

## Sensor Evolution

8<sup>th</sup> November 2011

ABB, Oldends Lane, Stonehouse, GL10 3TA

This workshop will seek to chart the development of sensor technologies applied to the water industry and future-gaze as to what technologies will be implemented. Sensor evolution can be described in terms of the complexity of the sensor system and also the evolving legislative drivers for measurement and some ways these go hand-in-hand. Some of the earliest “bio-sensors” were aquatic creatures such as fish or invertebrates which were used to assess water quality. It was then deemed necessary to measure particular components in the water that affect the water quality and a number of simple sensors were developed. Moving from simple single analyte sensors modern and future sensor technologies will employ multi-analyte, remote sensing arrays. In addition, the development of different technologies used in water sensing will be discussed, for example comparisons between electrochemical or optical methods. **Evolving sensor technologies** that will be covered in this workshop will include simple physical sensors such temperature, flow and pressure; chemical sensors, biological sensors and finally complex sensing systems encompassed in biosensors.

**A tour of ABB’s ‘Analytical Production’ facility is included at the end of the workshop programme**

---

Chairman: Richard Luxton, Director, Institute of Bio-Sensing Technology (UWE)

09.30 Coffee & registration

10.00 Introduction and overview

**Richard Luxton, Director, IBST (UWE)**

10.10 The History of Sensors in Water Monitoring

**Robin Lennox, ICA Specialist, South West Water**

10.40 ABB's Aztec Colorimetric Journey

**Mike Sparrey, Analytical Sales Specialist, ABB**

11.10 Tea / coffee

11.40 Screen printed carbon electrodes for stripping analysis of trace metals in water

**Dr Kevin C. Honeychurch, UWE,**

12.10 Rapid Ammonia Detection only one part of the Jigsaw

**Guido Drago, Director, Applied Enzyme Technology Ltd**

12.40 Lunch

13.40 *Quasi-Vivo*<sup>®</sup> in-vitro models as an alternative to use of animals for toxicity

**Malcolm Wilkinson, Managing Director, Kirkstall Ltd**

14.10 Sensor Integration: the Pros and Cons

**Andy Wallace, Sales Engineer, Partech Instruments**

14.40 Issues with current sensors and where the future will take us

**Discussion session, led by Richard Luxton**

15.10 Close of presentations

**15.15-15.45: Tour of ABB’s Stonehouse ‘Analytical Production’ facility**

---

### REGISTRATION

The cost of attending the Workshop is £75.00 inc VAT for members of SWIG and £135 inc VAT for non-members. Literature may be distributed for a fee of £55 and a limited number of table top displays are available at £105 each. Registrations can be made by Tel: 01925 855741, email: [linda.smith@swig.org.uk](mailto:linda.smith@swig.org.uk), web: [www.swig.org.uk](http://www.swig.org.uk) using the on-line booking form. **Please advise if you have special dietary needs.**

Cancellation policy: Refunds can only be made if cancellations are notified at least 5 days in advance of the Workshop date.