Welcome,

As a part of Data4Water EU Twining project, a series of summer schools will be organised. The third Summer school is organised by the Fraunhofer Institute for Open Communication Systems (Fraunhofer FOKUS) and University Politehnica of Bucharest.

The summer school topic is *Emerging research trends in ICT-supported water resource management and the water nexus* and takes place from 18th June to the 13th July 2018. Detailed description of the content, logistics and venue of the school is given bellow.

Applications for the summer schools are welcomed, no later than 10th of June 2018.

We look forward to seeing you in Bucharest soon.

Objective:

The three-week program is designed to teach participants the necessary background in text analytics and scientific literature analysis tools in order to investigate scientific research trends in ICT-supported water resource management and the water nexus (nexus with other resources such as energy and food and related scientific fields such as agriculture, life sciences, etc.). At the end of this program participants will be able to apply text analytics methods and do tool-supported scientific literature analysis.

Description:

The five-weeks summer school schedule is:

1. Training courses – 2 days [18th to 19th June].
2. Summer school assignment tasks for participants – 1 day [20th June]
3. Problem solving sessions guided by experts – 17 days [21th June to 13th July]
4. Session for presenting the final results - 1 day [23th July]
5. *Evaluation of the summer school achievements [23th July]*

The detailed syllabus of the training courses covers three main aspects of text analytics as follows:

1) Introduction to Data Analytics with focus on Text Analytics
   a) *Introduction to Machine Learning and Text Analytics*
   b) *Introduction to Natural Language Processing and Topic Modelling*
   c) *Algorithms and Examples*
2) Data
   a) *Data sources*
   b) *Introduction into the (literature) data set*
   c) *Possible extensions of the dataset*
3) Presentation of the toolkit
   a) *Introduction into its usage*
   b) *Extension possibilities*

Content from all above three aspects will be addressed during the summer school.

The **problem-solving session** is focused on the analysis of the scientific literature dataset by using the provided analytics tools and methods. In order to improve the literature insights, the tool as well as the dataset have to be extended by further data sources (e.g. from scientific publication databases) and by additional algorithms. Next step will be the reappraisal of the literature analysis outcomes in regards of past and current research trends in ICT support for water science and the food, water and energy nexus. The participants will write a scientific report about their results and findings, which might be submitted as a scientific article.

The course is intended for a multidisciplinary audience and interdisciplinary student teams (computer science, water science, …) will work on the summer school tasks.

Application procedure:

To apply for a place please send a short CV (including research interests) to elena.apostol@cs.pub.ro or catalin.leordeanu@cs.pub.ro.

The Summer School is targeted at PhD/MD/undergrads students and other early career researchers. There is **no** participation **fee**.

Important dates:

The closing date for applications is: **10th June 2018**
The final list of participants will be announced on **15th June 2018**

Organisers:

FOKUS: Prof. Dr. A. Paschke and M. Harasic
UPB: E. Apostol and C. Leordeanu

Trainers:

- **Prof. Dr. Adrian Paschke**, Fraunhofer FOKUS
- **Marko Harasic**, Fraunhofer FOKUS
- **Dr. Naouel Karam**, Fraunhofer FOKUS
- **Dr. Thomas Hoppe,** Fraunhofer FOKUS

Please direct all enquiries to elena.apostol@cs.pub.ro or catalin.leordeanu@cs.pub.ro.