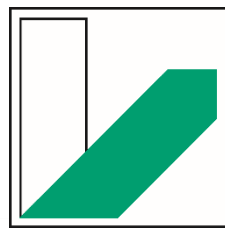




## Advanced Training Course 5 ““Hyporheic Zone Ecology””

02. – 4. March in Darmstadt, Germany



UNIVERSITÄT  
BAYREUTH



TECHNISCHE  
UNIVERSITÄT  
DARMSTADT



IWW WATER CENTRE

This course will provide insight into the structure-function coupling of microbial communities and biofilms in the hyporheic zone and state-of-the-art techniques to describe and quantify microbial diversity and physical structure of stream biofilms. It will give an overview on techniques applied for identifying microbes associated with pollutant degradation and highlight the relevance of protozoa, micro- and macro-metazoa in hyporheic processes.

### Scientific organization

Marcus A. Horn (Ecological Microbiology, Universität Bayreuth)

Anne Robertson (Life Sciences, University of Roehampton)

Tom I. Battin (Stream Biofilm and Ecosystem Research Laboratory, École polytechnique fédérale de Lausanne)

### Local organization

Christoph Schüth (head of geoscience department, TU-Darmstadt) and

Christine Kübeck (IWW water resources management)

## **Day 1 – Wednesday, 02 March 2016**

### **Afternoon Session 1: 12:00 – 12:15**

- 12:00-12:15 Marcus A. Horn (Ecological Microbiology, University of Bayreuth)  
Welcome address and outline of the workshop
- 12:15-13:15 Hans-Curt Flemming (Biofilm Center, University of Duisburg-Essen)  
Biofilms: Life between sediment and water phase
- 13:15-14:15 Steffen Kolb (Landscape Biogeochemistry, Leibniz Center for Agricultural Research, Müncheberg)  
Enumerate the invisible majority - methods for quantification of microbes
- 14:15-15:00 Coffee Break
- 15:00-16:00 Tillmann Lüders (Institute of Groundwater Ecology, Helmholtz Center Munich)  
Stable isotope tools to unravel the role of key microbial populations in subsurface and aquatic habitats
- 16:00-17:00 Marcus A. Horn - (Ecological Microbiology, University of Bayreuth)  
Amplicon based methods to identify microbial key players associated with pollutant degradation

## **Day 2 – Thursday, 03 March 2016**

### **Morning Session: 9:00 – 12:30**

- 09:00-10:00 Martin Obst (Environmental and Analytical Microscopy)  
Analytical Microscopy in Environmental Chemistry and Biogeochemistry
- 10:00-11:00 Tim Urich (Bacterial Physiology, University of Greifswald)  
Meta-omics techniques to study the function, structure and interactions of complex microbiomes in the environment
- 11:00-11:30 Coffee Break
- 11:30-12:30 Jana Seifert (Institute of Animal Science, University of Hohenheim)  
Metaproteomics and protein-stable isotope probing to identify active microbial communities involved in biodegradation processes

### **Afternoon Session 1: 14:00 – 17:30**

- 14:00-15:00 Mia Bengtsson (Institute for Microbiology, University of Greifswald)  
Microbial eukaryotes in the hyporheic zone: tiny monsters with a big appetite
- 15:00-16:00 Anne Robertson (Life Sciences, University of Roehampton)  
Meiofauna: patterns and processes in stream hyporheic zones
- 16:00-16:30 Coffee Break
- 16:30-17:30 Hans-Jürgen Hahn (Molecular Ecology, University of Koblenz-Landau and Institute for Groundwater Ecology IGE GmbH, Landau)  
The hyporheic zone – Ecology and Colmation

### **Day 3 – Friday, 04 March 2015**

#### **Morning Session (9:00-10:30)**

- 09:00-10:00 Lars Jurzik (Hygiene, Social and Environmental Medicine, Ruhr University Bochum)  
Biofilms in the hyporheic zone – are there habitats for viruses?
- 10:00-10:30 Marcus A. Horn (Ecological Microbiology, University of Bayreuth)  
Closing remarks and Coffee Break
- 10:30-open end Visit of an surface water treatment plant and infiltration site in the area of the  
“Hessisches Ried”

#### **Contact for further information**

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