



AFRICA

Online Summer School

2–12 October 2022

africasummerschool.iahr.org

The **Africa Online Summer School** is organized by the IAHR-Africa Division. It is initiated as a commitment from IAHR to reach and connect with African scholar, young professionals, and institutes; and as a mean to promote collaborations that will create solutions for the water security and climate change challenges and help meet net-zero and sustainability targets. This school provides a synthesis of several aspects of hydro-environmental engineering. The main objective of the school is to introduce the main principles hydro-environmental engineering and their importance and practical applications in Africa.

Deliverables

Upon completion, the participant should be able to:

- Recognize the importance of hydro-environmental engineering and its impact on water infrastructures.
- Understand the fundamentals and main principles behind each field of hydro-environmental engineering.
- Be familiar with projects and applications where the hydro-environmental engineering is involved.
- Identify leading experts in the field of hydro-environmental engineering and be familiar with IAHR.
- Identify research and engineering streams that African scholars and professionals should focus on and/or explore.

For whom?

This course is intended for a broad audience. Whether you are a young professional or a senior, academic or practitioner, the course will help you to learn, identify and connect between the different aspects of hydro-environmental engineering.

Workload

The course is composed of 18 lectures. Two lectures are given each day. In total, the school is composed of 13h of lectures (45 min for each lecture). No official assignments are required, but some professors may provide simple assignments. A Professional Certificate of Attendance (PCA) is issued under request.

Lecturers



Jörg Imberger



Ellis Penning



Mohamed Ghidaoui



Vladimir Nikora



Wim S. J. Uijttewaal



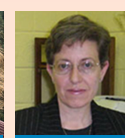
Marcelo Garcia



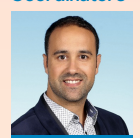
Andrea Rinaldo



Claudia Adduce



Ana Maria da Silva



Moez Louati



Maria Kennedy



Alfred Johny Wüest



Heidi Nepf



Ioana Popescu



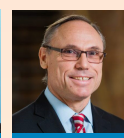
Peter Goodwin



Roger Falconer



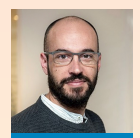
Joe Fernando



Brent Sleep



Elpidia Kolokytha



David Ferras

Coordinators

OPENING			
02 OCT	⌚ 05.00 Ontario 07.00 Chicago 14.00 CET 20.00 HKT Prof. Joseph Hun-Wei Lee IAHR President	Dr Samuel Partey UNESCO Dr Tassew Mekuria UMCES UN WATER representative (TBA) Prof. Daouda Koné Director of Capacity Building at WASCAL	
WEEK_1			
03 OCT	⌚ 05.00 Ontario 07.00 Chicago 14.00 CET 20.00 HKT Prof. Jörg Imberger Overview on the Hydro-environmental engineering and research challenges in Africa	⌚ 06.00 Ontario 08.00 Chicago 15.00 CET 21.00 HKT Prof. Peter Goodwin Climate change adaptation	
04 OCT	⌚ 05.00 Ontario 07.00 Chicago 14.00 CET 20.00 HKT Prof. Roger Falconer Water Security from Global to Regional Scales	⌚ 06.00 Ontario 08.00 Chicago 15.00 CET 21.00 HKT Dr Ellis Penning Contributing to the Sustainable Development Goals (SDGs) using an ecosystem-based approach	
05 OCT	⌚ 05.00 Ontario 07.00 Chicago 14.00 CET 20.00 HKT Prof. Vladimir Nikora Short introduction to turbulent flows	⌚ 06.00 Ontario 08.00 Chicago 15.00 CET 21.00 HKT Prof. Claudia Adduce Jets and Plumes	
06 OCT	⌚ 05.00 Ontario 07.00 Chicago 14.00 CET 20.00 HKT Prof. Andrea Rinaldo Environmental Transport	⌚ 06.00 Ontario 08.00 Chicago 15.00 CET 21.00 HKT Prof. Wim S. J. Uijttewaal Shallow flows, with applications in hydraulic engineering	
07 OCT	⌚ 05.00 Ontario 07.00 Chicago 14.00 CET 20.00 HKT Prof. Mohamed S. Ghidaoui Waves in Hydro-systems	⌚ 06.00 Ontario 08.00 Chicago 15.00 CET 21.00 HKT Prof. Ana Maria da Silva River dynamics	
08 OCT	⌚ 05.00 Ontario 07.00 Chicago 14.00 CET 20.00 HKT Prof. Harindra Joseph Fernando Fundamental concepts in environmental fluid mechanics	⌚ 06.00 Ontario 08.00 Chicago 15.00 CET 21.00 HKT Prof. Marcelo García Sediment transport	
WEEK_2			
10 OCT	⌚ 05.00 Ontario 07.00 Chicago 14.00 CET 20.00 HKT Prof. Brent Sleep Remediation of groundwater contamination	⌚ 06.00 Ontario 08.00 Chicago 15.00 CET 21.00 HKT Prof. Heidi Nepf Vegetation Hydrodynamics	
11 OCT	⌚ 05.00 Ontario 07.00 Chicago 14.00 CET 20.00 HKT Prof. Maria Kennedy Seawater desalination and environment	⌚ 06.00 Ontario 08.00 Chicago 15.00 CET 21.00 HKT Prof. Elpida Kolokytha Introduction on water resources planning and management	
12 OCT	⌚ 05.00 Ontario 07.00 Chicago 14.00 CET 20.00 HKT Prof. Alfred Johny Wüest Seasonal stratification and mixing of African lakes and reservoirs	⌚ 06.00 Ontario 08.00 Chicago 15.00 CET 21.00 HKT Prof. Ioana Popescu Hydroinformatics-and ICT solution for water-related problems: Past experiences and ongoing projects	

How to participate?

This short course is open only to IAHR members. To register for the summer school, please use the Zoom webinar registration link. The lectures will be given using Zoom Webinar. Detailed information will be sent to the email address given in the registration form.

If you are not yet a member, please join IAHR and become a member, or contact Carmen Sánchez to register for this event. By registering for this event, you will receive one-year free membership.

If you are African living in Africa, you can apply for this discount or free registration. Priority will be given to students and young professionals.

If you would like to receive, after the course, a **Professional Certificate of Attendance** (fee: EUR 50) issued by IAHR, please indicate your intention in the registration form. Please contact Carmen Sánchez for payment processing.