



DEPARTMENT OF CIVIL ENGINEERING

SEMINAR

**Historical development of physical river models (1755-1949):  
From the Rhine to the Yellow River**

Professor Albert Koenig

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Date: October 25, 2019 (Friday)  
Time: 5:00 p.m. - 6:00 p.m.  
Venue: Room 632C, Haking Wong Building  
The University of Hong Kong

**ABSTRACT**

Even after the development of quantitative river hydraulics in the wake of Galileo's scientific revolution, many river control problems could not be mathematically solved because of their scale and complexity. This gave rise to the first physical river model for the river Rhine in 1755 by Claude-Léopold Genneté (1706-1782) in Utrecht, Netherlands, which stimulated rapid development and application of such models in other European countries. When in 1898 Hubert Engels (1854-1945) introduced the first stationary experimental hydraulic laboratory with movable bed at the Technical University of Dresden, Germany, systematic research of river flow problems could be greatly expanded and attracted also the attention of Chinese hydraulic engineers. This leads to a close collaboration between Germany and China, with many experiments on flood control of the Yellow River being conducted in Germany in the 1920s and 1930s. The first hydraulic experimental laboratory in China was established in 1934 at the German-speaking Tongji University, followed in 1935 by a hydraulic engineering laboratory at Beiyang University in Tianjin and the China Central Hydraulic Research Institute in Nanjing. Prominent Chinese hydraulic engineers involved were German trained Li Xie 李協 = Li Yizhi 李儀祉(1887-1938), and Tongji University graduates Shen Yi 沈怡(1901-1980), Zheng Zhaojing 鄭肇經 (1894-1989), Li Fudu 李賦都 (1903-1984), and others. The talk will be richly illustrated with contemporary documents and rare photographs.

**ABOUT THE SPEAKER**

Professor Albert Koenig obtained a BSAE degree from the University of the Philippines at Los Baños, followed by an MS and PhD from Cornell University. He has worked for more than thirty years in academia, industry and government in various countries, always in the area of environmental engineering. In 1992 he joined the Department of Civil Engineering at the University of Hong Kong. After his retirement in 2009, he held visiting positions at the University of Padua, Italy and the University of Hong Kong where he is currently an Adjunct Professor. Since 2018, he also serves as visiting professor at Chuhai College of Higher Education. He is a member of several professional associations, including HKIE and the International Water Association (IWA), Specialist Group on Water and Wastewater in Ancient Civilizations.

- ALL ARE WELCOME -