Monica RIVA			
Function:	Professor		
Institution:	Politecnico di Milano (Polimi)	□ Funding Agency ☒ Programme Manager	
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Division	Dept. of Civil and Environmental Engineering (DICA)		

Areas of Expertise:

Subsurface flow and transport dynamics, parameter estimation, geostatistics, geostatistical inversion, stochastic groundwater hydrology, probabilistic well capture zones, scaling in hydrology, data assimilation, inverse modeling, uncertainty quantification, multiphase flows, oil recovery, analytical and numerical methods, interpretation and modeling of experimental data. Key contributions include development of: exact and approximated formalisms for prediction of groundwater flow fields governing the spread of conservative and reactive solutes in hydro-geo-chemically heterogeneous geomaterials, by means of conditional moments of the state variable of interest; innovative stochastic and upscaling techniques to study multiphase flow features of immiscible and miscible fluids. Leading scientist of the Groundwater research group of Polimi (DICA). Co-author of about 108 publications, of which 69 in ISI index journals (complete CV and publication list at http://www.dica.polimi.it).

Selected 3 publications

Riva M., S. P. Neuman, A. Guadagnini (2015), New scaling model for variables and increments with heavy-tailed distributions, Water Resour. Res., 51, 4623-4634.

Riva M., A. Guadagnini, A. Dell'Oca (2015) Probabilistic assessment of seawater intrusion under multiple sources of uncertainty, *Adv*. *Water Res*, 75, 93-104.

Riva M., A. Guadagnini, D. Fernandez-Garcia, X. Sanchez-Vila, T. Ptak (2008), Relative importance of geostatistical and transport models in describing heavily tailed breakthrough curves at the Lauswiesen site, *J. Contam. Hydrol*, 101, 1-13

Short Description of your Institution:

Politecnico di Milano is ranked as one of the most outstanding European universities in Engineering, Architecture and Industrial Design. It is known for its wide-range of expertise in Engineering and Natural Sciences, including major emphasis on the Environment protection and environmental engineering. DICA research activities include surveying and geomatics, applied geology, applied geophysics, geotechnics, management of water resources, hydraulic engineering and hydrology.

Role in the project:

Coordinator. Polimi will be involved in all WPs of the project. Specifically: Organize existing key field data for the development of conceptual models; Develop a sub-Gaussian model for scaling of statistics; Develop new algorithms (freely accessible) to generate data-driven sub-Gaussian properties; Reconstruct the spatial distribution of hydrogeological parameters; Reconstruct groundwater circulation within the field cases; Apply risk model to the field sites; Dissemination of results, communication with stakeholders/general public

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