

Integrated (Survey and Engineering Sensor) Monitoring Technology for Complete Structural or Geological Monitoring

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KEY WORDS: Interdisciplinary Approaches for the Design and Analysis of Deformation Measurements, Warning and Alert Systems, Monitoring Concepts for Static and Dynamic Deformations of Engineering and Geotechnical Structures, Multi-Sensor Systems and Sensor-Networks, Innovative Concepts for Sensors and Methods, Automation of Monitoring Measurements and Interpretation

ABSTRACT:

Position based sensor technology for monitoring has greatly diversified and improved since early systems developed in the late 1990s. Combined with improvements in computing power, mobile energy sources and communications technologies, position based monitoring offers new data for combination with traditional engineering/geotechnical sensor approaches. Today the complete data is available to analyse the internal and external health of the monitored object, providing comprehensive tools for assessing lifetime or gaining early warning of hazards or failure risk. By building a complete external and internal monitoring system, engineers are able to capture a digital representation of key features, and automate analysis and alarming. What will be presented is an explanation of this technology and also examples of it's use.