



# **Monitoring the Aquatic Environment using Sensor Technologies**

**Conference with Posters and Exhibition**

**Organised by the Automation and Analytical Management Group  
Royal Society of Chemistry**

**A one day meeting on  
Wednesday 19th October 2011**

**At The Royal Society of Chemistry,  
Burlington House,  
Piccadilly, London W1J 0BA**

**Email: [conference@aamg-rsc.org](mailto:conference@aamg-rsc.org)  
Website: <http://www.aamg-rsc.org>**

# Monitoring the Aquatic Environment Using Sensor Technologies

A one day meeting organised by the Automation and Analytical  
Management Group of the Royal Society of Chemistry

**Wednesday 19th October 2011**

The Royal Society of Chemistry, Burlington House,  
Piccadilly, London W1J 0BQ

## Introduction

The previous two conferences held on Sensor Systems in 2009 and 2010 were focused on general technologies and applications to environmental monitoring. This third conference aims to discuss the present status of aquatic monitoring requirements, procedures, techniques and application of sensor technologies. Sessions include development of new sensors, automated monitoring techniques and procedures and remote monitoring techniques. The conference will also include exhibition and poster presentations.

Opportunities have been provided again in this conference for postgraduate PhD students and young postdoctoral researchers to give oral and poster presentations related to the theme of the conference. The interest and use of sensing techniques in environmental aquatic monitoring has grown rapidly in recent years enhanced by the potential for automation and remote at-site measurements with low cost methodologies and miniature instrumentation. This Conference offers a good opportunity to bring together scientists involved in this field to exchange experiences and thoughts about the new applications and novel sensors.

## Scientific Committee

Dr R.Narayanaswamy, Professor Krishna Persaud, Dr Chris Walton, Dr P.Quincey,  
Dr A Braithwaite, Dr Craig Roxburgh, Dr Mark Baron and Dr Martha Buitenkamp

## Programme

09.00 – 09.30 Registration and coffee

### Session 1 Sampling, Calibration and Data Validation

Chairman: **Dr R Narayanaswamy**

09.30 Advances in on-line water quality monitoring and early warning systems  
**Bram van der Gaag**, *KWR Watercycle Research Institute, Netherlands*

09.55 Sensors - Challenges associated with sampling and calibration  
**Richard Greenwood**, *University of Portsmouth, UK*

10.20 The monitoring of metals, nutrients and actinides in the aquatic environment  
using sensors and passive sampler technologies  
**Gary Fones**, *University of Portsmouth, UK*

10.55 Does continuous water monitoring have a place in port management?  
**Ciprian Briciu-Burghina**, *Dublin City University, Ireland*

### 11.15 Tea/Coffee

11.40 The collection of continuous water quality monitoring data:  
experiences with a range of data management systems  
**Antòin Lawlor**, *Dublin City University, Ireland*

- 12.00 Efficient drinking water monitoring in the distribution network  
**Jan Mink**, *2M Sensors Ltd, Netherlands*
- 12.20 Biofouling challenges in monitoring the aquatic environment  
**James Chapman**, *Dublin City University, Ireland*
- 12.40 Continuous aquatic monitoring of Ireland's only marine reserve:  
current status and future needs  
**Timothy Sullivan**, *Dublin City University, Ireland*

**13.00 Lunch & Poster Session**

**Session 2 Monitoring Applications**

Chairman: **Craig Roxburgh**

- 14.15 Monitoring of metals in seawater using voltammetric techniques  
and microelectrodes  
**Stan van den Berg**, *University of Liverpool, UK*
- 14.40 Sensing systems for rapid characterization of water contamination  
**Jeff Newman**, *Cranfield University, UK*
- 15.05 Polymer membrane-based potentiometric sensors in monitoring the  
aquatic environment  
**Aleksander Radu**, *University of Portsmouth, UK*
- 15.30 Sensor supported understanding of the aquatic carbon cycle  
**Susan Waldron**, *University of Glasgow, UK*
- 15.50 Tea/ Coffee
- 16.10 Combined ship-based and stationary monitoring of the Amsterdam  
canals  
**Hans Korving**, *Delft University of Technology, Netherlands*
- 16.30 Estimating sub-surface dispersed oil concentration using acoustic  
backscatter response  
**Chris Fuller**, *Clarkson University, USA*
- 16.50 Optical trapping with a photonic crystal cavity: a new manipulation  
technique for micro-organisms in water  
**Thijs Van Leest**, *Delft University of Technology, Netherlands*
- 17.00 Electrochemical sensors for defence and security  
**Mark Baron**, *University of Lincoln, UK*
- 17.20 Concluding remarks and end of conference**

## How To Register

Early registration is requested due to limited number of delegate places and catering requirements. Please complete and return the registration form as soon as possible.

<b>Registration Fees:</b>	Non Members	£160
	Members	£120
	Students/Retired	£ 80

The registration fee includes attendance at the meeting together with coffee, lunch and afternoon tea/coffee.

### Payment of registration fees:

- By Cheque made payable to: **AAMG-RSC**
- By Credit Card (note that AMEX and DINERS cards are not accepted)

### Venue

The Royal Society of Chemistry  
Burlington House,  
Piccadilly  
London W1J 0BA

Maps and details will provided upon registration

### Registration Contact

Conference Secretary, AAMG-RSC, PO Box 174, Manchester M24 4XZ, UK  
Email: [conference@aamg-rsc.org](mailto:conference@aamg-rsc.org) Fax: +44 (0) 161 610 3939

### AAMG Treasurer

Dr R Narayanaswamy, Address as above  
Tel +44 (0) 7974 515265 Fax: +44 (0) 161 610 3939

### Notes

- 1) Fees are not normally refundable but are transferable. If for any reason the organisers should cancel the conference then fees will be refunded.
- 2) The registration fee includes attendance at the meeting together with coffee, lunch and afternoon tea/coffee, as appropriate.
- 3) The organisers reserve the right to alter the programme.

*Data Protection Act.* The information on this form will be retained (1) for the purpose of administering this meeting, in particular for producing a list of participants for distribution at the meeting, and (2) in order that information on future meetings can be sent to you. Please write to the meeting contact if you object.

## Registration Form

Please complete this form after referring to the registration information and return by post or fax to:

**AAMG-RSC, PO Box 174, Manchester. M24 4XZ, UK**  
**Fax No: +44 (0) 161 610 3939**

### Monitoring the Aquatic Environment Using Sensor Technologies

Wednesday, 19th October 2011  
Royal Society of Chemistry, Burlington House, Piccadilly, London

Delegate Name & Title

Position

Organization

Address

Post Code

Telephone No:

Fax No:

Email

Special Requirements

Signature

<b>Registration Fees:</b>	Non-Member	£160
	Members	£120
	Student/Retired	£ 80

Payment:

(Please tick payment method)

By Cheque

Please make cheque payable to: **AAMG-RSC**

Credit/Debit Card

Please complete details below

**Credit Card Details** (Please note that AMEX or DINERS cards cannot be accepted)

Card Type:    Visa                      Mastercard                      Maestro

Card Number:

Valid from                      Expiry Date

Card Issue No: (Maestro only)

Cardholder Name

Statement Address

Post Code

Contact Tel No (not mobile)

Signature of Cardholder

Date