

**Half-Day Talk on “Hybrid Liquid Desiccant System and Chimney Micro-Plant for Simultaneous Production of Fresh Water and Electricity”**

**Date** : Saturday, 16<sup>th</sup> November 2019  
**Venue** : IEM (Southern Branch) Training Centre, 24-B Jalan Abiad, Taman Tebrau Jaya, Johor Bahru  
**Speaker** : Assoc. Prof. Dr. Ahmad Jais Alimin, Faculty of Mechanical and Manufacturing, UTHM

**Synopsis**

Rapid growth of global population, especially in poor developing regions without sustainable petroleum resource, have inevitably increase their concern on issues such as alternative energy resources and water security. Recently, a hybrid plant concept that uses liquid desiccant system for harvesting freshwater from the atmospheric and solar chimney for energy supply has been constructed and tested for simultaneous production of freshwater and electricity. Experimental and simulation works showed that the hybrid system is greatly influenced by the liquid desiccant’s properties (quality and concentration) and ratio of desiccant’s mass flow rate to mass flow rate of the processed humid air. By understanding the overall hybrid integration and operation efficiencies, future development towards upscaling the integrated solution, specific for those living in the humid and sunny regions, can be worked out systematically. The presentation on this topic is separated into a few sections beginning with the description about the solar chimney technology, followed by the concept of extracting water from the atmospheric, the methodology of combining both technologies, the construction and testing of the hybrid plant and lastly the summary on the findings and outcome from this research project. The main objective of this technical talk course is to give a better understanding for our young engineers and practicing engineers to get some insight on the above topic.

Time	Tentative Program
8.30 a.m. – 9.00 a.m.	Registration
9.00 a.m. – 9.10 a.m.	Welcome Speech by IEM Southern Branch Organizing Committee
9.10 a.m. – 10.30 a.m.	Session 1: Hybrid Liquid Desiccant System and Solar Chimney Micro Plant (Part 1)
10.30 a.m. – 10.45 a.m.	Coffee Break
10.45 a.m. – 12.30 p.m.	Session 2: Hybrid Liquid Desiccant System and Solar Chimney Micro Plant (Part 2)
12.30 p.m. – 1.00 p.m.	- Discussion - Question and Answer Session
1.00 p.m.	End of Talk

**Speaker Biodata**

**Assoc. Prof. Dr. Ahmad Jais Alimin**, graduated from Imperial College London in 1998 and completed his master’s Engineering at Universiti Teknologi Malaysia in 2002. He began his academic career at UTHM since 2003, as a Tutor, under the Faculty of Mechanical and Manufacturing Engineering. Upon completion of his PhD at Coventry University, he was then appointed as a Lecturer in 2007. From 2008 until 2011, he was tasked as the Head for Department of Plant and Automotive Engineering. After completing the tenure, he was then appointed as the faculty Deputy Dean for Research and Development from 2012 until 2013, followed by an appointment as the Deputy Dean for Students Affairs, Development and Publication for the university’s Centre for Graduate Studies, from 01/2014 until 05/2015. In 2015 he successfully completed his study in Postgraduate Diploma in Entrepreneurship, awarded by the Judge Business School, Cambridge University. From August 2015 until April 2016, he was away from the university for industrial and sabbatical leaves, setting up and working on the university’s spin-off company, APT TOUCH SDN BHD ([www.apttouch.com](http://www.apttouch.com)) – focusing on Technologies for Low Carbon Footprint. He also involved actively in delivering academic lectures (locally and internationally), conducting research activities and consultancy works, supervising research students, as well as writing academic articles. He had successfully supervised three PhD students, four master’s students, 56 Bachelor’s Degree Projects and six Diploma projects. Since 2007, he had successfully managed more than 10 research grants with a total amount of around RM2.7 Million. His company already commercialised one of his R&D products - Retrofit EFI technology (FGK – [www.fuelgainkit.com](http://www.fuelgainkit.com)), which is already available on Lazada and Shopee. Currently he is the Head of Automotive Powertrain Research Group UTHM.

**Participant Fees:**

Grade	Online	Normal
IEM Corporate Member & Graduate Members (30 years and above)	RM 120.00	RM 140.00
IEM Senior Engineers (60 years and above)	RM 110.00	RM 130.00
IEM Graduate Members (Below 30 years)	RM 100.00	RM 120.00
IEM Student Members	RM 60.00	RM 80.00
Non IEM Member	RM 180.00	RM 200.00

**Closing Date: 8<sup>th</sup> November 2019**

**For ONLINE REGISTRATION**, payment **MUST BE MADE VIA ONLINE PAYMENT** (bank-in the participant fees into the Institution's Maybank Current Account (No. 5-013920-15708) before the **closing date**. Registration will be on a first-come-first-serve basis. Kindly return the Reply Slip to the IEM (SB) office before **8<sup>th</sup> November 2019** together with a non-refundable cheque for the participant fees made payable to ***The Institution of Engineers, Malaysia (Southern Branch)***. Alternatively, you could bank-in the participant fees into the Institution's Maybank Current Account (No. 5-013920-15708), and to facsimile both the Bank-in and Reply Slips to the Institution. The Institution requests all members co-operation in ensuring fees are paid in advance to the seminar. Please also be reminded that fees will not be refunded to absent participants who have paid, and to also note that all reservations must be paid despite participant cancellations. Thank you for your continuous support of the Institution.

Chairman, Sub-Committee on Seminar and Technical Talk, IEM (SB)

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**Half-Day Talk on "Hybrid Liquid Desiccant System and Chimney Micro-Plant for Simultaneous Production of Fresh Water and Electricity"**

Saturday, 16<sup>th</sup> November 2019, 9.00 a.m. – 1.00 p.m. at the IEM (Southern Branch) Training Centre, Johor Bahru

I wish to attend the above talk. I enclosed herewith a cheque No. .... for the amount of RM.....as payment for the seminar fee.

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