

## Talk on Advanced Surface Engineering with Superior Properties

*(Organised by Marine Engineering and Naval Architecture Technical Division, IEM)*

**Date** : 27<sup>th</sup> April 2017 (Thursday)  
**Time** : 5.30 pm to 7.30 pm (*Refreshments will be served at 5.00pm*)  
**Venue** : TUS and C&S Lecture Room, 2nd Floor Wisma IEM, PJ  
**Speaker** : Dr. Reza Mahmoodian and Ir. Dr. Ching Yern Chee

**BEM Approved CPD/PDP :2**  
**Ref No: IEM17/HQ/131/T**

### SYNOPSIS

The improvement in surface properties (hardness, wear, abrasion and corrosion) can be economically achieved by applying various kinds of coatings. In recent years, there is considerable interest to develop nanostructured coatings to deal with wear and severe corrosion problems. Nanostructured coatings offer noteworthy potential for their utilization in extreme environments.

This short course will provide an opportunity to the participants to become familiar with the fundamentals of surface modification techniques, advancement in the field of coating technology, synthesis and characterization of novel nanostructured coatings well suited to many industrial applications like oil, gas, seawater desalination, petrochemical, automobile industries etc. In addition, this course also covers technical aspects of selection and specification of protective coatings, largely for atmospheric environments. The course provides theoretical and practical information on coatings selection for wear and corrosion control. Inspection is only one part of ensuring a quality coating job, and selecting the correct coating system and writing a good specification are just as important.

### BIODATA OF SPEAKER

**Dr. Reza Mahmoodian** is Postdoctoral Research Fellow (PDRF) at Malaysia's first and leading research university, the University of Malaya (UM) and formerly a visiting researcher at University of California, Los Angeles-UCLA, USA. He started working since 1999 including 10 years in industries (Manufacturing and Oil&Gas), 7 years' academics (simultaneously 7 years as industry consultant to Azarin Kar Ind. Co, in Coating and manufacturing process). Dr. Reza received his first degree in BEng (Industrial Engineering – Industrial Technology IAUK) from Kerman Azad University Iran in 2004. He went on to complete MEng, Design & Manufacturing Engineering in 2010 and subsequently obtained his PhD (Mechanical Engineering) and MEng University of Malaya (Malaysia) in 2013. His current research field is advanced material processing & advanced surface engineering including Development of Powder-based Target physical vapor deposition for functional thin films and Thin Film Bio-coating, Anti-microbial coatings, etc at the Centre of Advanced Manufacturing and Material Processing (AMMP). Dr. Reza is actively involved in Knowledge and Technology Transfer to manufacturing Industries and enterprises. As a visiting scientist, Dr. Reza has expanded his network to University of California, Los Angeles (UCLA) during his visit in 2015 and 2016 to establish joint research and collaborations in the field of thin film and 3D-ICs technology.

**Ir. Dr. Ching Yern Chee** has been practicing as a material engineer for the past ten years in polymer industrial. She has obtained her Doctor of Philosophy in Mechanical Engineering in 2011 from the University of Malaya. Now, she has more than 17 years of experience in the field of Materials Engineering and Polymer Technology in both academia and private industry. She has published more than 55 research articles in various ISI/WoS- and Scopus-listed publications. Ir. Dr. Ching has filed numerous intellectual property rights /patents for her inventions and received many accolades as a distinguished scholar. She is filing a few patents, trademarks and copyrights which stem from his specialty research. She has 6 gold awards and 2 Best Invention Awards at international/national exhibitions pertaining to her research and inventions. Her invention on bionanocomposite coating has won the Best of the Best Award and Gold Medal in 4th International Invention, Innovation & Design, INDES 2015

**Rear Admiral Dato' Pahlawan Ir. Hj. Jasan Ahpandi bin Sulaiman (Rtd)**

Chairman

Marine Engineering and Naval Architecture Technical Division

### ANNOUNCEMENTS TO NOTE:

- **Non-members** may also attend the talk but will need to pay a registration fee of **RM50** and an administrative fee of **RM15**. GST is inclusive.
- Limited seats are available on a "first come first served" basis (maximum 100 participants). **To secure your seat, kindly register online at [www.myiem.org.my](http://www.myiem.org.my).**

### ADMINISTRATIVE FEE

- Kindly be informed that an administrative fee of **RM15** is payable for talks organized by IEM. GST is inclusive.
- Student Members are however exempted.

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### CPD/PDP HOURS CONFIRMATION

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