IAHR 2017 **37th IAHR WORLD CONGRESS**
13-18 August, 2017
Kuala Lumpur, Malaysia

PRE-CONGRESS WORKSHOP

MASTER CLASS ON HYDROINFORMATICS AND WATER MANAGEMENT

13 August 2017
(Sunday)
8:30 - 18:30

Putra World Trade Centre (PWTC), Kuala Lumpur

Master Class on Hydroinformatics and Water Management is conducted to address on the world-wide application of advanced information and communication technologies (ICTs) in the management and problem solution related to water. Hydroinformatics technologies and tools draw on and integrate many disciplines in water management which support for decision making at all levels included governance and policy.

There is a growing need for the subject matter experts and professionals to appreciate with the subjects on hydroinformatics and water management. Managers, engineers, modelers, planners, designers and students who are involved in hydroinformatics and water management would benefit from attending this workshop.

Workshop Managers
Ir. Dr. Fang Yenn Teo (DID)
Dr. Yau Seng Mah (UNIMAS)

Speakers

Talk by **Prof. Roger A. Falconer** (Cardiff University)

Integrated Water Resources Management for Bathing Water Compliance

This talk will address a new study on developing an integrated Cloud-to-Coast model for the purpose to estimate urban point and diffuse faecal indicator organism loads. The study will collect new data on faecal indicator organism loads and fluxes for calibration and validation of overall process models. The model can also produce qualitative health impact assessment and create an emulator of model for the purpose of prediction and protection.

Talk by **Prof. Soon Thiam Khu** (Monash University)

Surrogate modelling: recent applications in hydrology, hydraulic and ecological modelling

This talk will provide an overview of the recent developments and applications of surrogate modelling in the field of hydro-ecology. Surrogate modelling, also known as approximate or meta-modelling, has been around since 1990s. But in recent years, has gain a lot of traction and popularity due to the need to evaluate risks, and uncertainties in water modelling. This talk will attempt to provide an overall framework of the different ways in which surrogate models are used. Also, discussion on some of the pitfalls and drawbacks of surrogate modelling, especially when coupled with sampling methods and optimization algorithms.

Talk by **Prof. Wenhong Dai** (Hohai University)

Hydrodynamics and hydrodynamic enhancement of a typical goose-head pattern braided channel

This talk will address the simulation of hydrodynamic characteristics of a typical goose-head pattern braided reach in lower Yangtze River as upstream input of clearer water releasing after the Three Gorges Reservoir (TGR). The applied numerical model was calibrated by measurements and physical model experiments. Results aim to analyse the bed deformation within branches of the braided reach, to predict the future effect of hydrodynamic enhancement and additional fluvial processes as well.

Talk by **Prof. Dekui Yuan** (Tianjin University)

Characteristics of storm surge in Bohai Sea, China and its impact factors

This talk will address the characteristics of storm surge occurred near Tianjin, an important metropolis in China, using statistical method based on observations. The temporal characteristics of storm surge near Tianjin coastal area were studied and high tide levels in 63 years from 1950 to 2012 were deeply analysed. Furthermore, a storm surge model coupling with wave and tide was developed based on FVCOM-SWAVE using NCEP meteorological data set. Using the model, the impacts of wave and tide on the storm surge and current were analysed.

Talk by **Prof. Junqiang Xia** (Wuhan University)

Theoretical and experimental studies on criteria of people and vehicles stability in urban floods

This talk will address different formulae for the incipient velocity of human and vehicle instability, based on a mechanics-based analysis. Accordingly these formulae accounting for the effect of buoyancy and the influence of a non-uniform upstream velocity profile acting on the flooded subject. The experimental data have been used to calibrate parameters in the derived formulae, which guaranteed the predicative accuracy of the proposed formulae.

Talk by **Prof. Dongfang Liang** (Shanghai Jiao Tong University)

Shallow-water modelling of floods and coastal processes

This talk will address several topics concerning the numerical solution of the shallow water equations and Boussinesq-type equations. In particular, on the subjects of shock-capturing schemes, surface/ subsurface flow coupling, and open boundary treatment. Application examples will be given in connection with rainfall-runoff, urban flooding, tidal oscillation, tsunami propagation and wave runup on coastal beaches.

FEE:	INTERNATIONAL	LOCAL
	55USD	RM200

MAX: 100 PAX

CONTACT
37th IAHR World Congress PCO Office
c/o River Engineering and Urban Drainage Research Centre (REDAC)
Engineering Campus, Universiti Sains Malaysia,
14300 Nibong Tebal, Penang, Malaysia
Tel: +604 599 5490 Fax: +604 599 6926
E-mail: iahr2017sec@usainsgroup.com