The University of Hong Kong
Faculty of Engineering
Department of Civil Engineering
香港大學工程學院土木工程系

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INSTITUTION OF ENGINEERS
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Geotechnical Division
岩土分部

The Twelfth Lumb Lecture
Risk assessment and management:
Necessary insight to reduce landslide risk

Presented by
Dr. Suzanne Lacasse
Norwegian Geotechnical Institute (NGI)

6:30 p.m. June 27, 2023 (Tuesday)
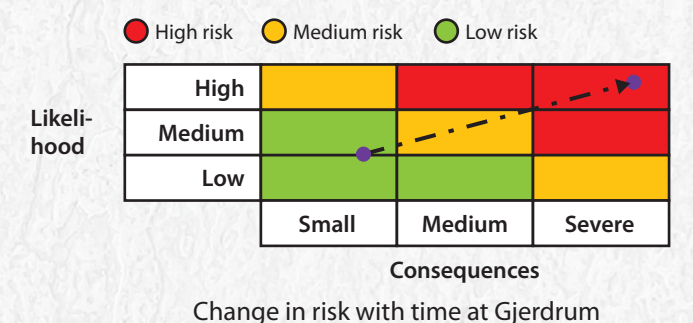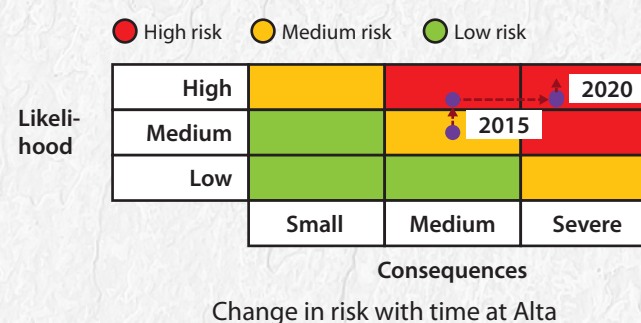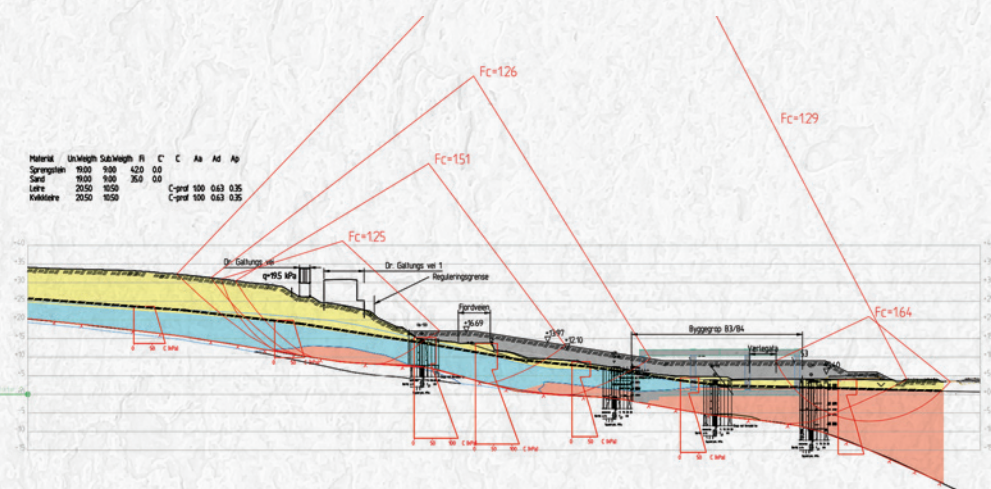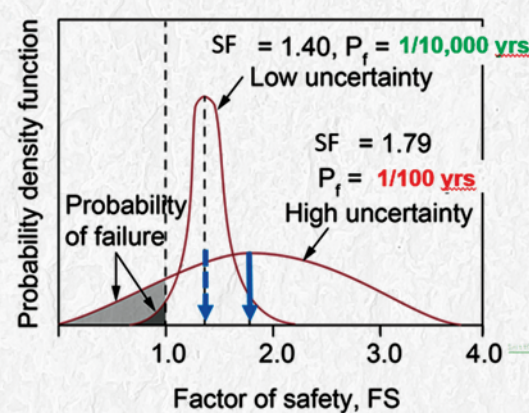Rayson Huang Theatre, The University of Hong Kong

ABOUT THE SPEAKER

Dr. Suzanne Lacasse was born in Noranda, Québec, did a Bachelor of Arts at Université de Montréal and Civil Engineering degrees at École Polytechnique de Montréal and the Massachusetts Institute of Technology (MIT). She was Lecturer at École Polytechnique and then on the faculty of the Civil Engineering and Environmental Department at MIT (1971-1983), where she also was Head of the Geotechnical Laboratory. Dr. Lacasse then went to the Norwegian Geotechnical Institute (NGI) and became its Managing Director in 1991, a position she held until 2012. Dr. Lacasse has received four honorary doctorates, from Scotland, Norway, and Canada. She won the highest award of the Canadian Geotechnical Society, the Robert Legget Award, the highest award of the Engineering Institute of Canada, the Kennedy Medal, and the Effective Teaching Award in Civil Engineering at MIT. She is elected member of the National Academy of Engineers in the US, Canada, Norway and France. She published over 400 papers and gave the Rankine Lecture (UK), Terzaghi Lecture (US), Nabor Carrillo Lecture (Mexíco), Coulomb Lecture (France), and the Terzaghi Oration (ISSMGE: International Society of Soil Mechanics and Geotechnical Engineering). The ISSMGE established in her honour the 'Suzanne Lacasse Lecture' on risk and reliability in geotechnical engineering. Dr. Lacasse is an Officer of the Order of Canada and a Knight of the 1st Order of the Falcon in Iceland.

SYNOPSIS

Increasingly, society and standards require that risk-informed decisions on safety be made. Benefits can be gained by leveraging reliability and risk concepts decisions as a complement to conventional analyses. There is a range of probabilistic tools that can be implemented within a "risk-informed" framework, from qualitative experienced-based estimates to full probabilistic multi-parameter modelling of the hazards and consequences. The 12th Lumb Lecture aims to show that implementation of a risk approach, both qualitative and quantitative, will provide added insight into safety to stakeholders. The lecture concentrates on risk assessment and risk management for reducing landslide risk. Four key aspects are necessary for efficient risk-informed decision-making: (1) carry out a risk assessment; (2) identify the most significant factors influencing the safety; (3) prepare a risk picture of the slope using risk diagrams; and (4) make risk-informed decisions on the need for measures to reduce risk. Basic concepts of a reliability-based approach and illustration of their use with examples from practice are provided. The benefit of using a risk-informed approach is discussed. The implementation of new technology, for example machine learning, to help reduce risk is also mentioned. A new risk assessment and management framework for risk-informed decisions is proposed. The paper concludes with learnings from risk assessments and suggests that the approach should be implemented more widely than before in practice.

FREE ADMISSION – ALL ARE WELCOME

Change in risk with time at Alta

Change in risk with time at Gjerdrum

Registration is required.
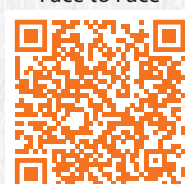Attendance certificates will be available.
For further details, please contact Ms. Bridget Lam.
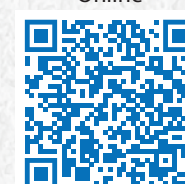
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