

2013 International Workshop



Membrane Bioreactor for wastewater reuse: Fundamental, Design and Operation

12 – 14 November 2013
Tunis, Tunisia

Organized by:



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Partners



BACKGROUND

Water is an increasingly scarce commodity in Tunisia, which can experience severe water shortages, particularly in summer, with increasing demands for water in agriculture, industry, urban development, and tourism. Clean freshwater is a limited resource and its use for crop irrigation is in fierce competition with the demand for household consumption as well as with the need to protect the quality of aquatic ecosystems. Reuse and decentralization will be essential for meeting our needs for water and sanitation. Membrane bioreactors (MBRs), commonly referred to combination of the conventional activated sludge process together with a membrane filtration step to separate solids and liquids, is being an essential part of advancing such water sustainability, because they encourage water reuse and open up opportunities for decentralized treatment.

OBJECTIVES

- to focus on basic principles and state-of-the-art of MBR technology for wastewater treatment and reuse
- to improve the basis for communication and understanding of MBR technology by defining common terms and definitions
- to present the basics of MBR process design and of pilot-scale operations.
- to bring together academic and industrial scientists from the field of membrane science and technology
- to stimulate contacts and to exchange new ideas on research/professional work

AUDIENCE

- Scientists and Researchers
- wastewater/water engineers
- Water utility plant management and executives
- Students
- Operators
- Manufacturers and distributors
- Consultants and contractors
- Government

VENUE

Conference Centre of the Tunisian Union of Industry, Commerce and Handicrafts (www.utica.org.tn/)

WORKSHOP OVERVIEW

The workshop will be delivered by a combination of subject specialists from the academic community and industrial practitioners. The workshop will be a full two-day event. It is presented in an easy-to-understand, step-by-step, interesting and educational format.

ABOUT LECTURERS

Pierre Le-Clech is an Associate Professor at the UNESCO Centre for Membrane Science and Technology at the University of New South Wales. He has been working on membrane processes since 1999, when he started his research on fouling in membrane bioreactors (MBRs) in Cranfield, UK, with one of his papers on the topic being cited more than 500 times. Since, he has researched many aspects of the water and wastewater treatments by membrane technologies. Pierre currently leads research studies, with topics ranging from reuse of reverse osmosis modules to novel operating conditions for forward osmosis. He also works on validation guidelines for MBRs used in wastewater recycling schemes.

Amos Branch started a PhD at the University of New South Wales (UNSW) in the UNESCO Centre for Membrane Science and Technology in 2012. Amos' research is focused on the application of online monitoring techniques for continuous validation of Membrane Bioreactors (MBRs) in water reuse schemes. Prior to commencing a PhD Amos has had industrial experience with Siemens Water Technologies and Sydney Water during undergraduate studies in Industrial Chemistry at UNSW.

CERTIFICATE OF COMPLETION

Each attendee will receive a certificate of completion following the workshop (subject to 80 percent attendance).

DRAFT PROGRAMME

DAY 1 – TUESDAY, 12 NOVEMBER 2013

8:00-9:30 Welcome & Registration

9:30-10:00 Opening Ceremony and welcome addresses

10:00-10:45 Session 1: Introduction to the workshop and to MBR

Water resources in Tunisia : challenges and opportunities

Membrane Technology Fundamentals: Flux, Pressure, Membrane structure, Membrane configurations

10:45-11:15 Refreshment Break

11:15-12:30 Session 2: MBR Fundamentals and principles

Biotreatment Fundamentals

MBR Principles and Performances

12:45-14:00 Lunch Break

14:00-15:30 Session 3: MBR Design, Operation and Maintenance

MBR Fouling and Cleaning

Clogging and pretreatment

Operating and maintenance costs

15:30-16:00 Refreshment Break

16:00-17:30 Session 4: Case Studies

DAY 2 – WEDNESDAY, 13 NOVEMBER 2013

9:00-10:30 Session 5: Australian-Tunisian Project in MBR Technology

Research Projects in MBR Technology in MENA region:

1. Australian-Tunisian project
2. Other projects

10:30-11:00 Refreshment Break

11:00-12:30 Session 6: Commercial MBRs and more Case Studies

12:30-14:00 Lunch Break

14:00-15:30 Session 7: Towards Validation Guidelines for MBRs

15:30-16:00 Refreshment Break

16:00-17:00 Session 8: Round Table: MBR technology for wastewater reuse in MENA region: challenges and opportunities

with representatives of Tunisia's Ministry of Equipment and Environment (ONAS, ANPE, ANGED....)

17:00 Conclusions and Suggestions for Future work

Seminar Evaluation

DAY 3 – Thursday, 14 NOVEMBER 2013

Facility Tour visit: MBR plant

16:00 Closure of the workshop

REGISTRATION FEES

	Country	Early Fee Before October 10th	Normal Fee Before October 25th
Student	Low Middle-income	75€ (150 TND)	100€ (200 TND)
	High-income	100€ (200 TND)	125€ (250 TND)
Academic/Researcher	Low Middle-income	125€ (250 TND)	150€ (300 TND)
	High-income	200€ (400 TND)	250€ (500 TND)
Professional (public and private sector)	Low Middle-income	175€ (350 TND)	225€ (450 TND)
	High-income	300€ (600 TND)	400€ (800 TND)

The registration fee includes the final program, conference material, refreshments, lunches, and certificate of attendee. Hotel accommodation and tour facility (day3) are not included. The registration fee can be paid by bank transfer to MAYA ORGANIZATION. Payment of registration fees should be made in TND for Tunisian participants and in EUROS for all the other countries. The details (IBAN and BIC/SWIFT) for the payment are available in the registration form.

SPONSORSHIP and EXHIBITION OPPORTUNITIES

Exhibition space and Sponsorship packages are available. Enquiries should be directed to the local organizer:

MAYA ORGANIZATION
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ABOUT MAYA ORGANIZATION

Maya Organization is a non-governmental and non-profit making organization promoting the sustainable and improved management of the water environment and adaptation to climate change at water-scarce countries.

Maya Organization works in close cooperation with several actors and partners worldwide in water sector like local governments, international associations, training specialists, donors, academic and research institutions, think-tanks, and international organizations.