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The Hong Kong University of Science and Technology  
Department of Civil & Environmental Engineering  
ASCE Hong Kong Section



## SEMINAR

# Foundation Response to Tunneling-Induced Ground Movements

By

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### Abstract

Ground movements can arise from tunneling operations and can have a significant effect on nearby piles and foundation systems. The main effects of ground movements are the development of additional movements, axial forces and bending moments in the piles, and thus the key design aspects are related to movements and to the structural integrity of the pile. However, the ultimate geotechnical load carrying capacity is also affected by the tunneling because of the changes in stress caused by the excavation process. This seminar will describe an approach to the analysis of tunneling-induced ground movements and their effects on pile response and the settlement behavior of various foundation types. The zones in which loss of pile capacity may be important are indicated.

**Date** : 16 July 2009, Thursday  
**Time** : 11: 00 am – 12:00 noon  
**Venue** : Room 5583 (Lift 27/28)  
Chia-Wei Woo Academic Concourse  
The Hong Kong University of Science and Technology  
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### Biography

*Harry Poulos joined the Department of Civil Engineering at Sydney University in 1965, and was appointed a Professor in 1982, a position which he held until 2001. In 1989, he joined the consulting firm of Coffey Partners International, and is currently a Senior Principal and Chairman of Technical Development with Coffey Geotechnics. He is also an Emeritus Professor at the University of Sydney, and an Adjunct Professor at the Hong Kong University of Science and Technology. He has published books and technical papers on foundation settlements, pile foundations, and offshore geotechnics, and has been involved in over 300 major projects in Australia and overseas. He was the 1989 Rankine Lecturer, and is a Fellow of the Australian Academy of Science and the Australian Academy of Technological Sciences and Engineering, and an Honorary Fellow of the Institution of Engineers Australia. In 1993, he was made a Member of the Order of Australia for his services to engineering.*

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