

Registration fee

IEM Members:  
RM15.00

Non-Members:  
RM70.00

Date:

4<sup>th</sup> Sept 2021  
(Saturday)

Time:

11.00am – 1.00pm

Venue:

Goto Webinar  
Virtual Platform

**BEM Approved**  
**CPD/PDP**  
**Hours: 2**

Ref No:

IEM21/HQ/337/T (w)

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WEBINAR TALK ON  
“APPLICATION OF COMPUTATIONAL FLUID  
DYNAMICS (CFD) IN FREE SURFACE FLOW  
PROBLEM”

Jointly Organised with Water Resources Technical Division,  
IEM & IEM Southern Branch

SYNOPSIS

CFD has become a common tool in engineering design and planning due to the rapid increase of computational power and affordability of desktop computer. However, the reliability of CFD's result is highly dependent on the setting of the model, quality of input data as well the choice of model. The choice of model depends on the problem to be solved, the purpose of simulation and the level of accuracy required by the engineer or planner.

In this talk, a general introduction will be given on the application of CFD model for the simulation of flow with free surface. Such model is widely used for flood simulation, coastal wave simulation and open-channel flow simulation. The talk will cover the fundamental concept of such model, the advantages and disadvantages of the model, and the differences between the models.

SPEAKER BIODATA

Dr. Puay is a Senior Lecturer at the River Engineer and Urban Drainage Research Centre (REDAC) at Universiti Sains Malaysia (USM), Penang. He obtained his Ph.D. and master's degree from Kyoto University and BS in Civil Engineering from USM. His work mostly focused on mathematical and numerical modelling on open surface flow problem. He has developed several in-house one-, two-, and three-dimensional numerical models to simulate numerous flow problem, e.g., mudflow problem, tsunami wave propagation on land, and abrupt expansion flow in open-channel. Apart from that, he is also actively involved in consultation project, e.g., numerical modelling of emergency gate at a dam, flow over artificial riffles in a river and the Integrated River Basin Management (IRBM) study for Perai basin. He has been actively publishing in international and local journals. He is also the recipient of the national research grants, i.e., the Transdisciplinary Research Grant Scheme for the development of numerical model for mudflow disaster, and the Fundamental Research Grant Scheme to study the formation of pool and riffles structure in river.

Ir. C. Kamalesen Chandrasekaran  
Chairman  
Water Resources Technical Division, IEM

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