Chairman,

Electrical Engineering Technical Division, The Institution of Engineers Malaysia, Lots 60 & 62, Jalan 52/4, P.O. Box 223 (Jalan Sultan), 46720 PetalingJaya, Selangor Darul Ehsan Tel: 03-7968 4001/2 Fax to 03-7957 7678 (Email : roselein@iem.org.my)

REGISTRATION FORM ONE DAY COURSE ON "LIGHTNING"

LIGHTINING

Date : 14th April 2016

Venue: Auditorium Tan Sri Chin Fung Kee , 3rd Floor, Wisma IEM, Petaling Jaya

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| No | Name(s) | M'ship No. | Grade | Fee (RM)* |
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*Fees MUST be fully paid BEFORE the CLOSING DATE. Seats could only be confirmed upon payment.

Enclosed herewith a crossed cheque No: ________for the sum of RM _______issued in favour of "The Institution of Engineers, Malavsia" and crossed 'A/C payee only'. I/We understand that the fee is not refundable if I/We withdraw after my/our application is accepted by the Organising Committee as stated in the cancellation term. If I/We fail to attend the seminar, the paid registration fee will not be refunded.



The Institution of Engineers, Malaysia

ONE DAY COURSE ON "LIGHTNING"

Organised by: Electrical Engineering Technical Division, IEM

Date : 14th April 2016

Venue : Auditorium Tan Sri Chin Fung Kee , 3rd Floor, Wisma IEM, Petaling Jaya

Time : 9.00 a.m. - 5.30 p.m.

BEM Approved CPD/PDP Hours : 6 Ref No:IEM16/HQ/124/C

| REGISTRATION FEE (GST NOT INCLUDED) | | | | | | | |
|-------------------------------------|---|------------|-------------|--|--|--|--|
| Registration Fee | | Normal Fee | On-line Fee | | | | |
| IEM Student Member | : | 180.00 | 150.00 | | | | |
| IEM Graduate Member | : | 300.00 | 250.00 | | | | |
| IEM Corporate Member | : | 450.00 | 400.00 | | | | |
| Non IEM Member | : | 1200.00 | 1100.00 | | | | |

Terms & Conditions:

- For ONLINE REGISTRATIONS, only ONLINE PAYMENT is applicable [via RHB and Maybank2u –Personal Saving & Personal Current ; Credit Card Visa/Master].
- Payment via CASH / CHEQUE / BANK-IN TRANSMISSION / BANK DRAFT / MONEY ORDER / POSTAL ORDER / LO / WALK -IN will be considered as NORMAL REGISTRATION.
- 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 participants fail to attend the course, the fee is to be settled in full.
- Fee paid is not refundable. Registration fee includes lecture notes, refreshment.
- The Organizing Committee reserves the right to cancel, alter, or change the program due to unforeseen circumstances. Every effort will be made to inform the registered participants of any changes. In view of the limited places available, intending participants are advised to send their registrations as early as possible so as to avoid disappointment.

CANCELLATION POLICY

IEM reserves the right to postpone, reschedule, allocate or cancel the course. Full refund if cancellation is received in writing more than 7 days before start date of the event. No cancellation will be accepted prior to the date of the event. However, replacement or substitute may be made at any time with prior notification and substitute will be charged according to membership status.

PERSONAL DATA PROTECTION ACT

I have read and understood the IEM's Personal Data Protection Notice published on IEM's website at http://www.myiem.org.my" and I agree to IEM's use and processing of my personal data as set out in the said notice.

Photocopies are acceptable

SYNOPSIS

• Lightning terminates on the surface of Earth at an average of 45,000 strikes per day, equating to over 16 million strikes a year. In an average year, this fury of nature costs billions of dollars (USD) worth in damages including considerable number of fatalities and injuries to personnel.

• Over the years, technologies have largely migrated from the Electrical- Analog era to the Digital-Electronic age with electronic components becoming smaller with better efficiency. While technology has advanced rapidly, the means to protect these high-tech applications sadly lag behind.

• Despite the known problems and dangers associated to lightning strikes and the increasing secondary effects it causes to high-tech facilities, the lightning protection solution to this day is still very much based on the two-and-half century old practice of deploying conventional Franklin Rods as lightning arrestors. There is a growing imbalance between the rate of technological advancement and the means to protect them.

• The course will provide an overall understanding of Lightning, its impact and the advanced total lightning protection solution (includes Direct Strike Protection, Surge Protection and Grounding) provided by Hitachi.

Dr. Zen Kawasaki has more than 30 years of experience as an educator in Universities. He holds the position of President in the International Committee of Atmospheric Electricity (ICAE) and is also a member of IEE Japan, American Geophysical Union and Meteorological Society of Japan.

Over the years, he has been developing a wide variety of remote sensing systems such as lightning mappers and precipitation radars, and studying mechanism of lightning discharges and their related phenomena with his own developed observation equipment.

He also participated in the development and study of the Lightning Imaging Sensor (LIS) aboard the Tropical Rainfall Measuring Mission (TRMM) as a principal investigator in Japan and clarified the relationship between lightning discharges and thunderstorm characteristics. Furthermore, he designed his own VHF broadband lightning sensors for space. These sensors were launched in 2009 and 2012, and they succeeded in recording VHF emissions from lightning discharges in space. He has been awarded for the following:

- The Research Award in the Society of Atmospheric Electricity of Japan
- The Technical Progress award for the First Success of Laser Triggered Lightning in the Field Experiment in the Institute of Electrical Engineering of Japan
- The Progression Awards in the Laser Society of Japan
- The Technical Progress Award for the development of the small satellite "Maido-1" and lightning observation in the Institute of Electrical Engineering of Japan

He is a member of the following committees:

- President of International Committee of Atmospheric Electricity
- Member of American Geophysical Union
- Member of The Institute of Electrical and Electronics Engineering
- Member of Institute of Electronics, Information and Communication Engineering of Japan
- Institute of Electrical Engineering of Japan
- Member of Meteorological Society of Japan

Dr Kawasaki has also published more than 200 papers on International Journals and Proceedings of International Conference.

| | Speaker | | |
|-------------------|--|-------------------------------|--|
| 8.30am -9.00am | Registration | | |
| 9.00am – 9.05am | Welcome Speech By the Session Chairman | EETD Committee Member, IEM | |
| 9.05am – 9.20am | (1) Introduction of Hitachi & HCFP | Gordon | |
| 9.20am – 10.05am | (2) Global Warming and Lightning Activity | Prof. Zen | |
| | 10.05am to 10.20am – Tea Break | • | |
| 10.20am – 12.20pm | (3) Understanding Lightning & Its Impact | Lai Mun | |
| 12.20pm – 01.05pm | (4) Introduction to Lightning Protection - Direct Strike Protection - Grounding | Lai Mun | |
| | 01.05pm to 02.05pm - Lunch | | |
| 02.05pm – 02.35pm | (5) Introduction to Secondary Effects of Lightning - Surge Protection | Jeremy Wong | |
| 02.35pm - 03.05pm | (6) Thunderstorm Tracking System | Professor Zen | |
| 03.05pm – 03.20pm | Q&A | | |
| • | 03.20pm to 3.35pm – Evening Tea Break | • | |
| | END | | |

Ms. Ong Lai Mun has more than 12 years of experience in conducting audit services and undertaking projects related to lightning protection, surge protection and grounding. The countries of these projects include Malaysia, Singapore, Indonesia, Brunei, Thailand, Korea and Vietnam.

In the year 2003 she graduated as B.E. Electrical Engineering from University Technology Malaysia and she also holds a Master in Electrical Engineering from University Technology Malaysia graduated in the year 2006, specializing in the research of lightning protection. She is currently pursuing her PhD on Atmospheric Discharges in Uppsala University, Sweden.

Over the years, Lai Mun has also accumulated a vast experience serving clients across several industries:

- Oil & Gas (some of the clients include Petronas, Shell, Mitsui Chemicals, ExxonMobil and SCG Chemical)
- Telecommunication (i.e. Ericsson, Celcom, MobileOne, Globe Telecom)
- Broadcast Communications (i.e. Smart Digital, Jaring, Measat)
- Theme Park (i.e. Universal Studios Singapore, Resorts World at Sentosa).

Lai Mun has also publish technical papers for international conferences such as:

- International Conference on Lightning Protection (ICLP),
- International Symposium on Lightning Protection (SIPDA),
- International Power Engineering Conference (IPEC)
- Association of Engineering Education in Southeast Asia and the Pacific Conference (AEESEAP).

She has been awarded the status of Associate Asean Engineer (AAE) by the Asean Federation of Engineering Organisations (AFEO).