

# THE ROLE OF CPTU ON FORENSIC INVESTIGATION ON LONG TERM SETTLEMENT AND GEOTECHNICAL FAILURES OF CONSTRUCTION ON SOFT SOILS

**SPEAKER**

**PROF. DR. PAULUS P. RAHARDJO**



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# SYNOPSIS

Problems during and after construction in and on soft soils are very common. The soft soils could be in the state of normally consolidated or underconsolidating. However, very often, prior to design, many engineers have missed the status of degree of consolidation in the soft soil. The Nichol highway accident of 2004 in Singapore has been a trigger on the forensic investigation revealing that the ground, even though after 30 years of reclamation work, it is still undergoing consolidation with residual excess pore pressure of 30 kPa, which is supposed to be one of the reasons of the failures. CPTu is one of the most important tools to find out the existing excess pore pressure and soil stiffness. This lecture describes a number of case histories of geotechnical failures or potential conditions of failures where CPTu has been used to detect the problems and important findings by the speaker based on CPTu data.

## SPEAKER'S BIODATA

Prof. Dr. Paulus P. Rahardjo is a Head of Geotechnical Research Centre at Universitas Katolik Parahyangan, Indonesia (Unpar). He pursued graduate study in highway engineering at Bandung Institute of Technology (ITB), then Master's Degree and Ph.D degree from Virginia Tech (USA). He has been actively engaged in teaching, research as well as hundreds of geotechnical consultancies. He works for design and advising clients on many geotechnical problems including building foundations, highways, tunnels, bridges, jetties and wharfs, dams, coal minings etc. among his specialties with intense experience in research and practice are in the field of in situ testing and landslides or slope protection.