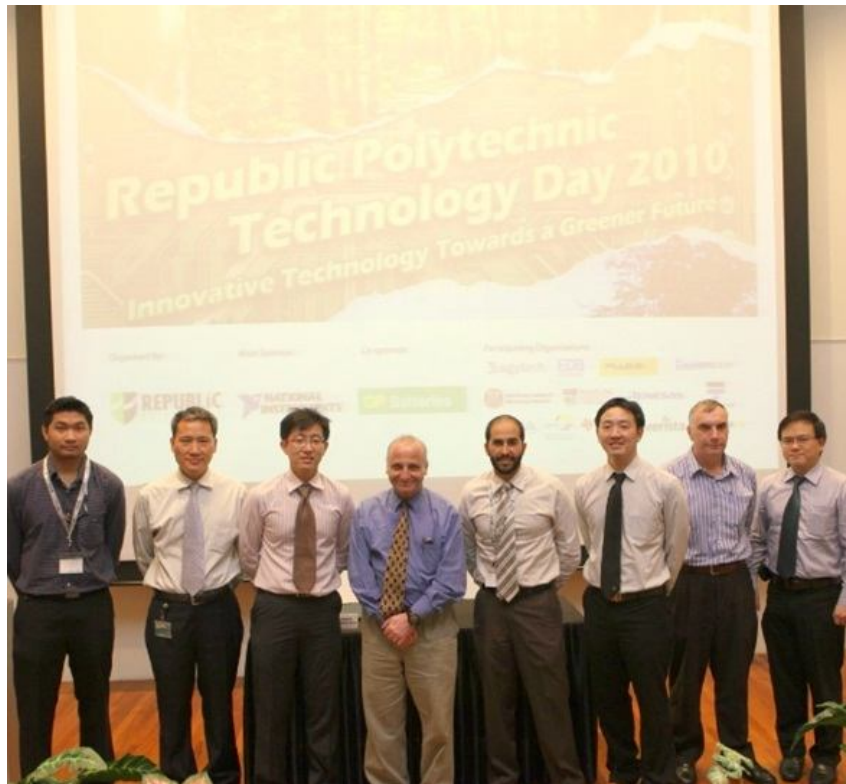
Mr Froinand Fajardo from NI speaking on the importance of data acquisition in clean energy system

Last but not least, RP's very own Mr Quek Yang Thee shed light on the enabling technologies for electric vehicles. He also shared with the audience his experience while working on his research project which deals with the use of photovoltaic (PV) panels and Compressed Air Energy Storage (CAES).



Mr Quek Yang Thee delivering an interesting presentation on the future of vehicles relying on clean energy

After the speakers were given token of appreciations for their participation a group photo was taken on stage.



Group photo of all speakers and RP's senior management

The audience were then treated to a sumptuous tea break. At the same time this is an excellent opportunity for them to visit the exhibition booth and find out more on the various technologies from the clean energy industry.



The retrofitted Toyota Prius which runs on GP Batteries Battery System



One of the electric vehicles showcased was the Vectrix electric bike which has been equipped with GP batteries energy storage and management system



Staff from Min Shang Industries showcasing their latest technology in the area of compressed air systems which can be used for cooling and energy storage applications



Team from Yokogawa Asia joined by Mr Lim Boon Choon (Vice President, Singapore Sales & Services Operation) showing off their latest automation and control technology for green systems

A lab tour was also organized to the Texas Instruments Low Power Applications lab where SEG staff, Mr Hong Ling Tim showcased his projects which exploit the use of low power ICs for a variety of applications.



Mr Hong Ling Tim presenting on his work to the visitors at the Texas Instruments Low Power Applications lab

Judging from the number of participating organizations and the audience turnout there is no doubt that the event has been a huge success. RP staff and students gained tremendously from the tech series as they managed to stay well informed on the latest developments in the clean energy industry.

Many of the visitors at the event expressed their satisfaction on the highly informative presentations and exhibits. The Electronics Design TDC team will continue to organize similar events in the future to emphasize on up-and-coming technologies.