



AARHUS  
UNIVERSITY

# PROGRAMME

SECOND INTERNATIONAL WORKSHOP  
ON TEMPORAL HIGH RESOLUTION WATER  
QUALITY MONITORING AND ANALYSIS

**30 June – 1 July 2016**  
**Sandbjerg manor, Denmark**

## Thursday 30 June

09.30 – 10.00 Arrival, registration and coffee

### 10.00 - 12.30 Session 1

10:00 – 10:20 Welcome

10:20 – 10:50 **Keynote Michael Rode**

Improving understanding of land-to-stream nutrient processing using novel continuous sensor technologies

10:50 – 11:05 **Julia Vanessa Kunz**

Quantifying effects of season and channel morphology on river N uptake using high frequency sensors

11:05 – 11:20 **Daniel Graeber**

Contrasting effects of a lowland stream re-vitalization on inorganic nutrient and dissolved organic matter net-uptake

11:20 – 11:35 **Jana Von Freyberg**

Autonomous, real-time monitoring of water quality and isotopic composition in rain- and stream water at a mountain headwater catchment

11:35 – 11:50 **Ophélie Fovet**

Characterizing storm event flowpaths and their seasonal variability based on near-continuous monitoring of multi-element and multiproxy of the water chemical composition

11:50 – 12:05 **Per-Erik Mellander**

Insights to nutrients pathways using high frequency monitoring of water quality

12:05 – 12:30 Discussion

12.30 – 14.00 Lunch and break

### 14.00 – 16.00 Session 2

14:00 – 14:30 **Keynote Phil Jordan**

Agri-environmental observations for science and policy: small steps or big leaps of faith?

14:30 – 14:45 **Bertel Nilsson**

Understanding hydrogeology to guide optimal location of Nitrogen mitigation measures in the landscape

- 14:45 – 15:00 **Noeleen T. McDonald**  
Experience in Monitoring Nutrient Source Contributions to Water Quality in an Agricultural Catchments Programme
- 15:00 – 15:15 **Bas Van der Grift**  
Insights in nutrient sources and transport from high-frequency monitoring at the outlet pumping station of an agricultural lowland polder catchment
- 15:15 – 15:30 **Jane Rosenstand Poulsen**  
Experiences with high frequency nitrate monitoring in Danish streams
- 15:30 – 16:00 Discussion
- 16.00 – 16.30 Coffee
- 16.30 – 18.00 Session 3**
- 16:30 – 16:45 **Eva Skarbøvik**  
Use of sensor data to quantify uncertainty of grab water sampling.
- 16:45 – 17:00 **Emma Lannergård**  
Challenges and opportunities with the use of high frequency turbidity measurements in northern rivers
- 17:00 – 17:15 **Louis Maniere**  
Monitoring and quantification of suspended-matter transfers in a drained plain agricultural catchment
- 17:15 – 17:30 **Charlotte Kjærgaard**  
Emission based agricultural regulation applying drainage water monitoring  
– challenges and opportunities
- 17:30 – 17:45 **Magdalena Bierozka**  
In situ automated water quality monitoring in agricultural catchments in England and Sweden
- 17:45 – 18:15 Discussion
- 19.00 – Dinner

## Friday 1 July

07.00 – 08.30 Breakfast

### 08.30 – 10.30 Session 4

08:30 – 09:00 **Keynote Andrew Wade**

Making best use of high-frequency water quality and biological data to improve coupled hydrochemical and ecological models of rivers and streams

09:00 – 09:15 **Remi Dupas**

Identifying seasonal patterns of phosphorus storm dynamics with a clustering method based on Dynamic Time Warping

09:15 – 09:30 **Mairead Shore**

Using high frequency water quality data to disentangle multiple stressors

09:30 – 09:45 **Carl Christian Hoffmann**

Comparing ISCO and grab sampling of  $\text{NH}_4^+$ ,  $\text{NO}_3^-$ ,  $\text{PO}_4^{3-}$ , TN and TP in drainage and streamwater

09:45 – 10:00 **Hannu Marttila**

Continuous in-situ monitoring of metals in runoff waters using novel technique

10:00 – 10:15 **Liang Yu**

Spatial and temporal variations of water quality in a lowland urban polder catchment in Amsterdam

10:15 – 10:30 Discussion

10.30 – 11.00 Coffee

### 11.00 – 13.00 Session 5

11.00 - 13:00 Discussion

13.00 – 15.00 Lunch and departure