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Symposium on Uncertainty Quantification in Computational Geosciences

Program of oral presentations

2018, January 15th-17th, BRGM, Orléans, France

Monday afternoon (January 15th) – Session I

UQ applied to natural resources (water and mineral) exploration and exploitation, chaired by P. Audigane (BRGM)

13:00-13:45	Registration and Coffee <i>* Note: there are lunch facilities on site at BRGM restaurant (fees at your charge)</i>
13:45-14:00	Welcome
14:00-14:40	F. Wellmann (RWTH Aachen University): Model-Based Machine Learning and Uncertainty Quantification in Geomodelling
14:40-15:20	P. Ackerer (Uni. Strasbourg): Uncertainties in hydrogeology modelling and potential impacts on models predictions
15:20-15:50	Break
15:50-16:30	A. Gesret (Mines ParisTech): Uncertainty estimation by probabilistic seismic tomography
16:30-17:10	G. Courriaux (BRGM): Comparisons from multiple realizations of a geological model: Implication for uncertainty factors identification
17:10-18:30	Poster session, during which the traditional French “Galette des rois” will be served
After 18:30	Free evening, a list of restaurant in Orléans city center will be provided (fees at your charge)

Tuesday morning (January 16th) – Session II	
UQ applied to natural risks related to geological processes, chaired by P. Gehl (BRGM)	
8:30-9:00	Coffee
9:00-9:40	I. Zentner (EDF): Stochastic representation of soil variability and application in soil-structure interaction analysis
9:40 –10:20	P. Franchin (Uni. Roma): Uncertainty modelling in seismic risk assessment at the urban/regional scale
10:20–10:50	Break
10:50–11:30	B. Sudret (ETHZ): Surrogate models for uncertain dynamical systems: applications to earthquake engineering
11:30–12:50	Lunch (free of charge)
Tuesday afternoon (January 16th) – Session II	
UQ applied to natural risks related to geological processes, chaired by P. Gehl	
12:50–13:30	A. Mangeney (IPGP): Limits of numerical models used to simulate natural landslides: confrontation with field observation and laboratory experiments.
13:30–14:10	A. Benaïchouche (BRGM): Identifying parametric controls and dependencies using conditional local variance: Application to seismic hazard assessments

Tuesday afternoon (January 16th) – Session III	
UQ applied to hydro-meteorological processes – chaired by D. Idier (BRGM)	
14:10-14:50	M. Menendez (Uni Cantabria): Cascade of uncertainties to estimate coastal impacts
14:50–15:30	D. Moncoulon (CCR): Modelling flood insured losses : an uncertainty propagation from hazard to damages
15:30–16:00	Break
16:00–16:40	C.-M. Duluc (IRSN): Hydrometeorological hazards assessment : practices in nuclear safety field and scientific challenges
16:40–17:20	J. Rohmer (BRGM): Boosting coastal flooding early-warning systems using metamodels
19:00-20:30	Cocktail (free of charge) – Hotel Dupanloup
20:30–22:00	Seminar by A. Mangeney (IPGP), « Mardi de la Science », Hotel Dupanloup http://www.centre-sciences.org/CentreSciences/MardisDeLaScience#r54

Wednesday morning (January 17th) – Session IV**Methods and theoretical developments for UQ chaired by B. Sudret (ETHZ)**

8:30-9:00	Welcome coffee
9:00-9:40	F. Gamboa (IMT Toulouse) Sensitivity analysis: from variance analysis to Cramér Von Mises statistics
9:40 –10:20	B. Iooss (EDF) Large dimension and dependence of inputs in global sensitivity analysis
10:20–10:50	Break
10:50–11:30	O. Le Maître (LIMSI): Reduction Methods for Uncertainty Quantification and Bayesian Inference in Geosciences
11:30–12:10	P. Sochala (BRGM): Construction of functional surrogates for uncertain geosciences applications
12:10–13:00	Wrap-up and closing Statements <i>* Note: there are lunch facilities on site at BRGM restaurant (fees at your charge)</i>