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Keynote Lecture

Application of Data Mining in Transportation Geotechnics

ABSTRACT

This paper presents a brief overview of Data Mining applications in transportation geotechnics, highlighting the current research directions and the discussion of some issues that need further attention in the future, mainly related with prediction capacities. Some practical applications to earthworks, compaction and pavement engineering are presented to illustrate the capacity of this numerical tool, as well as more advanced techniques illustrated through the development of a predictive model for mechanical behavior of jet grouting material.



Prof. António Gomes Correia graduated in Civil Engineering from the Technical University of Lisbon - IST in 1977, and received a Doctor-Engineer Degree by "Ecole Nationale des Ponts et Chaussées"-Paris in 1985.

In 2001 he gets the degree of specialist in Geotechnique attributed by the Portuguese Association of Engineers.

He is since 2003 Full Professor at the University of Minho and since 2010 Director of the Research Centre of Territory, Environment and Construction. He is also from 2010 chair of the Doctoral program in Civil Engineering.

He was from 1998 to 2001 Chairman of the European Technical Committee - ETC 11 - Geotechnical aspects in design and construction of pavements and rail track - from ISSMGE and from 2001 chairman of the International Technical Committee - TC 3 – Geotechnics for pavements of the ISSMGE, renamed from 2009 as TC 202 – Transportation Geotechnics.

He is involved in research, teaching and consulting in the general field of geotechnics and pavement engineering for 33 years. His work embraced transportation geotechnics, particularly soil and pavement geomaterial properties, compaction and geotechnical and pavement modelling and design. He has over 320 technical papers published on these subjects.