



Prof. Dong Sheng Jeng is currently at Division of Civil Engineering, the School of Engineering, Physics and Mathematics, University of Dundee. He was educated in National Chung-Hsing University in Taiwan and received his Doctoral Degree from the University of Western Australia. Prof. Jeng was also at the Griffith University and University of Sydney before as a staff member. Prof. Jeng has been working in the area of offshore geotechnics since 1993. His most significant contributions have been in the field of coastal geotechnical engineering, specifically issues associated with wave–seabed–structure interaction (WSSI), which have a major bearing on the understanding and construction of coastal structures. He established the first analytical solutions for the inherent problems of WSSI in 3D short-crested wave systems and revised the conventional consolidation equation for anisotropic seabeds with variable permeability to obtain closed-form solutions. His 3D models allow the determination of wave-induced oscillatory liquefaction in front of breakwaters under obliquely incident wave; this represents the most dangerous condition and one that cannot be dealt with using either 1D or 2D models. My analytical solutions have been widely used for verifying numerical simulations and for determining wave surface profiles using measured pore pressure in marine sediments. These solutions were the basis of a major chapter in ‘The mechanics of scour in the marine environment’ (Chapter 10, Sumer & Fredsøe, 2002) and have been widely used by coastal engineers for the prediction of wave-induced oscillatory liquefaction around marine structures and the installation of *in situ* facilities.

Currently, Prof. Jeng and his students are working on the development of poro-elastoplastic models for post-liquefaction and densification in marine sediment under dynamic loadings (such as waves, currents and earthquakes etc.). This is also part of his current EU project—MERMAID (2012-2016). They are also establishing new conceptual model for pore pressure accumulations in marine sediment with instant cyclic shear stresses, unlike the existing models based on the maximum cyclic shear stresses.

Prof. Jeng has won a large number of competitive research grants in offshore and coastal geotechnics and has published in most of the leading Geotechnical Engineering and other journals; His journal publications exceed over one hundred.