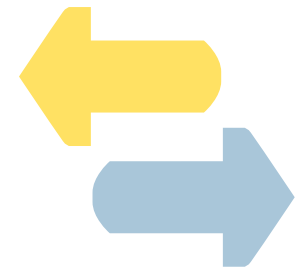




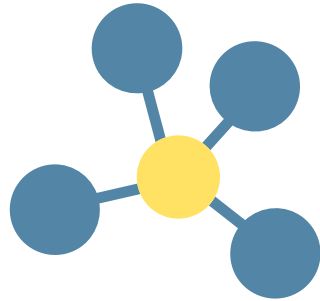
# Nordic Water Network



An interdisciplinary platform  
for water related research  
and exchange in Northern Europe



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## ABOUT

The Nordic Water Network (NWN) is an interdisciplinary platform for water related research and exchange in Northern Europe. It is compiled by a core team of six major technical universities: Aalborg University (AAU), Berlin Institute of Technology (TUB), Cracow University of Technology (CUT), Dublin City University (DCU), Technical University of Denmark (DTU) and Norwegian University of Science and Technology (NTNU).

We seek to cooperate with our partners beyond national borders, beyond disciplinary boundaries and beyond institutional limitations in order to promote joint research and joint education in the water sector.

## CORE TOPICS IN RESEARCH AND TEACHING

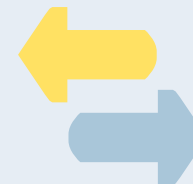


### EMERGING POLLUTANTS

*For innovative water infrastructure systems, knowledge about the transport of different emerging pollutants, e.g. pharmaceuticals and microplastics, is required.*

### WATER INFRASTRUCTURE

*Sustainable water management in cities requires up-to-date technology, i.e. pumping systems, that is adapted to current and upcoming challenges like changing wastewater composition or effects of climate change.*



### WASTEWATER TREATMENT

*Issues like sludge treatment, resource recovery and aquaculture in water systems have to be discussed to define the right measurement methods.*

### STORMWATER MANAGEMENT

*Future challenges require innovative ideas regarding urban flooding, bathing quality in cities, radar-based forecasting (RTC), first-flush-effect, costs and governance.*



## INTERNATIONAL COOPERATION OF UNIVERSITIES

The network itself is based on the cooperation of universities from different Northern European countries. Within each partner university, there are several departments involved.

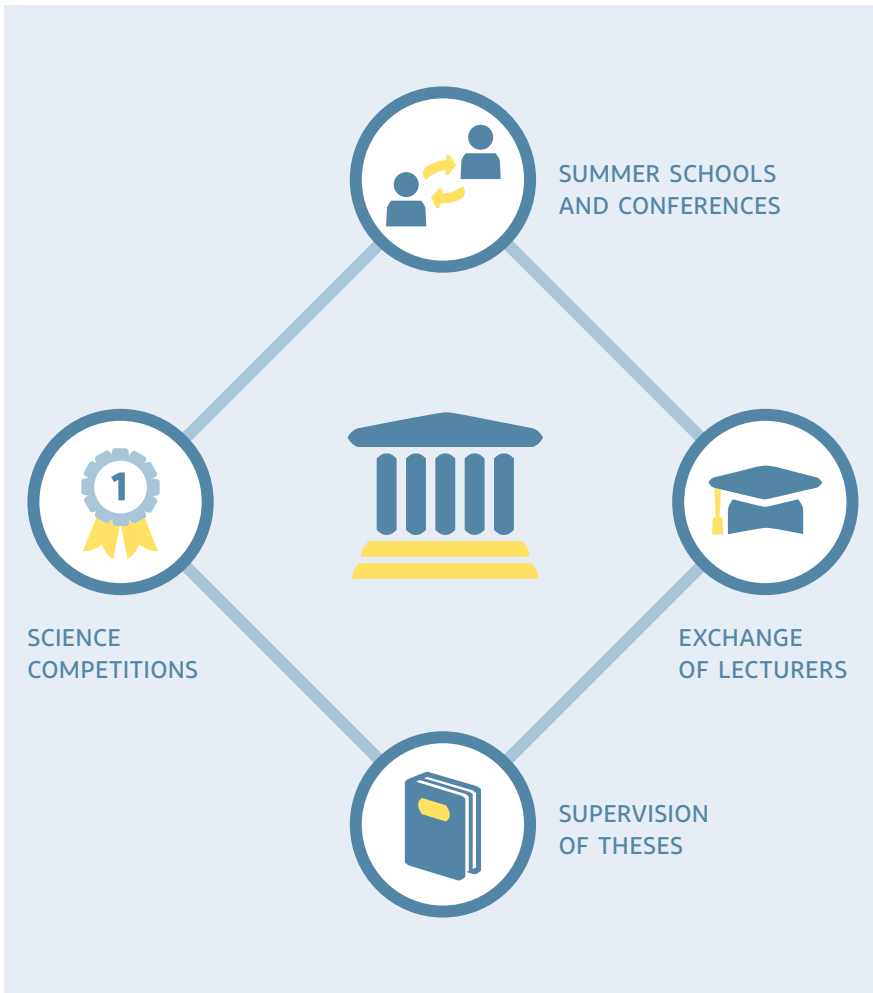
## COOPERATION WITH NON-UNIVERSITY RESEARCH FACILITIES

For international research projects, we seek the cooperation with other research institutions for reciprocal benefiting of each other's expertise and resources.

## COOPERATION WITH COMPANIES AND MUNICIPALITIES

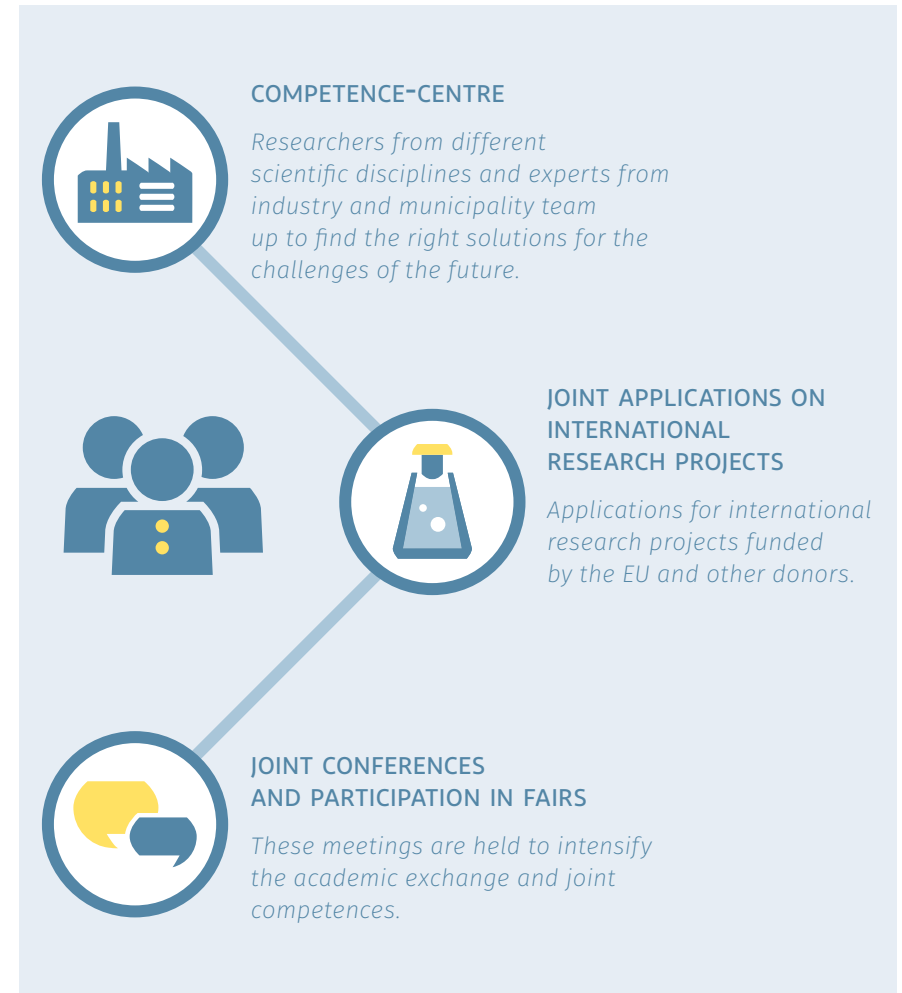
The cooperation with private and public enterprises offers scientists and students a practical approach and contacts to leading businesses in the water sector. Vice versa, the network offers the possibility to participate in international research projects and contacts to the next generation of young water experts.

## JOINT EDUCATION



The challenges of the future require well educated young researchers. In order to provide them the best education possible, the Nordic Water Network conducts the following actions: joint supervision of theses, exchange of lecturers, joint summer schools, conferences and science competitions.

## JOINT RESEARCH



In order to fulfil our mission, we are going to realize international research projects which concentrate on strategies to cope with the effects of the climate change and the improvement of water and wastewater infrastructure. The actions we conduct are: joint applications on international research projects, joint conferences and joint participation in fairs.

## PARTNERS

Through the six partner universities and their various contacts to industry and public authorities, the NWN forms an extended network across myriad disciplines and branches.





AALBORG UNIVERSITET

## AALBORG UNIVERSITY

### DENMARK

ENROLLED STUDENTS: 20506 (2016)

#### WATER RELATED DEPARTMENTS

- Department of Energy Technology
- Department of Civil Engineering
- Department of Chemistry and Bioscience
- Department of Architecture, Design and Media Technology
- Department of Planning

**NWN FOCUS:** computational fluid dynamics (CFD), pump analysis, energy efficiency, multiphase aspects



#### CONTACT

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*“The NWN is unique in bringing together very diverse competences but with a single focus – sustainable water handling.”*



## BERLIN INSTITUTE OF TECHNOLOGY

### GERMANY

ENROLLED STUDENTS: 34428 (2016)

#### WATER RELATED DEPARTMENTS

- Institute of Landscape Architecture and Environmental Planning
- Optical Institute
- Institute of Environmental Engineering
- Institute for Economics and Economic Law
- Institute for Process Engineering
- Institute of Architecture
- Institute for Ecology
- Institute of Process and Plant Dynamics
- Institute of Chemical Engineering
- Institute of Fluid Mechanics
- Institute of Construction Engineering
- Institute of Applied Geosciences

**NWN FOCUS:** water quality control and microbiology, wastewater treatment, pumping systems, fluid mechanics and optimization of wastewater treatment systems, modelling of hydrosystems



#### CONTACT

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Straße des 17. Juni 135, 10623 Berlin, Germany

*“For successfully advancing towards a sustainable use of water, the collaboration within the NWN provides a unique competence cluster. The Northern European universities demonstrate an extraordinary expertise in many fields, e.g. water treatment, asset management, simulation, technical infrastructure, automisation and digitalisation.”*

## CRACOW UNIVERSITY OF TECHNOLOGY

### POLAND

ENROLLED STUDENTS: 14519 (2016)

#### WATER RELATED DEPARTMENTS

- Institute of Engineering and Water Management
- Institute of Geotechnics
- Institute of Water Supply and Environmental Protection

**NWN FOCUS:** assessment and forecasting of water resources conditions and dynamics, planning, design, construction and maintenance of water engineering structures, assessment of flood risk and drought hazard, methods and means of protection, safety of water and geotechnical structures, repair technologies, water and wastewater treatment (with emphasis on a product recovery), reliability assessment of water supply and sewage disposal systems, environmental issues in spatial planning



#### CONTACT

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*"The CUT became a member of the NWN to create strong exchange of knowledge, practice and ideas related to water as a main factor of contemporary municipalities' development. Working connections between the NWN members from European countries with different experience in water management creates special opportunities to obtain a synergy in solving today's problems."*

## DUBLIN CITY UNIVERSITY

### IRELAND

ENROLLED STUDENTS: 16000 (2016)

#### WATER RELATED DEPARTMENTS

- DCU Water Institute
- School of Mechanical & Manufacturing Engineering
- School of Chemical Sciences
- School of Biotechnology

**NWN FOCUS:** Water sensing and real-time monitoring of emerging contaminants and pathogens, Water and energy efficient wastewater treatment and processing, Sustainable water management, Multiphase flows characterisation in treatment processes and hydraulic engineering, Membrane performance and novel membranes, solids removal, novel materials for water treatment – hardness removal



#### CONTACT

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Room S379, School of Mechanical and Manufacturing Engineering, Water Institute, Collins Avenue, Glasnevin, Dublin 9, Ireland

*"The DCU Water Institute is providing key expertise covering established and emerging priorities to the Water Agenda to the structural reform of the Irish water sector. Joining the Nordic Water Network will allow us strengthen links with institutes sharing a similar focus on innovative research. We look forward to growing multilateral research and educational collaborations."*

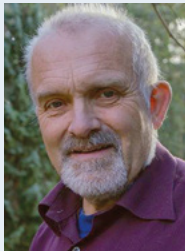


ENROLLED STUDENTS: 39000 (2016)

**WATER RELATED DEPARTMENTS**

- Department of Civil and Environmental Engineering
- Department of Marine Technology
- Department of Energy and Process Engineering
- Department of Geoscience and Petroleum
- Department of Ocean Operations and Civil Engineering

**NWN FOCUS:** water and wastewater engineering, stormwater management, water and wastewater treatment, asset management, hydropower, fluid mechanics



**CONTACT**

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*“The Nordic Water Network is important for us in network establishment to empower our scientific outreach. We learn from ongoing and recent research and educational methods at universities that work under conditions quite similar to our situation. In particular the exchange on knowledge related to fluid machines and wastewater treatment methods are important for us.”*

ENROLLED STUDENTS: 11031 (2016)

**WATER RELATED DEPARTMENTS (WATER DTU)**

- Department of Environmental Engineering
- National Institute of Aquatic Resources
- Department of Chemical and Biochemical Engineering
- Department of Civil Engineering
- Department of Applied Mathematics and Computer Science
- Center for Bachelor of Engineering Studie
- Department of Energy Conversion and Storage
- Department of Environmental Engineering
- National Food Institute
- Department of Photonics Engineering
- DTU Management Engineering
- Department of Micro- and Nanotechnology
- National Space Institute



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(DTU Environment) Building 115, room 114,  
2800 Kgs. Lyngby, Copenhagen, Denmark

*“The NWN is an important network for Water DTU that will help establishing international water research as a joint focus area across actors with different interests and competencies.”*

**NWN FOCUS:** modelling of urban water systems, stormwater management and urban drainage, micropollutants and cloudburst management, modelling and decision making, risk assessments and risk management of flooding, climate change impacts

## JOIN THE NETWORK!



No matter if you are representing a company, a university or an association or if you are a student from one of our partner universities – everyone working with or about water is welcome to join the network. Do not hesitate to contact us for further information!

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Mail: [contact@nordic-water-network.com](mailto:contact@nordic-water-network.com)

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Stay updated about our ongoing and future actions by subscribing to our mailing list.

Subscription via [www.nordic-water-network.com](http://www.nordic-water-network.com) or [contact@nordic-water-network.com](mailto:contact@nordic-water-network.com)

## IMPRESSUM

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