PhD in Civil and Environmental Engineering

Research Title:

Applied Environmental Engineering

Funded by	Politecnico di Torino

Thematic area referent	Prof. Alberto Tiraferri (alberto.tiraferri@polito.it) (only the contact point for general information; advisors will be assigned after acceptance to the program)

Contact	http://www.diati.polito.it/la_ricerca/aree_di_ricerca/ingegneria_sanitaria_ambientale

Context of the research activity	The research will focus on the engineering aspects revolving around the protection of ecosystems and the prevention/remediation of chemical, physical, and biological contamination of environmental matrices. Examples include the study of biological cycles, ecological alterations and ecotoxicology, fate and transformation of pollutants, environmental impact and risk, water and wastewater treatment, waste treatment and recycling, gaseous emissions treatment.

Objectives	Objective of this research is the improvement of environmental quality. This goal can be accomplished through evaluation of the environmental footprint and risk of new or existing processes, the assessment of contaminations and their effect on humans and on the ecosystems, the reclamation and the treatment of contaminated resources. These studies bring together knowledge from chemistry, physics, biology, civil and chemical engineering, as well as management and economics disciplines. They are directly applied to the development of clean industrial technologies and the certification of environmental quality of various engineering processes; the design and the management of systems to reclaim contaminated sites, to produce high quality water, to the treatment and safe disposal of liquid and solid wastes from both industry and civil sources.

Skills and competences for the development of the activity	The ideal candidate has knowledge of implications and applications of engineering processes; has a strong background in applied environmental engineering; knows how to bring together expertise from various disciplines to a specific task; speaks and writes in correct English; has good written and oral communication skills; is motivated, independent, and shows the potential to develop an original research activity leading to exceptional scientific accomplishments.