



POLITECNICO
DI TORINO



Technion
Israel Institute of Technology



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

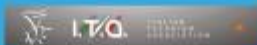
In cooperation with:



With the support of:



Under the patronage of:





University of Torino



- **600 years old**
- **27 Departments**
- **~ 70,000 students**
- **~ 4,000 teaching and technical staff in permanent position**
- **~ 4,000 staff not in permanent position**



- Dept. Agricultural, Forest and Food Sciences
- Dept. Veterinary Medicine





Dept. Agricultural, Forest and Food Sciences (Disafa)

First
degree

+

Master's
degree

- ~2000 students

PhD
degree

65 students

- Agricultural Sciences
- Forest and Environmental Sciences
- Food Science and Technology
- Viticulture and Enological Sciences
- Plant Biotechnology
- Animal Science
- Landscape design and Architecture





UNITO Research projects on “WATER”

Departments: 8

- Chemistry
- Agricultural, Forest and Food Sciences
- Physics, Economics
- Earth Sciences
- Molecular Biotechnologies and Health Sciences
- Drug Science and Technology
- Computer Science

Research Groups: 19



UNITO Topics

- Screening and control of emergent water pollutants and pathogens
- Removal of water contaminants and pollutants
- Tertiary water treatments
- Monitoring and treatment for water reuse in agriculture
- Food residues and waste
- Risk Assessment and sustainable management of water resources
- Water management in agriculture
- Oceans (monitoring and observation)
- Underwater observation and data reasoning
- Measurement of cell surface biomarkers
- Solar-light mediated water splitting

Earth Science

Science

Food

Life Sciences

NMP

Environment

Health



UNITO EU-funded projects ongoing



MAT4TREAT - Enhancing water quality by developing novel materials for organic pollutant removal in tertiary water treatments

<http://www.mat4treat.unito.it/node/9>



MOTREM - Integrated Processes for Monitoring and Treatment of Emerging Contaminants for Water Reuse

<http://motrem.eu/>



VALERIE - Valorising European Research for Innovation in agriculture and forestry

<http://www.valerie.eu/>



PoliTO Research projects on “WATER”

Departments: 3

DIATI – Department of Environment, Land and Infrastructure Engineering

DISAT – Department of Applied Science and Technology

DENERG – Department of Energy



POLITO Topics

- Desalination, freshwater production, and wastewater reuse
- Wastewater treatment
- Groundwater characterization and remediation
- Nanotechnologies for water purification
- Dynamics of pollutants in surface and subsurface water bodies
- Environmental fluid mechanics and river engineering
- Planning, management and analysis of Water Distribution Networks
- Local and smart electricity production
- Analysis of the water-food-trade nexus
- Flood risk analysis
- Design of innovative weather sensors
- Portable metals detectors for water management
- Nanotechnology for personalized medicine and more efficient thermal devices

Physics

Environmental Eng.

Energy

Hydraulics

Sanitary Eng.

Materials

Chemical Eng.

Nanotechnologies



PoliTO EU-funded projects ongoing



REGROUND - Nanosized Iron Oxide Nanoparticles for the REclamation of Heavy Metal Contaminated GROUNDwater

http://cordis.europa.eu/project/rcn/196810_it.html



MAT4TREAT - Enhancing water quality by developing novel materials for organic pollutant removal in tertiary water treatments

http://cordis.europa.eu/project/rcn/194348_en.html



European Research Council

CWASI - Coping with water scarcity in a globalized world

<http://erc.europa.eu/projects-and-results/erc-funded-projects/cwasi>

WATEREUS-MED - Water reuse in Mediterranean Countries

http://cordis.europa.eu/project/rcn/104485_en.html



NANOREM - Taking NANotechnological REMediation Processes from Lab Scale to End User Applications for the Restoration of a Clean Environment

<http://www.nanorem.eu/>



ALPERIL-Allerta dei pericoli nei bacini alpini

www.hautes-alpes.fr/5299-projet-alperil.htm