POLITECNICO DI TORINO

Technion
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UNIVERSITÀ DEGLI STUDI DI TORINO

Politecnico di Torino
Technion Institute of Technology
University of Torino

EXPO 2015

Managing Water Quality for Public Health

October 14th 2015

Department of Agriculture, Forest and Food Sciences University of Torino

Largo Paolo Braccini, 2 - Grugliasco (TO)

Water Management and Distribution

13:00 ***Registration of participants***

14:00 ***Welcome by Partner Representatives***

14:15 ***Water resources system analysis: tools and challenges***
AVI OSTFELD - Vice Dean, Irwin and Joan Jacobs, Graduate School, Technion - Israel Institute of Technology

14:35 ***Best management practices for efficient use of water and for preventing contamination from plant nutrients and pesticides***
ALDO FERRERO, DARIO SACCO - Department of Agriculture, Forest and Food Sciences, University of Torino

14:55 ***Growing rice with less water and arsenic for global food security***
ELI VERED - Netafim Ltd Israel

15:10 ***Emerging compounds in water intended for human consumption: experiences and evolution***
CLAUDIA LASAGNA - Iren Acqua Gas S.p.A.
FRANCA PALUMBO, ENRICO RAFFO - Laboratori Iren Acqua Gas S.p.A.

15:25 ***Alternative decentralized water sources - opportunities and challenges***
ERAN FRIEDLER - Department of Environmental, Water and Agricultural Engineering, Technion - Israel Institute of Technology

15:45 ***Coffee break***

Water Quality Monitoring

16:05 ***Autonomous system design for continuous monitoring of metals in water***
LUCIANO SCALTRITO - Department of Applied Science and Technology, Politecnico di Torino

16:20 ***Aquatic effect-based monitoring tools***
TIZIANA SCHILIRÓ - Department of Public Health and Pediatrics, University of Torino

16:35 ***Photochemical self-depuration processes in surface waters***
DAVIDE VIONE - Department of Analytical Chemistry, University of Torino

16:50 ***How nanotechnologies can contribute to water treatments? From nanostructured electrodes from water splitting to bio-inspired microbial electrochemical cells and graphene based desalination membranes***
MARZIA QUAGLIO - Center for Space Human Robotics IIT@PoliTo

17:05 ***Nanoscale iron particles for groundwater remediation***
RAJANDREA SETHI - Director of the Department of Environment, Land and Infrastructure Engineering, Politecnico di Torino
TIZIANA TOSCO - Department of Environment, Land and Infrastructure Engineering, Politecnico di Torino

17:20 ***SMAT: the point of view of a water utility***
ARMANDO QUAZZO - Business Development - SMAT Group

17:35 ***General discussion and closing remarks***

Info & registration: eventi@polito.it

The increasing demand of water for drinking, agriculture, industry energy, sanitation makes it necessary to plan and develop sustainable management strategies to increase the sources of supply, optimize the use and ensure the quality of water resources. Agriculture is the major consumer of freshwater resources, as it uses about 70% of the water taken from rivers and groundwater. About half of this value is given back locally, feeding groundwater or surface flow. Specifically in agriculture it is necessary to plan and develop new approaches to improve use efficiency and ensure the quality of water resources. Most of the water withdrawn for domestic and industrial uses is returned respectively as poor quality wastewater.

Water quality can be affected by the presence of biological, chemical and physical contaminants of natural and anthropic origin. The pollutants discharged into the water can have a lot of potential harmful effects to human health.

Technologies for the drinking water treatment, more efficient hydraulic engineering techniques with less impact, more effective wastewater treatment processes are useful to ensure the water retrieval and to prevent the dispersion of wastewater without suitable purification treatments thus causing pollution widespread.

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