

Daniel FERNÀNDEZ-GARCIA			
Function:	Associate Professor		
Institution:	Universitat Politècnica de Catalunya (UPC)	□ Funding Agency ☑ Programme Manager	
Email:	daniel.fernandez.g@upc.edu		
Phone:	+34-93-4011698		
Division	Dept. of Civil and Environmental Engineering (DECA)		

## **Areas of Expertise:**

Subsurface contaminant hydrology with emphasis on modeling flow and transport in porous media, probabilistic risk analysis, remediation engineering, multiphase flow and enhanced oil recovery, reactive transport, particle tracking methods, geothermal energy, applied geostatistics, saltwater intrusion, capture zones, and stochastic methods. Co-author of about 70 publications, of which 52 in ISI index journals (complete CV and publication list <a href="http://h2ogeo.upc.edu/en/">http://h2ogeo.upc.edu/en/</a>)

Selected 3 publications

Fernàndez-Garcia, D., T. H. Illangasekare, and H. Rajaram (2005), Differences in the scale-dependence of dispersivity and retardation factors estimated from forced-gradient and uniform flow tracer tests in three-dimensional physically and chemically heterogeneous porous media, Water Resour. Res., 41, W03012, doi:10.1029/2004WR003125.
Salamon, P., Fernàndez-Garcia, D., J. J. Gómez-Hernández (2006), A review and numerical assessment of the random walk particle tracking method, Journal of Contaminant Hydrology, 86, 277-305.

Henri, C. V., D. Fernàndez-Garcia, and F. P. J. Barros (2015), Probabilistic human health risk assessment of degradation-related chemical mixtures in heterogeneous aquifers: Risk statistics, hot spots, and preferential channels, Water Resour. Res., 51, doi:10.1002/2014WR016717.

## **Short Description of your Institution:**

The Universitat Politècnica de Catalunya (UPC) is a public institution dedicated to higher education and research, specialised in the fields of architecture, engineering and technology. The School of Civil Engineering (DECA) is positioned in 39th place in the world in the area of civil and structural engineering and the first in Spain (QS World University Ranking). The Hydrogeology Group (GHS) conducts research, teaching and knowledge transfer to society in the field of hydrogeology and geochemistry. The GHS consists in more than 10 professional experts and about 30 Ph.D. The group has signed more than 1,000 publications, including more than 600 papers in international journals. The group is internationally known for its contribution in multiphase flow, reactive transport and stochastic modeling of flow and transport in porous media.

## Role in the project:

UPC will be involved in several WPs of the project. Specifically: Develop particle tracking based methods for complex reactive transport problems; Develop a Groundwater Risk Management Model; Determine probabilistic time related protection zones; Dissemination of results, communication with stakeholders/general public.