

Ombretta Paladino

Associate professor

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Education and training

1989

Ph.D. In Chemical Engineering

Politecnico di Torino - Torino - IT

1985

Laurea in Chemical Engineering (M.Sc.)

summa cum laude

Università di Genova - Genova - IT

Academic experience

2000 - ONGOING

Associate Professor

Università di Genova - Genova - IT

Teaching - Research - Supervision of B.Sc. M.Sc. Ph.D. students and Research Fellows

2011 - 2014

Head of Programme - M.Sc. in 'Environmental and Energy Engineering'

Università di Genova - Genova - IT

Managing and planning of teaching activities - Coordination of the board of teachers

2007 - 2011

Head of Programme - B.Sc. and M.Sc. in 'Environmental Engineering'

Università di Genova - Genova - IT

Managing and planning of teaching activities - Coordination of the board of teachers

1995 - 2000

Assistant Professor

Università di Genova - Genova - IT

Research - Teaching - Supervision of B.Sc. and M.Sc. students

1994 - 1996

Post-doc Research Fellow

Env. Institute - Joint Research Centre - European Commission
Research - Projects PHATOX (Pharmaceutical Toxicology) - FIRES (Facility for Investigating Runaway Events Safely) - RTF (Resource Technology Facility)

1990 - 1994

Post-doc Research Fellow

Università di Genova - Genova - IT
Research funded by Italian Ministry of Research and Industry

Work experience

2000 - ONGOING

Adviser for matters related to Environmental Crime

Italian Court of Law

Adviser about contamination of water and soils - industrial hazards - waste disposal - operation of chemical plants power plants wastewater treatment plants and landfills - human health and ecological risk

Teaching activity

- **Dynamics and Control of Chemical Reactors** - M.Sc. in Ingegneria Chimica e di Processo
- **Risk Assessment of Chemical and Industrial Hazards** - M.Sc. in Engineering for Natural Risks Management
- **Reaction Engineering of Biofuels** - M.Sc. in Energy Engineering

Research interests

Scale-up and optimization of chemical and biochemical processes:

simulation based and theoretically based scale-up; dynamic modelling and control of chemical reactors; on-line fault diagnosis; zero-liquid-discharge processes; optimization of solid-waste and waste-water treatment processes, biochemical processes and bioreactors, recycle and energy recover.

Human Health Risk Assessment (HHRA) and Ecological Risk Assessment

(ERA) from Tier I to Tier IV: investigation scenarios and collection strategies; source-pathway-receptor models; physically-based, data-based, black-box deterministic and probabilistic models for exposure assessment and risk characterization.

Identification of industrial and man-made hazards due to chemicals:

pollutant sources identification; fate and transport of reacting chemicals (PAH, Heavy Metals, pesticides, PCBs, particulate, emerging contaminants); modelling of groundwater pollution; field data analysis; site characterization and design of monitoring campaigns, also with low cost sensors.

- Head of the Research Lab: **Environmental Chemical Processes Lab (ECPL)**, Savona Campus.