#### Joint Technical Seminar

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### Non-textbook Flowslides in Fine-grained Colluvium

# Organised by

## CEDD-GEO, AGS(HK), GSHK(PB), GSL(HKRG), HKGES, HKIE(GD) and IOM<sup>3</sup>



**Speaker** Professor Oldrich Hungr, University of British Columbia, Canada

**Synopsis** The name flowslide applies to a landslide that involves liquefaction due to the structural collapse of the soil fabric. Flowslides can be extremely damaging, because they involve sudden failure, high velocity and long runout. They occur during earthquakes, but also often spontaneously, as a result of over-stress of collapse-susceptible soil.

Much of the existing literature dealing with flowslides relates specifically to known collapsesusceptible soil types, including loose saturated sand or silt (loess), or extra-sensitive clay. However, collapsive behavior may occur in a much wider range of soil types. Of particular interest are flowslides that involve previously-disturbed soils ("colluvium"). This lecture will present several cases of major, fatal flowslides that occurred in colluvium formed by previous slow, ductile landsliding. It appears that softening of the disturbed cohesive soil can dramatically change its failure behavior. Thus, assumptions of ductile failure in a given material, even if backed by previous site experience, may become disastrously incorrect. The most common soils involved in these dangerous flowslides are low to moderate plasticity silty clays and silts. The provenance of the examples is Canada, Western USA, Europe and South-East Asia.

**Professor Oldrich Hungr** is a Professor of Geological Engineering at the University of British Columbia in Canada. He is an eminent engineering geologist and is internationally recognized for his research in landslide hazards. He has contributed significantly towards the modelling of landslide behaviour with emphasis on debris dynamics, landslide hazards mapping, quantitative hazard and risk assessment and design of remedial and protective measures. He is one of the three members of the current Slope Safety Technical Review Board to advise the HKSAR Government on technical aspects of slope safety.

- **Date:** 2 December 2014 (Tue) **Time:** 6:00 pm
- **Venue:** G/F, Seminar Room, Civil Engineering & Development Building, 101 Princess Margaret Road, Ho Man Tin, Kowloon.

#### Free admission, no registration required.

Attendance certificate will be provided to participants after the Seminar. For enquiries, please contact Ir Dr Julian Kwan at <u>juliankwan@cedd.gov.hk</u>.