

## **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