

Upper Rhine Cluster for Sustainability Research



Researcher Profile

Toussaint Renaud
Geophysicist/Physicist, DR CNRS,
IPGS, EOST

Expertise in relation to the topics of the URCforSR (include max. 3 related and recent publications)

Flow in porous media and soils, experiments/modelling/monitoring, fracture processes, physico chemistry, soil liquefaction and landslides, pollutants and remediation (forced flows), sequestration .
. Resp: Group leader „Experimental Geophysics“ team (16 permanents+10-15 PhD and postdoc researchers): Geomechanics, Water interactions with soil and rocks, subsurface imaging
Resp: Cooordination of EU FP7 project (2013-2016), Flow in transforming porous media
Publications: cf <http://eost.unistra.fr/renaud> , publications, google scholar

Impact of sample geometry on the measurement of pressure-saturation curves: Experiments and simulations
M Moura, EA Fiorentino, KJ Måløy, G Schäfer, R Toussaint
Water Resources Research 51 (11), 8900-8926

The importance of fracture-healing on the deformation of fluid-filled layered systems
A Vass, D Koehn, R Toussaint, I Ghani, S Piazzolo
Journal of Structural Geology 67, 94-106

How cracks are hot and cool: a burning issue for paper 2016

R Toussaint, O Lengliné, S Santucci, T Vincent-Dospital, M Naert-Guillot, KJ Maloy, Soft matter
Lattice Boltzmann modelling of streaming potentials: variations with salinity in monophasic conditions

EA Fiorentino, R Toussaint, L Jouniaux
Geophysical Journal International 205 (1), 648-664

Special Interests in the topics of the URCforSR

Axis 3: Transformation processes and technology

Axis 2 : Energy, infrastructures and social changes.

We have an expertise on soil and rock mechanics, as well as on multiphasic flow, modeling and monitoring, with or without transformations (physical or chemical) of the rock/soil matrix.

What you are searching for regarding the cooperation within the URCforSR

I'm looking for contacts and complementary expertise to implement transnational projects, regional or larger, on energy-related projects, or pollution/remediation projects. We have an expertise in physical experiments and numerical modeling in geomechanics, water flow and monitoring, deformation and stability of soil and rocks.