

THE THIRD LUMB LECTURE

Geotechnical Challenges in Hydropower Development in China



Presented by Ir Professor C.F. Lee



at 6:00 p.m., October 6, 2004,
Theatre One,
Hong Kong Convention and Exhibition Centre,
Wanchai, Hong Kong



About the Speaker

Ir Professor C.F. Lee is currently a Pro-Vice-Chancellor and Chair Professor of Geotechnical Engineering at The University of Hong Kong. He graduated from The University of Hong Kong in 1968. He subsequently received his Master's degree from the same university in 1970 under the supervision of Professor Lumb, and a Ph.D. from the University of Western Ontario, Canada, in 1972. He then worked for Ontario Hydro for about two decades, on a variety of dam and nuclear power projects. He was a member of the Slope Safety Technical Review Board set up by the Hong Kong Government from 1998 to 2001 to advise on aspects of slope safety in Hong Kong. He has also served as a specialist consultant to many international bodies such as the United Nations Development Programme, the World Bank, the Asian Development Bank, and the International Atomic Energy Agency, for a variety of energy and infrastructure projects in various parts of the world. He is also a specialist consultant to the Three Gorges and other hydro projects in China.

Ir Professor Lee is an Academician of the Chinese Academy of Engineering, a Fellow of the Canadian Academy of Engineering, and a recipient of the K.Y. Lo Medal from the Engineering Institute of Canada. He has published some 200 papers in the geotechnical engineering field.

Synopsis

Hydroelectric energy is one of the major sources of energy being used to drive the modernization and industrialization of China. Presently, only 26% of the exploitable hydraulic generation capacity of 380,000 MW has been developed, including such dam sites as the Three Gorges, Ertan, and Gezhouba. In the decades ahead, it is expected that many other potential sites will be developed in order to meet the energy needs of China. Most of these sites are located in mountainous southwestern China, where large rivers such as the Yangtze, the Yellow, the Pearl and the Lanchang originate. These sites are often associated with complex geology and significant potentials for geologic disasters such as landslides and debris flows, as well as earthquakes. Geotechnical challenges faced in the development of such sites included the presence of interlayers of weak rock in the dam foundation (e.g. Gezhouba), the presence of high rock stresses in underground powerhouse construction (e.g. Ertan), landslides in the reservoir (e.g. Three Gorges, Zhexi, Manwan), reservoir-induced seismicity (e.g. Xinfengjiang, Huanglongtan), etc. The resolution of such geotechnical engineering issues has led to the advancement of the state-of-the-art and a wealth of experiences for the geotechnical engineering community. The Third Lumb Lecture will highlight such experiences and compare them with those acquired in other parts of the world.

Programme

- 6:00 p.m. Welcoming speech by Professor Lap-Chee Tsui
- 6:10 p.m. Introduction of the Speaker by Dr. P.K.K. Wong
- 6:20 p.m. Lumb Lecture by Ir Professor C.F. Lee
- 7:30 p.m. Vote of Thanks

Post-Lecture Tour

There will be a post-lecture tour to visit a hydro project site in China (such as the Three Gorges), for further details please visit our website or contact the Secretariat.

About Professor Lumb



Professor Lumb became a lecturer in the Department of Civil Engineering, The University of Hong Kong in 1954. After 32 years of service at The University, he retired in 1986. Many of his ex-students have fond memories of him as a modest teacher who preferred to keep a low profile. He dedicated his life towards the 'dawning' of geotechnical engineering in Hong Kong and received numerous awards in recognition of his great contributions.

Registration and Enquiries

Admission is FREE. No prior registration is required, all interested are welcome. For enquiries, please contact:

Miss May Wong

Tel: (852) 2241 5532 Fax: (852) 2559 5337

Email: lumb@hkucc.hku.hk

Website: http://www.hku.hk/civil/lumb_lecture