ORGANISED BY:
URBAN ENGINEERING DEVELOPMENT SPECIAL INTEREST GROUP (UEDSIG), IEM
IN COLLABORATION WITH
UL STANDARDS AND ENGAGEMENT (UL)

Physical Half Day Seminar on "Battery Energy Storage System"

BEM APPROVED CPD: 4.0 REF NO: IEM24/HQ/556/T

Date : 16 January 2025 (Thursday)
Time : 01.30 pm - 06.30 pm
Venue : Auditorium Malakoff, Wisma IEM
Speakers : Mr. Kolin Low
: Er. Ho Victor & Ir. Alan Chan Teck Wai
: Mr. Winter Ho
: Dr. Chiam Sing Yang

CLOSING DATE : 9 JAN 2024

REGISTRATION FEE'S (subject to 8% SST)		
	ONLINE (NON HRDF Claimable) (Log-in for registration & payment: www.myiem.org.my/member/login.aspx)	**NORMAL FEE (HRDF Claimable)** (By Email : Payment by cash, credit card, bank-in, Quotation & Invoice)
IEM Student Members	100.00	150.00
IEM Graduate Members	180.00	230.00
IEM Corporate Members	300.00	350.00
Non-IEM Members (Non of the Above	500.00	550.00

PROGRAMME

TIME	PROGRAMME
01:30pm – 02:00pm	Registration of Participants,
02.00pm - 02.10pm	Welcoming Address and Introduction by IEM UEDSIG Representative
02.10PM -03.00PM	**Topic 1 - UL Standards Supporting Battery Energy Storage System** **Speaker : Mr Kolin Low**
03.00PM -03.50PM	**Topic 2- Interpretation Of UL9540A, NFPA 855 And The 'Garis Panduan Keperluan Keselamatan Kebakaran Bagi Pusat Data'** **Registered Fire Safety Engineers:** **Er.Ho Victor & Ir. Alan Chan Teck Wai**
03.50pm - 04.20pm	Break
04.20pm -05.10pm	**Topic 3- Introduction of UL 9540A and other UL Standards and Good Practices for BESS safety** **Speaker : Mr. Winter Ho**
05.10pm-06.00pm	**Topic 4- Battery Fire Safety and Considerations in UL9540A Tests.** **Speaker : AStar-ABTF Dr. Chiam Sing Yang** Affiliated with the "Singapore Battery Consortium"
06.00pm-06.30pm	Q&A Closing Remarks by UEDSIG Representative

"IEM reserves the right to alter or cancel the programme due to unforeseen circumstances at its discretion'.
IEM SHALL NOT be responsible for any direct or consequential losses".
For further details, kindly contact:
The Institution of Engineers, Malaysia
Bangunan Ingenieur, Lots 60/62, Jalan 52/4, P.O. Box 223 (Jalan Sultan), 46720 Petaling Jaya, Selangor
Tel: 603-7890 0143

Email : shahrul@iem.org.my / syafiq@iem.org.my

Topic I - UL Standards Supporting Battery Energy Storage System

The adoption of Battery Energy Storage System (BESS) has been growing rapidly in ASEAN due to the advantages of addressing renewable energy intermittency, back-up power during outages, grid stability, among others. However, BESS comes with unintended risks especially thermal runaway. This session will explain the roles of UL Standards supporting BESS implementation and use cases in ASEAN and other countries.

Speaker : Mr Kolin Low

Kolin Low is the Regional Director of UL Standards & Engagement (ULSE), a global nonprofit standards development organization driven by public safety mission. Based out of Singapore, he has direct responsibility for the engagement with Asia Pacific region. Kolin has 15 years of experience in standards and policy working for ULSE, ISO and Enterprise Singapore.

Topic 2- Interpretation Of UL9540A, NFPA 855 And The 'Garis Panduan Keperluan Keselamatan Kebakaran Bagi Pusat Data'

Lithium-ion batteries may be technologically superior in it's technical performance but it also brings with it a higher risk of fire because of thermal runaway. This sharing session will give an overview of the statutory local framework for the fire safety storage requirements of this new hot topic. It will cover both the local and international codes/guidelines about mitigating the fire risk from the product safety and the environment in which the product is kept.
Other quantitative tools like computational fluid dynamics (CFD) and qualitative tools such as (Hazard Mitigation Analysis) are also introduced in this lecture. The audience should be able to have an overview of the guidelines and the various tools available to them when they are dealing with this topic.

Registered Fire Safety Engineers I : Er.Ho Victor

Er. Ho Victor is a council member of The Institution of Fire Engineers, Singapore, and a director of HiLT Pte Ltd an international fire safety engineering consultancy. He has been involved in fire safety consultancy for 29 years. He practices as a Professional Engineer/Registered inspector in Singapore. He is also a Registered Fire Safety Engineer in both Singapore and Malaysia. He also currently lectures at Ngee Ann Polytechnic and Temasek Polytechnic on fire engineering. He has served on various code committees and is currently serving on the Singapore Master Fire Code Review Committee and the adoption of UL9540A into Singapore's code of practice. On the international front, his involvement with Underwriters Laboratories (UL) is as a technical committee member of UL 2849, UL3202 and a stakeholder in UL9540.

Registered Fire Safety Engineers 2 : Ir. Alan Chan Teck Wai

Ir. Alan Chan is a fire safety consultant with over 17 years of experience in performance-based design for various building in Malaysia and oversea. He also specializes in fire safety design for mass rapid transit (MRT/LRT) systems. Ir Alan possesses multiple professional certifications, including Registered Malaysia Fire Engineer (M'sia FSE), Professional Engineer (P. Eng), ASEAN Chartered Professional Engineer (ACPE), Asia Pacific Economic Cooperation Engineer (APEC), and NFPA Certified Fire Protection Specialist (CFPS). His extensive qualifications and experience reflect his dedication to enhancing fire safety engineering practices.

Topic 3- Introduction of UL 9540A and other UL Standards and Good Practices for BESS safety

This presentation introduces UL 9540A, a key standard for evaluating the safety of Battery Energy Storage Systems (BESS). It outlines the testing methods for fire risks and thermal runaway hazards. Additionally, we'll explore related UL standards and best practices that enhance BESS safety, ensuring reliable and secure energy storage solutions in various applications.

Speaker : Mr. Winter Ho

Winter Ho graduated from Power Mechanical Engineering and received master degree in National Tsing Hua University, Taiwan. He joined UL in 2011 as engineer and located in Taipei office. He is currently under IES (Integrated Energy Systems) department and responsible for TIC (testing inspection certification) of battery charger, uninterruptible power supply and electric vehicle supply equipment. He started in 2016 to work with local customers for the certification of storage battery system, and expanded the relationship to clients located in southeast Asia in 2019.

Topic 4- Battery Fire Safety and Considerations in UL9540A Tests

Understanding battery and its fire safety is key to help design better products, understand the risks and develop key mitigation or protection system. This is especially relevant for large scale battery deployments such as use of stationary storage. This session will talk about the basics of battery and its fire risks, explain the roles of some product standards, and in particular, UL 9540A test standards. This includes what it is, what it covers and what it is not.

Speaker : Dr. CHIAM Sing Yang

Dr. Chiam Sing Yang is currently Technical Director of the Singapore Battery Consortium and Deputy Executive Director of Institute of Materials Research and Engineering, Singapore. He also chairs the secondary cells working group and in Singapore. Dr. Chiam has been in R&D for more than 15 years. He was also the founding director for the Singapore Battery Consortium in 2019. Previously, he was an Adjunct Assistant Professor at Nanyang Technological University and also Technology and Research Consultant for National Electric Vehicle Centre (NEVC) at Land Transport Authority (LTA).

Moderator 1 : Ir. Dr. Ling Lloyd
Trainer Id 12818

Ir. Dr. Lloyd Ling is an Associate Professor and Deputy Dean of R&D and Postgraduate Programmes at Universiti Tunku Abdul Rahman (UTAR) in Malaysia. He holds a Ph.D. in Civil Engineering from Universiti Teknologi Malaysia, an M.S. in Engineering Management from California State University, Northridge, and a B.S. in Civil Engineering from the same institution. His research focuses on hydrology, climate change, flood mitigation, and applied GIS. Dr. Ling has contributed to various academic committees, including serving as Chairman of the Centre for Disaster Risk Reduction (CDRR) and as a member of the External Relation Committee (ERC). His expertise encompasses soil conservation, project management, financial analysis, modeling and simulation, and statistical inference.
Dr. Ling's work is widely recognized, with numerous publications and citations in his field.

Moderator 2 : Dr. Doh Shu Ing

Dr. Doh Shu Ing is an Associate Professor in the Faculty of Civil Engineering Technology at Universiti Malaysia Pahang (UMP). He earned his PhD in Civil Engineering from Universiti Malaysia Sabah in 2012, following a Master's degree in 2005 and a Bachelor's degree in 2000, both in Civil Engineering from the same institution. Dr. Doh has a strong passion for research, having secured over 30 local and international projects. He has published more than 100 reputable journal articles and actively provides consultation and training programs for government and private agencies. His research interests include concrete materials, sustainable construction, and construction management. He has been involved in various projects, such as modeling the effect of elevated temperature on the mechanical properties of steel slag mortar and studying sustainable universal building design for aging communities in Malaysia. Dr. Doh is also a member of professional bodies like the Board of Engineers Malaysia (BEM) and the Institution of Engineers, Malaysia (IEM).

REGISTRATION FORM

Physical Half Day Seminar on "Battery Energy Storage System"
16 Jan 2024 (Thursday) Closing Date : 9 Jan 2024
Email : shahrul@iem.org.my / syafiq@iem.org.my

REGISTRATION FEE'S (subject to 8% SST)		
	ONLINE (NON HRDF Claimable) (Log-in for registration & payment: www.myiem.org.my/member/login.aspx)	**NORMAL FEE (HRDF Claimable)** (By Email : Payment by cash, credit card, bank-in, Quotation & Invoice)
IEM Student Members	**100.00**	**150.00**
IEM Graduate Members	**180.00**	**230.00**
IEM Corporate Members	**300.00**	**350.00**
Non-IEM Members (Non of the Above	**500.00**	**550.00**

NAME	MEMBERSHIP NO. / GRADE	FEES (RM)
	Sub Total:	
	SST Added 8% :	
	Total Amount Payable :	

PAYMENT DETAILS :

☐ Cash RM_____

☐ Cheque no._____for the amount of RM_____(non-refundable) .

FULL PAYMENT must be settled before commencement of the course, otherwise participants will not be allowed to enter the hall. If a place is reserved and the intended participant fails to attend the course, the fee is to be settled in full. If the participant failed to attend the course, the fee paid is non refundable. The Registration Fee includes lecture notes, refreshment and lunch.

For **ONLINE REGISTRATIONS,** please note that payment **MUST** be made **BEFORE the closing date.** If payment is not received within the stipulated time, the registration fee will be reverted to the normal registration fee.

Contact Person: _____Designation:_____

Name of Organization: _____

Address : _____

_____

Telephone No. : _____(O) _____(Fax No.)

_____(H) _____(HP)

Email :_____

_____
Signature & Stamp

_____
Date