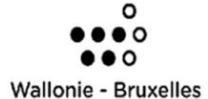




Ecole Supérieure d'Ingénieurs de Medjez El Bab



L'Unité de Recherche en Gestion Durable des Ressources en Eau et en Sol (GDRES) et ses partenaires (ELI – UCL et CERTE (LGR)) organisent le deuxième summer school dans le cadre des activités de l'Ecole Doctorale du Science du Vivant et de l'Environnement de l'Université de Jendouba

Hydrosystems modelling for water resources management

Le cours est soutenu par le projet bilatéral UCL – ESIM financé sur un don de la Wallonie Bruxelles International (Programme spécifique Eau et Environnement, Projet 1.1.2. Smart Medjerda : Surveillance et cogestion des ressources en eau de la Medjerda)

Overview

The course is devoted to hydrological systems functioning and modelling as a support for water resources management. The course will alternate lectures with practical training and “hands on” modelling sessions. Attendees will also learn about water - soil hydrodynamic and hydrological/hydrogeological process. Soil hydrodynamic processes play a key role in agricultural and environmental processes, including water system processes, but they are extremely variable in space and time. Soil hydrodynamic models are therefore crucial in the design and optimization of agricultural and environmental management programs. The course will provide participants with the theory and methods to address these critical challenges.

Fees

The course is free. Full hotel accommodation for 2 nights stay is covered by the course.

Academic Requirements

This course is intended to PhD, Postdoctoral and Engineers in hydrology and hydrological modelling, water management system, climate change, etc. They must have knowledge of computer, Geographic Information Systems in particular ArcMap, and knowledge on hydrology and water resources management. Experience on hydrological modelling is an advantage. Since the summer school will be in English, communication skills in English are necessary.

Participants are requested to bring their laptop computer and install a recent version of Python working environment <https://www.anaconda.com/download/> before the class.

Ministère de l'Agriculture des Ressources
Hydrauliques et de la Pêche

Institution de la Recherche & de l'Enseignement
Supérieurs Agricoles



Ministère de l'Enseignement Supérieur et de la
Recherche Scientifique

Université Jendouba



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Lectures



Marnik Vanclooster
(Prof, UCL Belgium)



Slaheddine Khliji
(Ass Prof. ESIM Tunisia)



Haykel Sellami
(Ass.Prof. CERTE Tunisia)



Faten J. Horriche
(Ass.Prof. CERTE Tunisia)



Sihem Benabdallah
(Prof. CERTE Tunisia)



Raed Fehri
(Dr, UCL Belgium)



Ahlem Gara
(Dr, ESIM, Tunisia)

Programme

December 14th

9h-12h: Hydrological Modelling for Water Resources Management

(Pr. Sihem Benabdallah, CERTE, Tunisia)

13h-16h: Hydrogeological Modelling for Water Resources Management

(Pr. Faten Jarraya Horriche, CERTE, Tunisia)

After learning the theory behind hydrological modelling, participants will learn how hydro(geo)logical models can support the management of water resources through practical cases in Tunisia.

December 15th

8h-13h: Modelling soil hydrodynamic process (Pr Marnik Vanclooster)

Principles and advances of soil hydrodynamic modelling will be presented and illustrated for practical application (e.g. infiltration in unsaturated soils / pollutant transport in soils). Examples will be illustrated by means of open software applications (Python notebooks).

14h-17h: Application of Rainfall-Runoff modelling using the ATHYS software (Dr, Ahlem Gara)

The attendee will be able to run and calibrate the ATHYS platform with different combinations of RR models, and perform optimization and sensitivity analysis.

December 16th

8h-12h: Citizen Science in Hydrology and Water Resources (Dr. Raed Fehri, UCL, Belgium)

Participants will learn through practical examples of applications how general public can be involved in reinforcing the existing official databases and generating new scientific knowledge in hydrology.

12h-14h: Open discussion and closing ceremony

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Location

The course will be held at Hammamet in a Hotel which will be communicated later to the selected candidates.

Contacts

Dr. Haykel Sellami, Ass.prof., CERTE, Tunisia, haysellami@yahoo.fr

Dr. Slaheddine Khlifi, MC ESI Medjez el Bab, slaheddinekhlifi@gmail.com

Registration

The number of participants is limited. Applicants will be checked for their technical skills and the suitability of the course considering their study topics.

Please follow the link below and fill your application form **no later than 30 November 2019**.

Pour s'inscrire au cours veuillez remplir le formulaire en ligne via le lien ci-dessous **avant le 30 Novembre 2019**

<https://forms.gle/NTBZnH1JgLVSKKWk6>