Caroline Darcel   ITASCA

Hydrogeology

Expertise	Numerical Modeling of Flow and Transport, Fractured Media, Unsaturated Flow
Education	Ph.D. (Hydrogeology), 2002
	DEA (Hydrogeology, Hydrology, Geochemistry and Geostatistics), 1998
	M.S. (Physics and Geophysics), 1997
	B.S. (Physics and Geophysics), 1997
	Université Rennes, France

Professional Experience

2002 - Present	*Itasca Consultants S.A. Ecully, France, Hydrogeological Engineer*
1999 – 2002	*Géosciences Rennes, Université Rennes, France, Research Student*
1998	*CEA Saclay, France, Research Student*

Project Experience

Discrete Fracture Network modeling (Geo-DFN), applied to multi-scale site characterization at Forsmark and Simpevarp (Sweden), two candidate sites to the nuclear waste repository.

Numerical modeling of tracer tests in fractured media ("particle methods", following and tracking), applied to the Äspö site (Sweden) for the True Block Scale Project.

Software development (C/C++), Implementation of variably saturated flow in a finite element code; Implementation of Particle Following Method.

Modeling of the unsaturated flow in discrete fractures close to a drift (Yucca Mountain), unsaturated flow in fractured media; Equivalent Continuum Medium and Modified Invasion Percolation approaches.