

Costs and application procedure

All applicants should register via the webpage www.nrw-futurewater.de/index.php/summerschool2016.html by 30th June 2016.

Accommodation will have to be organized by the applicants themselves, we suggest one of the following hotels all of which are within walking distance to the University of Duisburg-Essen:

- www.bildungshotel-essen.de
- hotel-atelier.de/de
- www.motel-one.com/de/hotels/essen
- www.novum-hotels.de/hotel-ambassador-essen
- www.cityhotel-essen.de

The total charge for the five days (not including accommodation) will be € 80. For participants interested in the day trip to Amsterdam on Wednesday, 31st of August, there will be an additional charge of 25 €.

Please transfer the invoice total within two weeks after receipt of the invoice to the following bank account:

Universität Duisburg-Essen
Sparkasse Essen
BIC-Code: SPESDE33XXX
IBAN: DE75 3605 0105 0000 248997

IMPORTANT: please indicate as reason for transfer the invoice number and your name

Contact

Department of Biodiversity

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Zentrum für Wasser- und Umweltforschung (ZWU)

Universität Duisburg-Essen
Geschäftsstelle ZWU
Universitätsstraße 5, 45117 Essen
www.uni-due.de/zwu

nrw-futurewater.de



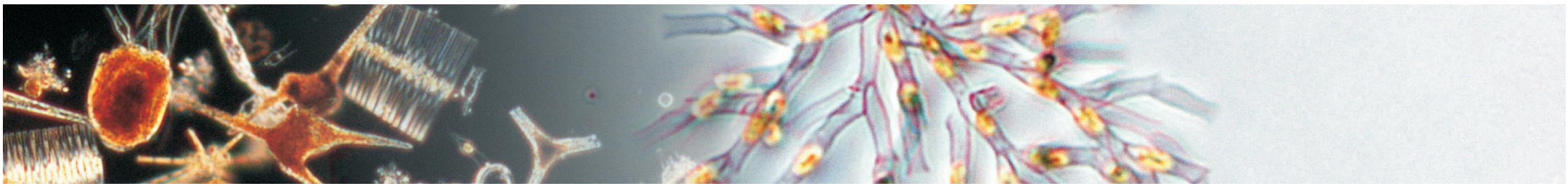
UNIVERSITÄT
DUISBURG
ESSEN

Offen im Denken

Summer School

Freshwater ecology and water quality assessment: Changing prospects in the face of the „-omics“ revolution

28 August - 2 September 2016
University of Duisburg-Essen



Freshwater ecology and water quality assessment: Changing prospects in the face of the “-omics” revolution

The summer school addresses scientists and students in the fields of water quality assessment and aquatic molecular diversity. An important aim is to bring together a cadre of young scientists from diverse backgrounds, including aquatic ecology, microbial ecology, molecular microbiology, chemistry, and bioinformatics, to share information that can lead to interdisciplinary approaches to understanding and exploiting the potential of the emerging molecular methods in the field of water quality assessment.

Environmental change is one of the major challenges of the 21st century and human impacts have fundamentally altered most ecosystems, with the biodiversity of freshwater ecosystems being affected most severely. The extent of biodiversity, however, is widely unknown. New methodical approaches, in particular the rapidly evolving molecular methods, increasingly uncover this diversity and provide the tools to routinely monitor biodiversity beyond the limits of individual-based approaches. The different approaches to biodiversity therefore differ in data quality and quantity and they target different biodiversity components. Unveiling the potential of these methods to detect pattern of biodiversity is, however, still in its infancy.

This summer school addresses the changing prospects in water quality assessment in the light of these new methods and the potential of molecular approaches in particular of barcoding (including OTU approaches), metagenomics, and metatranscriptomics.

Applications now are warmly welcome for the summer school which will be held at the University of Duisburg-Essen. Target group of this summer school are primarily scientists at post-graduate level, but junior faculty may also participate.

We hope that the moderate costs and the exiting program will make the summer school accessible to a wide range of applicants.

Topics

Monday 29.08.16

Biological basis of molecular water quality assessment:
community composition in aquatic environments

- Prokaryotic community composition in relation to environmental gradients in freshwater ecosystems
- Eukaryotic community composition in relation to environmental gradients in freshwater ecosystems
- Microscopy demonstration

Tuesday 30.08.16

Molecular approaches to water quality assessment

- Biomonitoring – state of the art
- Chances and limits of metabarcoding approaches
- Biodiversity and the unused potential of biodiversity

Wednesday 31.08.16

Day trip to Micropia museum, Amsterdam (max. 50 persons)

Thursday 01.09.16

Applied aspects of water quality assessment
and science communication

- Urban rivers of the Emscher catchment: restoration targets, monitoring and assessment
- Science communication (in German): Biologen-Monitoring im Medienschungel - Wie man als Wissenschaftsjournalist überleben kann
- Excursion to a rehabilitation site of the river Emscher

Friday 02.09.16

Leadership training for young scientists

Confirmed speakers

Prof. Dr. Daniel Hering (University Duisburg-Essen)

Prof. Dr. Florian Leese (University Duisburg-Essen)

Prof. Dr. Jens Boenigk (University Duisburg-Essen)

Prof. Dr. Hans-Peter Grossart (IGB Neuglobsow)

Dr. Thomas Korte (Emschergenossenschaft, Essen)

Dr. Olaf Fritsche (freelance journalist, Mühlhausen)

Dr. Agnès Bouchez (French National Institute for Agricultural Research, Thonon)

