COOPERATION PERSPECTIVES

YAZD UNIVERSITY (IRAN) – UNIVERSITY OF PERUGIA

New frontiers of hydrology and environmental protection

With the participation of

Prof. Farhad Nejadkoorki

Director, International & Scientific Cooperation Office, Yazd University

AULA MAGNA UNIVERSITY OF PERUGIA – ENGINEERING SCHOOL

SEPTEMBER 25 2017

PROGRAMME

Organizing committee
Corrado CORRADINI
Piergiorgio MANCIOLA
Renato MORBIDELLI
Carla SALTALIPPI
Alessia FLAMMINI
Elena RIDOLFI

10:00 WELCOME GREETINGS

Annibale MATERAZZI: Director, Dept. of Civil and Environmental Engineering
Farhad NEJADKOORKI Director, International & Scientific Cooperation Office, Yazd University

10:30 SPEECHES AND DISCUSSION

DESIGNING AIR QUALITY MONITORING NETWORKS: DIFFERENT APPROACHES
Farhad NEJADKOORKI
Department of Environmental Engineering at the Yazd University, Iran

New methods and techniques to design air quality monitoring networks in urban areas are explored. The different perspectives, from which the air quality variability in urban domains has been dealt with, are summarized. GIS and computer programming applications to capture and manipulate data, extract secondary data, generate database, and implement designing approaches are analyzed. This highlights how some of these methodological aspects are being well designed and summarizes the new developments that can be expected in the near future

IMPACT OF TEMPORAL DATA AGGREGATION ON HEAVY RAINFALL CLIMATIC TRENDS EVALUATION
Renato MORBIDELLI
Dept. of Civil and Environmental Engineering, University of Perugia, Italy

In the last century the increase of greenhouse emissions caused a higher global average temperature and climate changes are happening all over the world as a consequence. In recent years extreme events connected to rainfall seem to happen more frequently than in the previous decades. On these basis it is interesting to evaluate whether the underestimation errors of the annual maximum rainfall depths due to the availability of coarse temporal aggregation data significantly affect analyses finalized to define if climate change is producing effects on extreme event intensities and frequencies.

INFORMATION THEORY FOR MONITORING NETWORK ASSESSMENT AND DESIGN
Elena RIDOLFI
Dept. of Civil and Environmental Engineering, University of Perugia, Italy

Data collection is crucial in hydrology and water resources. Monitoring sensors are positioned in strategic places in such a way that the highest information content about the state of an area is obtained, observing the limitations in the number of available sensors. The problem of finding the optimal number of sensors and their positions can be solved through the Information Theory. A method to restrain the uncertainty due to the assumptions made and to obtain a robust sensors network is presented.

12:00 CLOSING

Corrado CORRADINI Full Professor of Hydrology University of Perugia

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