AQUA EXCEL 2020

Jihočeská univerzita v Českých Budějovicích
University of South Bohemia in České Budějovice

WAGENINGEN UNIVERSITY WAGENINGENUR

AQUAEXCEL[2020] TRAINING COURSES SERIES - DISTANCE LEARNING
Format: Three recorded lectures (each 90 minutes)
Location: Online Course

COURSE OUTLINE

TITLE
Experimental data management: from generating protocols to sharing data

COURSE DESCRIPTION
This course deals with best practice experimental data management, including all aspects from preparing experiment protocols to sharing data. It is based on the experimental data repository system developed in FP7-AQUAEXCEL called bioWES. bioWES is a distributed, knowledge-based repository for large datasets, typically applicable in biological and related sciences. The bioWES scientific data management solution provides full control over experiments, from protocol design, through data acquisition and processing, to sharing final results.

Participants will learn how to use the bioWES system for their own experimental work, using their own protocols and real experimental data. The aim is that by the end of the course, each participant will be able to install the bioWES system, create their own account, create unique experimental protocols based on their own specific needs, store their own experimental data, create connections between experimental protocols, cooperate with colleagues through sharing and visualise the overview of individual project steps. The participants will also be introduced to the special functionality of the system: data processing modules, plugins for communication with measurement devices and standardisation support.

The organisers will guide the users through every single step of the bioWES system, from installation to sharing of experimental data, during three one and a half hour sessions. The participant will use their own protocols and experimental data to test theoretical knowledge on real examples. The course will be available through a standard internet browser for each registered participant, and participants will be able to ask questions.

COURSE CONTENT

Lecture 1:
- Basic usage of the bioWES software solution
- bioWES fundamental parts explanation (protocol manager + web interface)
- General idea explanation – from protocol design, data acquisition and processing steps to sharing final protocol
- Protocol template creation
- Homework – complete the protocol template

Lecture 2:
- Protocol creation, completing experimental protocol and connect it with other protocols
- Connection, visualisation + evolution of protocol (CLONING)
- Protocol and protocol template sharing
- Protocol and protocol template visualisation chain
- Homework

Lecture 3:
- Web interface explanation – protocol and protocol templates visualisation
- Downloading experimental data
- Standardisation - how it can be used in protocol template
- Processing modules – process your data directly in the repository
- Plugin – automatic protocol filling (information from devices: microscope, camera)
- Information about the cooperation with the ELIXIR initiative within AQUAEXCEL[2020] related to standardisation

AQUA EXCEL 2020

Jihočeská univerzita
v Českých Budějovicích
**University of South Bohemia
in České Budějovice**

WAGENINGEN UNIVERSITY
WAGENINGEN UR

COURSE ORGANISERS

Ing. Petr Cisar Ph.D. and Antonin Barta, Institute of Complex Systems, University of South Bohemia in České Budějovice.

TARGET AUDIENCE

Researchers, students and technicians in the life sciences who would like to improve management of scientific data and metadata. It is believed that the course is particularly useful for researchers involved in AQUAEXCEL[2020] TransNational Access (TNA) projects.

COURSE TUTORS

Ing. Petr Cisar Ph.D

Position: Director of Institute of Complex Systems

Organisation: University of South Bohemia in České Budějovice

Contact details – cisar@frov.jcu.cz

http://www.frov.jcu.cz/en/institute-complex-systems

Petr Cisar obtained his M.Sc. and Ph.D. in cybernetics at the Faculty of applied sciences, University of West Bohemia in Pilsen, Czech Republic in the field of automatic visual speech recognition. Petr Cisar worked as a research engineer for the private company Honeywell s.r.o. from 2006 until 2009. He is one of the inventors of the patents in the field of alarm management and networking of image processing tools. Since 2009, he has been working for the University of South Bohemia as a researcher. His research interest is image analysis of cell cycle and design of experiment. Petr Cisar became the director of the Institute of Complex Systems in 2012.

Antonin Barta

Position: Technician/Assistant

Organisation: University of South Bohemia in České Budějovice

Contact details – abarta@frov.jcu.cz

http://www.frov.jcu.cz/en/institute-complex-systems

Antonin works as an assistant/technician at the Institute of Complex Systems from 2014. He is part of the Laboratory of Signal and Image Processing and cooperates on bioWES development.

LOCATION:

Online Course. Full details on access will be provided after registration.

COURSE FORMAT:

Three separate lectures of 90 minutes each, video format (previously recorded)

REGISTRATION:

E-mail your registration request to aquaexcel@aquatt.ie, using the official registration form, which can be downloaded from the AQUAEXCEL[2020] website: www.aquaexcel.eu/index.php/aquaexcel-courses/h2020-training-courses

Please indicate the following in the subject in your e-mail: AQUAEXCEL[2020] / training course #1 (JU)

FEES:

Course attendance is free, thanks to European Commission Horizon 2020 funding.

MAXIMUM PARTICIPANTS:

No limitation

LANGUAGE OF INSTRUCTION AND MATERIAL:

English

@AQUAEXCEL2020
www.aquaexcel.eu

Designed and developed by AquaTT