

## **Materials & Structures, Software Development**

**Expertise** Investigation of dense granular material behavior in solid-like and flowing regimes by means of laboratory experiments and distinct element modeling

**Education** DEA (Modeling and Simulation of Materials), 2002  
M.Sc. (Material Sciences), 2001  
Université de Marne-la-Vallée, France

### **Professional Experience**

2011 - Present	<i>Itasca Consultants S.A. Ecully, France</i> <i>Software &amp; Project Engineer</i>
2007 – 2008	<i>Project Engineer</i>
2008 – 2011	<i>Itasca Consulting Group, Inc., Minneapolis, Minnesota</i> <i>Software &amp; Project Engineer</i>
2002 – 2006	<i>Ecole Nationale des Ponts et Chaussées, Laboratoire des Matériaux et Structures du Génie Civil/Centre d'Enseignement et de Recherche en Mécanique des Sols</i> <i>Research Student</i>

### **Project Experience**

Development activities associated with Itasca's *FLAC3D (Fast Lagrangian Analysis of Continua in 3 Dimensions)*, *PFC codes (Particle Flow Codes)* and *3DEC (3-Dimensional Distinct Element Code)*.

*University Activities:* Investigation of the packing and mechanical properties of dense, anisotropic granular media. Numerical analysis (3D distinct element simulations) in conditions mimicking a well-defined experimental procedure; quantitative comparison between numerical data and laboratory results (agreements, limitations and perspectives).

Simulation of the quasi-static behavior of a two-dimensional, dense, isotropic, granular system submitted to biaxial compression. Micro-structural and parametric analysis.

Simulation of the behavior of a 2D ideal granular system (dry and cohesive) submitted to pure shear. Micro-structural and parametric analysis.