

Current draft program

9.00 Welcome and introduction

Challenges overview:

Asset holders' perspective

Tim Jesson, National Grid, chairman of Predictive Asset Management Committee
panel discussion –details tba

Academic perspective

Sensor and Measurement Issues - Masonry and Concrete Bridges

Carillion Professor Michael C Forde, University of Edinburgh, Institute for Infrastructure & Environment

Applications:

Optical fibre sensors for Process and Structural Health Monitoring of Engineering Materials and Structures

Professor Gerard F Fernando, Sensors and Composites Group, University of Birmingham

Ways forward:

1.Advanced data analysis

Machine learning approaches to SHM

Professor Keith Worden, University of Sheffield

Examples including analysis of NPL footbridge data:

Applications of cointegration to SHM

Dr Elisabeth Cross, University of Sheffield

A Kalman filter approach for evaluation of NPL footbridge tilt and temperature time series data

Prof Frank Neitzel, Chair of Geodesy and Adjustment Theory, Berlin University of Technology, Germany

Prof. Dr. Karl Foppe, Chair of Adjustment Theory, Statistics and Applied Geodesy, University of Applied Sciences Neubrandenburg, Germany

2.Data management using cloud computing

SensorCloud and analysis via cloud – Microstrain (US) /Technimeasure

Web service and pattern recognition –York University / Cybula, UK - tbc

3.Image based technologies

Thermography in real environment

Dr Rob Simpson NPL

Demonstrations / case studies - software and hardware including ideas for novel validation techniques

Advanced data analysis competition – Stage 1