

# INTERNATIONAL WORKSHOP OF WATER DISASTER MITIGATION AND WATER ENVIRONMENT REGULATION

## PROGRAM

### Day 0      April 24 WED

**09.00 - 18.00      REGISTRATION**

**VENUE: Wangjiang Hotel**

**18.00 - 21.00      ICEBREAKER RECEPTION**

**VENUE: Jazz Bar**

## **Day 1      April 25 THU**

### **09.00 - 09.10      OPENING CEREMONY**

**VENUE: JUYING Hall      CHAIR: Prof. Pengzhi Lin**

- Opening and Introductions
- Welcome Remarks (Leaders of Sichuan University and SKLH)

### **09.10 - 10.10      SESSION 1**

#### **PLENARY LECTURES**

**VENUE: JUYING Hall      CHAIR: Clark C.K. Liu**

P1	09.10-09.40	The power of surrogate global optimization for parameter calibration of computationally expensive, nonlinear simulation models with applications to hydrodynamics and water quality in lakes and watersheds <i>Christine Shoemaker (National University of Singapore, Singapore)</i>
P2	09.40-10.10	Strengthening higher education networks for water and disaster <i>Gretchen Kalonji (Sichuan University, China)</i>

### **10.10 - 10.40      COFFEE BREAK and GROUP PHOTOS**

### **10.40 - 12.00      SESSION 2A**

#### **KEYNOTE LECTURES      THEME 1: WATER ENVIRONMENT REGULATION**

**VENUE: JUYING Hall      CHAIR: Tian C. Zhang and Junke Guo**

E1	10.40-11.00	Using artificially intelligent models in restoration of impacted waterbodies: opportunities and challenges <i>Naresh Singhal (The University of Auckland, New Zealand)</i>
E2	11.00-11.20	Occurrence and prevention of black water disaster in shallow eutrophic lakes <i>Helong Jiang (Nanjing Institute of Geography &amp; Limnology, CAS, China)</i>
E3	11.20-11.40	Environmental flows from a habitat suitability perspective <i>Sung-Uk Choi (Yonsei University, Korea)</i>
E4	11.40-12.00	River microbiology <i>Yi Li (Hohai University, China)</i>

**10.40 - 12.00      SESSION 2B****KEYNOTE LECTURES****THEME 2: WATER DISASTER MITIGATION****VENUE: INTERNATIONAL Hall****CHAIR: Yakun Guo and Xudong Fu**

D1	10.40-11.00	River embankment failure by overtopping water and resultant flood and sediment hydrographs
		<i>Hajime Nakagawa (Kyoto University, Japan)</i>
D2	11.00-11.20	The climate change for flood and debris mitigation after typhoon Morakot 2009 in Taiwan
		<i>Harold Y.C. Tan (National Taiwan University, Taiwan, China)</i>
D3	11.20-11.40	High-resolution flood modelling and forecasting using modern GPUs
		<i>Qiuhua Liang (Loughborough University, UK)</i>
D4	11.40-12.00	Numerical estimation of extreme waves and surges along China coasts
		<i>Yongping Chen (Hohai University, China)</i>

**12.00 - 14.00      LUNCH****VENUE: Phuket Island Restaurant****14.00 - 15.00      SESSION 3****PLENARY LECTURES****VENUE: JUYING Hall****CHAIR: David Z. Zhu**

P3	14.00-14.30	Emerging contaminants in the environment
		<i>Rao Y. Surampalli (Global Institute of Energy Environment &amp; Sustainability, USA)</i>
P4	14.30-15.00	Water disaster mitigation in the new situation: what are the weak links
		<i>Xiaotao Chen (China Institute of Water Resource and Hydropower Research, China)</i>

**15.00 - 15.15      COFFEE BREAK**

**15.15 - 17.35      SESSION 4A****KEYNOTE LECTURES      THEME 1: WATER ENVIRONMENT REGULATION****VENUE: JUYING Hall      CHAIR: Naresh Singhal and Daoyi Chen**

E5	15.15-15.35	BMPs for stormwater management
		<i>Tian C. Zhang (University of Nebraska-Lincoln, USA)</i>
E6	15.35-15.55	Quantification modelling of climate change impacts on hydro-climatic extremes
		<i>Yunqing Xuan (Swansea University, UK)</i>
E7	15.55-16.15	An integrated evaluation-simulation-optimization approach for supporting ecological effects management in Yellow River Estuary
		<i>Yanpeng Cai (Beijing Normal University, China)</i>
E8	16.15-16.35	Biological behavior of migration and eco-hydraulics for fish schooling
		<i>Ruidong An (Sichuan University, China)</i>
E9	16.35-16.55	The effect of inertia and porous effects on wave attenuation capacity of coastal wetlands
		<i>Zhan Hu (Sun Yat-Sen University, China)</i>
E10	16.55-17.15	Controlling P loss from agricultural runoff by flue gas desulphurisation gypsum
		<i>Xiaoping Li (East China Normal University, China)</i>
E11	17.15-17.35	Application of lattice Boltzmann method for hydro-environment engineering
		<i>Yong Peng (Sichuan University, China)</i>

**15.15 - 17.35      SESSION 4B****KEYNOTE LECTURES****THEME 2: WATER DISASTER MITIGATION****VENUE: INTERNATIONAL Hall****CHAIR: Ioan Nistor and Qiuhua Liang**

D5	15.15-15.35	Simulation of the water level and potential flood in the Qiantang Estuary with storm surge
		<i>Yakun Guo (University of Bradford, UK)</i>
D6	15.35-15.55	Modelling system of hyperconcentrated floods for the Middle and Lower Yellow River
		<i>Junqiang Xia (Wuhan University, China)</i>
D7	15.55-16.15	Key technology of the landslide-dam discharging with artificial control methods
		<i>Xiaoqing Chen (Institute of Mountain Hazards and Environment, CAS, China)</i>
D8	16.15-16.35	The temporal dynamics of uncertainty contribution from satellite precipitation input in rainfall-runoff modeling
		<i>Lihua Xiong (Wuhan University, China)</i>
D9	16.35-16.55	Selection of optimal distribution curve for non-stationary flood series
		<i>Xiaohong Chen (Sun Yat-Sen University, China)</i>
D10	16.55-17.15	Construction and verification of refined hydrological-hydrodynamic model along the Sunan Canal
		<i>Ziwu Fan (Nanjing Hydraulic Research Institute, China)</i>
D11	17.15-17.35	Recent glacier-debris flows at Tianmo catchment in the southeast Tibet Plateau
		<i>Kaiheng Hu (Institute of Mountain Hazards and Environment, CAS, China)</i>

**18.00 - 20.00      DINNER****VENUE: Phuket Island Restaurant**

## Day 2    April 26 FRI

### 9.00 - 10.00    SESSION 5

#### PLENARY LECTURES

**VENUE: JUYING Hall    CHAIR: Hajime Nakagawa**

P5	09.00-09.30	Disinfection of treated sewage by chlorine jets
		<i>Joseph Lee (The Hong Kong University of Science and Technology Hong Kong, China)</i>
P6	09.30-10.00	Development of a national guideline for flood estimation
		<i>James Ball (University of Technology Sydney, Australia)</i>

### 10.00 - 10.20    COFFEE BREAK

### 10.20 - 12.00    SESSION 6A

#### KEYNOTE LECTURES    THEME 1: WATER ENVIRONMENT REGULATION

**VENUE: JUYING Hall    CHAIR: Qiuwen Chen and Sung-Uk Choi**

E12	10.20-10.40	The use of local active control to reduce flood risk in urban areas
		<i>Simon Tait (The University of Sheffield, UK)</i>
E13	10.40-11.00	Retrospect and prospect of water environmental regulation and modeling
		<i>Clark C.K. Liu (University of Hawaii, USA)</i>
E14	11.00-11.20	Quartic eddy viscosity model for wall-bounded turbulence
		<i>Junke Guo (University of Nebraska-Lincoln, USA)</i>
E15	11.20-11.40	Extreme wind and wave characteristics in the South China Sea and their impacts on the offshore structures
		<i>Daoyi Chen (Tsinghua University, China)</i>
E16	11.40-12.00	Aquatic species habitat simulation method and modelling
		<i>Yujun Yi (Beijing Normal University, China)</i>

**10.20 - 12.00      SESSION 6B****KEYNOTE LECTURES****THEME 2: WATER DISASTER MITIGATION****VENUE: INTERNATIONAL Hall****CHAIR: Hao Zhang and Kaiheng Hu**

D12	10.20-10.40	The flood protection system of the Orinoco River Delta - 50 years of operation <i>Arturo Marcano (Universidad Catolica Andres Bello, Venezuela)</i>
D13	10.40-11.00	Effect of kinematic fault rupture process of manila trench on tsunami propagation in the South China Sea <i>Hua Liu (Shanghai Jiao Tong University, China)</i>
D14	11.00-11.20	Simulation of outburst flood from barrier dams for disaster mitigation: lessons from practices <i>Xudong Fu (Tsinghua University, China)</i>
D15	11.20-11.40	Impact and key technologies for risk response to climate change on regional water resources, drought and flood <i>Denghua Yan (China Institute of Water Resource and Hydropower Research, China)</i>
D16	11.40-12.00	High-resolution flood modelling for urban area of unavailable drainage-pipe data <i>Jingming Hou (Xi'an University of Technology, China)</i>

**12.00 - 14.00      LUNCH****VENUE: Phuket Island Restaurant****14.00 - 15.00      SESSION 7****PLENARY LECTURES****VENUE: JUYING Hall****CHAIR: Simon Tait**

P7	14.00-14.30	Recent Palu earthquake and tsunami <i>Philip L.F. Liu (National University of Singapore, Singapore)</i>
P8	14.30-15.00	Mechanism and its controlling methods of the algal blooms in the tributaries of Three Gorges Reservoir <i>Defu Liu (Hubei University of Technology, China)</i>

**15.00 - 15.15 COFFEE BREAK****15.15 - 16.15 SESSION 8A****KEYNOTE LECTURES THEME 1: WATER ENVIRONMENT REGULATION****VENUE: JUYING Hall CHAIR: Yunqing Xuan and Yujun Yi**

E17	15.15-15.35	Route to sustainable urban drainage systems
		<i>David Z. Zhu (University of Alberta, Canada)</i>
E18	15.35-15.55	Urban diffusive pollutant wash-off process: physical experiments and cellular automata based modeling
		<i>Qiuwen Chen (Nanjing Hydraulic Research Institute, China)</i>
E19	15.55-16.15	Flow and sediment deposition in vegetated channels
		<i>Chao Liu (Sichuan University, China)</i>

**15.15 - 16.15 SESSION 8B****KEYNOTE LECTURES THEME 2: WATER DISASTER MITIGATION****VENUE: INTERNATIONAL Hall CHAIR: Arturo Marcano and Hua Liu**

D17	15.15-15.35	Extreme flood and debris loading on infrastructure-field investigations, experimental and numerical modeling
		<i>Ioan Nistor (University of Ottawa, Canada)</i>
D18	15.35-15.55	Integrated management of river and sewer systems for urban flood mitigation
		<i>Hao Zhang (Kochi University, Japan)</i>
D19	15.55-16.15	Assessment on sponge city performance: a case study in Jinan city
		<i>Zongxue Xu (Beijing Normal University, China)</i>



**16.15 - 16.25 CLOSING CEREMONY**

**VENUE: JUYING Hall      CHAIR: Prof. Jianmin Zhang**

**16.30 - 20.00 WORKSHOP BANQUET**

**Take a bus to Broad and Narrow Alley for dinner and Sichuan opera performances**

## **Day 3    April 27 SAT**

### **FULL DAY    TECHNICAL TOUR**

**Route: Chengdu→Yingxiu→Wenchuan Earthquake Museum→Zipingpu Hydropower Station→Dujiangyan Irrigation Water System→Chengdu**

**Scenic site:**

#### **1. Wenchuan Earthquake Museum**

The 5.12 Wenchuan earthquake occurred at 14:28:04, May 12, 2008, Beijing Time. According to the data of the Seismological Bureau of the People's Republic of China, the surface wave magnitude of the earthquake was 8.0 Ms, the moment magnitude was 8.3 Mw and the earthquake intensity was 11 degrees. The seismic waves have been confirmed to have surrounded the earth six times. The earthquake affected most of China and many Asian countries and regions, ranging from Liaoning in the north, Shanghai in the east, Hong Kong, Macao, Thailand and Vietnam to the south, and Pakistan to the west.

The Earthquake severely damaged buildings over an area of 100,000 square kilometers, including 10 counties in the worst-hit areas, 41 counties in the less-worst-hit areas, and 186 counties in the general disaster areas. As of 12:00 on September 18, 2008, the earthquake had caused 69,227 deaths, 374,643 injuries and 17,923 missing. It has been the most destructive earthquake since the founding of the People's Republic of China.



## 2. Zipingpu Hydropower Station

Zipingpu Hydropower Station is located at the upper reach of Minjiang River in Maxi, Dujiangyan City, Sichuan Province. It is a large-scale multifunctional water conservancy system which mainly facilitates the irrigation and water supply while enabling power generation, flood control and tourists attraction. The total installed capacity of Zipingpu Hydropower Station is  $4 \times 190$  MW, with an annual power generation capacity of  $34.176 \times 10^8$  kwh and an annual utilization time of 4,496 hours.



## 3. Dujiangyan Irrigation Water System

The Dujiangyan Irrigation Project was constructed in 256 B.C. by the local residents led by Bing LI, the local governor of the Shu County, Qin State. The project is located on the Minjiang River by Dujiangyan City, 56 kilometers to the west of Chengdu, Sichuan Province. The large-scale hydraulic project is still in use for irrigation purpose, serving as a great benefit for the local residents. It consists of three major components, namely, Yuzui, Feishayan and Baopingkou. The project solves the problems of self-diversion of river water and sediment discharge, mitigating significantly the flood hazards to the whole Chengdu region.



## **CONTACT US**

Prof. Pengzhi Lin

Tel: +86-13547890610

Email: [cvelinpz@126.com](mailto:cvelinpz@126.com)

Prof. Jianmin Zhang

Tel: +86-13981878609

Email: [zhangjianmin@scu.edu.cn](mailto:zhangjianmin@scu.edu.cn)

Dr. Yu Chen

Tel: +86-18200398593

Email: [rainchen393@hotmail.com](mailto:rainchen393@hotmail.com)