Registration

Fees
Participation fees for the Summer School include

    Accommodation

    Teaching material

    Breakfast, lunch and coffee breaks

and amount to

- 375 EUR/person
  (accommodation in single room)
- 275 EUR/person
  (accommodation in double room)

The number of participants is limited to 20 persons. Registrations will be processed in order of receipt. The registration is complete when payment has been received.

Accommodation
Rooms are reserved at the Hotel Monasterium / Guest House Poortackere.
www.monasterium.be

Registration
The registration form and information about the payment modalities are available at our website

www.mbr-train.org/summerschool

Contact

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The event is co-sponsored by MostforWater

MOSTforWATER

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MBR-TRAIN

Summer School on

Modelling Membrane Bioreactor Processes

15-17 July 2008
Ghent, Belgium

About MBR-TRAIN

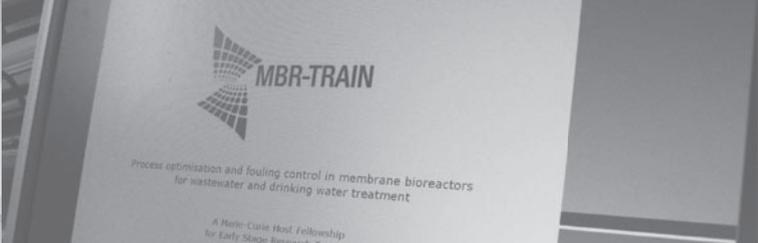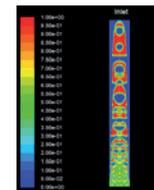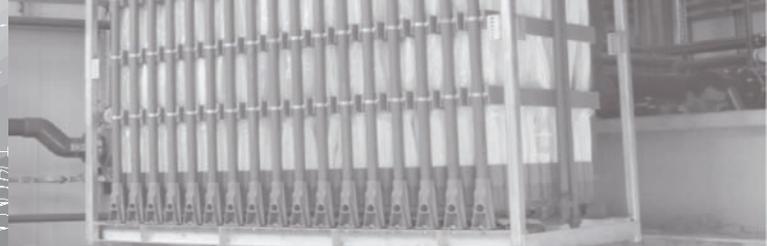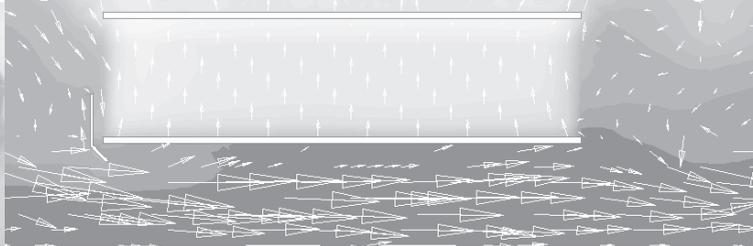The project MBR-TRAIN provides an Early Stage Research Training on "Process optimisation and fouling control in membrane bioreactors for wastewater and drinking water treatment".

A consortium of 10 partners offers a number of research opportunities centred around different aspects of fouling prevention and control.

One of the strategic project objectives is to enhance the intersectorial collaboration in an interdisciplinary field that is considered crucial for sustainable development, the field of water technologies

Summer School

The Summer School will be hosted by Ghent University's Department of Applied Mathematics, Biometrics and Process Control (Biomath). The institute is specialised in studies of complex systems in diverse disciplines by means of modelling and simulation

What do we offer?

This three days course will introduce the students to tools for modelling various aspects of membrane bioreactors: From data acquisition to modelling of complex processes, touching biological aspects as well as hydrodynamics. The use of different simulation techniques will be taught in courses and applied with software packages available on the market (e.g. WEST, Fluent). Lectures will be complemented by excercises, demonstrations and lab visits.

Who should attend?

Ph.D students or early post-docs in the field of wastewater treatment. Researchers interested in complementing their technical knowledge of the MBR process by modelling tools.

Partners

- RWTH Aachen University, DE
- IRSA-CNR, IT
- Aquafin, BE
- Cranfield University, UK
- Berlin Centre of Competence for Water, DE
- Ghent University, BE
- Brno University of Technology, CZ
- Thames Water, UK
- Delft University of Technology, NL
- Politecnico di Milano, IT

Programme

- Introduction
  - Why modelling?
  - Process modelling
  - Methodologies
- Biological process modelling
  - Mass balances
  - Biological processes
  - Gujer matrix
  - SMP model
  - Filtration modelling
- Process control theory
- Data acquisition (DAQ) and control

- Computational Fluid Dynamics (CFD)
  - Navier-Stokes equation
  - Turbulence modelling
  - 1-phase vs. multiphase
- Application of CFD in wastewater treatment and MBRs
- Introduction to Population Balance Modelling
- Introduction to the WEST platform for modelling and simulation of wastewater treatment plants

- Hands-on exercises in WEST
- Technical visit to MBR Plant Schilde (Aquafin)

For more details about the programme and speakers please visit

www.mbr-train.org/summerschool