

2nd International Conference on **Big Data Analysis and Data Mining** November 30-December 01, 2015 San Antonio, USA



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Data Mining and Geo-Engineering

Geo-Engineering has observed many advances in different and important fields. However, these advances were not observed in such extent regarding the tools and techniques used to analyze geo-engineering data. To provide a most comprehensive and up-to-date information, we offer in the Workshop the possibility to discuss recent developments on the application of Data Mining techniques in Geo-Engineering. Among others, the following topics could be analyzed during this event:

- Standard Organization and Representation Methods of Geotechnical Data
- Multiple Model System Identification
- Clustering Multiple Models
- DM Algorithms on Geological and Seismic Data
- Soil Compaction
- Assessment of Liquefaction Potential
- Behavior of Granular Materials Based on Triaxial Tests
- Cone Penetration Tests
- Identification of Cause-effect Relationship between Drilling and Construction
- Estimation of Drilling Parameters
- Predicting Landslides Induced by Rainfall
- Slope Stability Evaluation
- Empirical Relations for Debris Flows
- Predicting Rockburst Based on In-situ Database
- Models for Prediction of Rockburst Indexes
- Petroleum Engineering Issues
- Prediction of Surface Settlements Due to Tunneling

Biography

Luis Sousa has more than 40 years of engineering experience. He has an extensive international experience on a large range of projects. He is Full Professor at the University of Porto in Portugal and is multilingual. He has authored or co-authored over 20 books and hundreds of journal articles, presentations and reports. He was President of SKEC Engineering Consulting and is a Consultant for Laboratory of Deep Underground Engineering, Beijing and Consulting Engineer in Switzerland, China, Oman, and Portugal. He is now Professor at China University of Mining and Technology, Beijing, and Sichuan University, Chengdu, China.

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