CONFERENCE PROGRAM

Plenary lecture	MS: MiniSimposium	MCG: Mathematics and computation in geosciences	Mini-course on higher order elliptic Equations
Poster session	Oth: Others	PM: Numerical, mathematical, Modeling, etc.. in porous media	AM: Approximation methods

Sunday May 31

02:00-07:00 pm	Registration (IPRA building)

Monday June 01

08:00-08:30 am	Registration (Room 9).		
08:30-09:00 am	Conference opening: M. Amara, President of the University of Pau		
09:00-10:00 am	Plenary lecture: IS-06 Raphaèle Herbin (AMPHI A)		
	MS3 (AMPHI A) Chair: P. Poncet	MS4 (AMPHI B) Chair: S. Subbey	MS9 (AMPHI C) Chair: J. Giacomoni and S. Shmarev
10:00-10:30 am	MS3-01 R. Chatelin	MS4-01 C. Mullon	MS9-01 J. Duqué
10:30-11:00 am	MS3-02 A. Genty	MS4-02 B. Planque	MS9-02 C. Escudero
11:00-11:30 am	Coffee Break		
	MS3 (AMPHI A) Chair: P. Poncet	MS4 (AMPHI B) Chair: S. Subbey	MS9 (AMPHI C) Chair: J. Giacomoni and S. Shmarev
11:30-12:00 am	MS3-03 F. Pierre	MS4-03 U. Schaarschmidt	MS9-03 J. Giacomoni
12:00-12:30 pm	MS3-04 L. Riba		MS9-04 P. Mishra
12:30-02:00 pm	Lunch		
02:00-03:00 pm	Plenary lecture: IS-03 Ramon Codina (AMPHI A)		
	MS7 (AMPHI A) Chair: C. Rosier	MS4 (AMPHI B) Chair: S. Subbey	MS9 (AMPHI C) Chair: J. Giacomoni and S. Shmarev
03:00-03:30 pm	MS7-01 M. Diédhiou	MS4-04 U. Schaarschmidt	MS9-05 A. Sarkar
03:30-04:00 pm	MS7-02 C. Bourel	MS4-05 S. Subbey	MS9-06 S. Shmarev
04:30-05:00 pm	Coffee Break		
	MS7 (AMPHI A) Chair: C. Rosier	MS4 (AMPHI B) Chair: S. Subbey	MS9 (AMPHI C) Chair: J. Giacomoni and S. Shmarev
04:30-05:00 pm	MS7-03 C. Cancès	MS4-06 S. Subbey	MS9-07 K. Sreenadh
05:00-05:30 pm	MS7-04 J. Carrayrou		MS9-08 G. Vallet

Tuesday June 02

09:00-10:00 am	Plenary lecture: IS-08 Andrey Piatniski (AMPHI A)		
	MS1 (AMPHI A) Chair: B. Amaziane	Mathematics and computation in geosciences (AMPHI B) Chair: L. Lenarduzzi	Mini-course on higher order elliptic equations (AMPHI C) Chair: C. Escudero
10:00-10:30 am	MS1-01 J. Erhel	MCG-01 M. Berrada	
10:30-11:00 am	MS1-02 E. Ahusborde	MCG-02 H. Boumenni	
11:00-11:30 am	Coffee Break		
	MS1 (AMPHI A) Chair: B. Amaziane	Mathematics and computation in geosciences (AMPHI B) Chair: L. Lenarduzzi	Mini-course on higher order elliptic equations (AMPHI C) Chair: C. Escudero
11:30-12:00 am	MS1-03 E. Flauraud	MCG-03 A. Halassi	
12:00-12:30 pm	MS1-04 E. Marchand	MCG-04 L. Lenarduzzi	
12:30-02:00 pm	Lunch		
02:00-03:00 pm	Plenary lecture: IS-02 Coloma Ballester (AMPHI A)		
	MS1 (AMPHI A) Chair: B. Amaziane	Others (AMPHI B) Chair: J. Muñoz	Mini-course on higher order elliptic equations (AMPHI C) Chair: C. Escudero
03:00-03:30 pm	MS1-05 L. Nguyen-Tuan	Oth-01 J. Muñoz	
03:30-04:00 pm	MS1-06 F. Pereira	Oth-02 C. Roldan	
04:30-05:00 pm	Coffee Break		
	MS1 (AMPHI A) Chair: B. Amaziane	Others (AMPHI B) Chair: J. Muñoz	Mini-course on higher order elliptic equations (AMPHI C) Chair: C. Escudero
04:30-05:00 pm	MS1-07 I. Sin	Oth-03 M. Tlemcani	
05:00-05:30 pm	MS1-08 R. Touzani	Oth-04 F. Omdi	
05:30-07:00 pm	Poster session		

Wednesday June 03

09:00-10:00 am	Plenary lecture: IS-07 Olaf Ippisch (AMPHI A)	
	MS6 (AMPHI A) Chair: J. Charrier	Numerical, mathematical, modeling, etc.. in porous media (AMPHI B) Chair: C. Cancès
10:00-10:30 am	MS6-01 L. Goudenège	PM-01 K. Brenner
10:30-11:00 am	MS6-02 C. Bauzet	PM-02 P. Ferraz
11:00-11:30 am	Coffee Break	
	MS6 (AMPHI A) Chair: J. Charrier	Numerical, mathematical, modeling, etc.. in porous media (AMPHI B) Chair: C. Cancès
11:30-12:00 am	MS6-03 R. Duboscq	PM-03 J. Vieira
12:00-12:30 pm		PM-04 Y. Zang
12:30-02:00 pm	Lunch	
02:00-03:00 pm	Plenary lecture: IS-04 Albert Cohen (AMPHI A)	
	Others (AMPHI A) Chair: P. Poncet	Numerical, mathematical, modeling, etc.. in porous media (AMPHI B) Chair: J. Erhel
03:00-03:30 pm	Oth-05 R. Eymard	PM-05 J. Brezina
03:30-04:00 pm	Oth-06 H. El-Otmany	PM-06 L. Schumacher
04:45-07:00 pm	Visit Of Pau and Castle Henri IV	
08:00-11:00 pm	Gala dinner: Hotel Parc Beaumont 1, avenue Edouard VII, 64000 Pau - France, tel. +33 559 118 400.	

Thursday June 04

09:00-10:00 am	Plenary lecture: IS-01 Rachid Ait Haddou (AMPHI A)		
	MS8 (AMPHI A) Chair: K. Brenner and R. Masson	Approximation methods (AMPHI B) Chair: D. Sbibih	
10:00-10:30 am	MS8-01 E. Ahmed	AM-01 S. Bruvoll	
10:30-11:00 am	MS8-02 A. Fumagalli	AM-02 D. Sbibih	
11:00-11:30 am	Coffee Break		
	MS8 (AMPHI A) Chair: K. Brenner and R. Masson	Approximation methods (AMPHI B) Chair: D. Sbibih	
11:30-12:00 am	MS8-03 J. Hennicker	AM-03 M. Tahrichi	
12:00-12:30 pm	MS8-04 C. Japhet	AM-04 A. Boujraf	
12:30-02:00 pm	Lunch		
02:00-03:00 pm	Plenary lecture: IS-09 Ben Schweizer (AMPHI A)		
	MS2 (AMPHI A) Chair: M. Kern	MS5 (AMPHI B) Chair: L. El Alaoui	Others (AMPHI C) Chair: M. Pasadas
03:00-03:30 pm	MS2-01 A. Moncorge	MS5-01 A. Blouza	Oth-07 A. Bradji
03:30-04:00 pm	MS2-02 M. Puscas	MS5-02 J. Salomon	Oth-08 P. Exner
04:30-05:00 pm	Coffee Break		
	MS2 (AMPHI A) Chair: M. Kern	MS5 (AMPHI B) Chair: L. El Alaoui	Others (AMPHI C) Chair: M. Pasadas
04:30-05:00 pm	MS2-03 M. Blatt	MS5-03 L. El Alaoui	Oth-09 R. Oujja
05:00-05:30 pm	MS2-04 C. Guichard		
05:30-06:00 pm	MS2-05 C. Engwer		

Friday June 05

09:00-10:00 am	Plenary lecture: IS-05 Thierry Goudon (AMPHI A)	
	Numerical, mathematical, modeling, etc.. in porous media (AMPHI A) Chair: F. Benkhaldoun	Numerical, mathematical, modeling, etc.. in porous media (AMPHI B) Chair: C. Engwer
10:00-10:30 am	PM-07 S. Boddula	PM-11 E. Mejri
10:30-11:00 am	PM-08 S. Buitrago	PM-12 D. Naraboyina
11:00-11:30 am	Coffee Break	
	Numerical, mathematical, modeling, etc.. in porous media (AMPHI A) Chair: F. Benkhaldoun	Numerical, mathematical, modeling, etc.. in porous media (AMPHI B) Chair: C. Engwer
11:30-12:00 am	PM-09 N. Mansouri	PM-13 A. Santo
12:00-12:30 pm	PM-10 F. Benkhaldoun	
12:30-02:00 pm	Lunch	

List of Plenary Lectures, MiniSymposia, Contributed Talks & Posters

	Plenary lecture
IS-01	Convergence of dimension elevation in Chebyshev spaces versus approximation by Chebyshevian Bernstein operators, R. Ait Haddou
IS-02	On affine invariant image and video comparison: multiscale analysis of similarities between images on riemannian manifolds, C. Ballester
IS-03	On some mathematical aspects of the finite element approximation of Darcy's problem, R. Codina
IS-04	Adaptive algorithms for high dimensional interpolation, A. Cohen
IS-05	Simulations of non homogeneous viscous flows with incompressibility constraints, T. Goudon
IS-06	A class of numerical schemes for compressible flows at all Mach numbers, R. Herbin
IS-07	Making the most of scarce data: efficient parameter estimation with geostatistical inversion, O. Ippisch
IS-08	Homogenization of random Navier-Stokes type system for electrorheological fluid, A. Piatniski
IS-09	Hysteresis laws in porous media provide an explanation of gravity fingering, B. Schweizer

MS1 :	**Modeling & Numerical Simulation of Multiphase Multicomponent Flow and Reactive Transport in Porous Media**
MS1-01	A global reactive transport model applied to the MoMaS benchmark, J. Erhel
MS1-02	An integrated two-phase flow with reactive transport model in a parallel reservoir simulator, E. Ahusborde
MS1-03	Study of Compositional Multi-Phase Flow Formulations with Cubic EOS, E. Flauraud
MS1-04	Line search and choice of variables in the semi-smooth Newton schemes for modeling compositional two-phase flow with a fixed spacial discretization, E. Marchand
MS1-05	Simulation Models for 3D Coupled Thermo-hydro-mechanical Problems in Masonry Dams, L. Nguyen-Tuan
MS1-06	Model Validation for CO2 Storage in Saline Aquifers, F. Pereira
MS1-07	2D simulation of natural gas reservoir by multiphase multicomponent reactive flow and transport – description of a benchmarking exercise, I. Sin
MS1-08	Finite element simulation of coal-bed methane reservoirs, R. Touzani

MS2:	**High performance computing for flow and transport in porous media: algorithms and applications**
MS2-01	High Performance Computing Challenges for Simulation from Pore-to-Reservoir Scale at TOTAL, A. Moncorge
MS2-02	Parallel multiscale methods for reservoir simulation, M. Puscas
MS2-03	A parallel CPR-like preconditioner based on non-smoothed aggregation AMG, M. Blatt
MS2-04	ComPASS: a research framework for the parallel simulation of flow in porous media, C. Guichard
MS2-05	Efficient implementation of the Localized Orthogonal Decomposition method, C. Engwer

MS3 :	**Pore scale modeling**
MS3-01	Complex flows with transport at the pore scale in porous media, R. Chatelin
MS3-02	Modeling bubble flow in fracture with Lattice Boltzmann model, A. Genty
MS3-03	Polymer flows through porous media, F. Pierre
MS3-04	Application of Digital Image Correlation to infer Multiphase Pore-scale Flow Dynamics, L. Riba

MS4 :	**Intermediate Models for Quantifying Ecosystem Population Dynamics, Variability and Uncertainty**
MS4-01	A step towards statistical ecologics, C. Mullon
MS4-02	Projecting the future state of marine ecosystems, la grande illusion?, B. Planque
MS4-03	Emergent properties of a multi-stage population dynamics model, U. Schaarschmidt
MS4-04	Structural uncertainty in population dynamic models, U. Schaarschmidt
MS4-05	Modeling and Uncertainty Quantification of the Dynamics of a Biosystem under Vague Knowledge, S. Subbey
MS4-06	Tracking Uncertainty Propagation in a Fisheries Population Dynamics Model, S. Subbey

MS5:	**A posteriori error analysis for variational inequalities**
MS5-01	A posteriori analysis for a contact shell model, A. Blouza
MS5-02	Reduced basis methods for variational inequalities, J. Salomon
MS5-03	A posteriori error analysis of Richard's equation modeling the water table reaching the ground surface, L. El Alaoui

MS6 :	**Numerical methods for stochastic partial differential equations**
MS6-01	Numerical simulations of Cahn-Hilliard SPDE, L. Goudenège
MS6-02	Monotone finite volume schemes for hyperbolic scalar conservation law with a multiplicative stochastic noise, C. Bauzet
MS6-03	Analysis of the Lie splitting scheme applied to a stochastic nonlinear Schrödinger equation, R. Duboscq

MS7:	**On mathematical and numerical modeling of some problems in water ressources**
MS7-01	Three-dimensional model versus upscaled mixed sharp-diffuse models for saltwater intrusion. Numerical results, M. Diédhiou
MS7-02	Modeling of elevation of water table in coastal aquifers, C. Bourel
MS7-03	Discretization of unsaturated flows in heterogeneous anisotropic porous media on general grids preserving the gradient flow structure, C. Cancès
MS7-04	Working with very ill conditioned matrices during geochemical modeling, J. Carrayrou

MS8 :	**Numerical modelling of flow and transport in discrete fracture networks coupled with the surrounding matrix**
MS8-01	A 3-D reduced fracture model for two-phase flow in porous media with a global pressure formulation, E. Ahmed
MS8-02	An efficient upscaling procedure for highly fractured reservoirs, A. Fumagalli
MS8-03	Gradient discretization of Hybrid Dimensional Darcy Flows in Fractured Porous Media with discontinuous pressures at the matrix fracture interfaces, J. Hennicker
MS8-04	Space-time domain decomposition methods for flow and transport in porous media with fractures, C. Japhet

MS9 :	Quasilinear elliptic and parabolic problems
MS9-01	Discrete solutions for the porous medium equation, J. Duqué
MS9-02	Polyharmonic k-Hessian boundary value problems, C. Escudero
MS9-03	Uniqueness results for quasilinear elliptic equations with exponential growth, J. Giacomoni
MS9-04	Existence of solutions of fractional p-Kirchhoff equation via Nehari manifold, P. Mishra
MS9-05	On the Perturbed Q-curvature Problem on S^4, A. Sarkar
MS9-06	The Cauchy problem for the evolution $p(x)$-Laplacian, S. Shmarev
MS9-07	Elliptic equations with sign changing nonlinearities and exponential growth, K. Sreenadh
MS9-08	A stochastic Delta_p(.) problem, G. Vallet

	Mathematics and computation in geosciences
MCG-01	Numerical implementation of a flexible variational method for controlling the NEMO ocean model data, M. Berrada
MCG-02	The rainfall-runoff model GR4J optimization of parameter by genetic algorithms and Gauss Newton method: Application for the watershed Ourika (High Atlas, Morocco), H. Boumenni
MCG-03	A stabilized meshless method for time-dependent convection-dominated flow problems, A. Halassi
MCG-04	Enhancing and segmenting a remote sensing image of a glacier body, L. Lenarduzzi

	Others
Oth-01	On estimating the capability index using estimation methods based on stratified sampling, J. Muñoz
Oth-02	A Fuzzy Regression Model Based on Finite Fuzzy Numbers, C. Roldan
Oth-03	Second order sequential design for estimating a product of several Bernoulli means, M. Tlemcani
Oth-04	GIS modeling of land degradation in a large area: Case study, extreme west of High Atlas (Morocco), F. Omdi
Oth-05	Gradient Schemes for incompressible steady Navier-Stokes problem, R. Eymard
Oth-06	NXFEM for Darcy and Stokes interface problems with nonconforming finite elements, H. El-Otmany
Oth-07	A convergence order for a finite volume scheme for a semilinear parabolic equation, A. Bradji
Oth-08	Adaptive integration of singularity in partition of unity methods, P. Exner
Oth-09	On a class of dynamic thermal problems with frictional normal compliance adhesive contact condition, R. Oujja

	Numerical, mathematical, modeling, etc.. in porous media
PM-01	Immiscible two-phase Darcy flow model accounting for vanishing and discontinuous capillary pressures: application to the flow in fractured porous media, K. Brenner
PM-02	A computational multiscale approach for incompressible two-phase flow in heterogeneous porous media including relative permeability hysteresis, P. Ferraz
PM-03	A mixed hybrid finite element/volume approach for a pseudo-parabolic linked to two-phase flow in porous media with dynamic effects in the capillary pressure, J. Vieira
PM-04	Coupling of a two phase gas liquid 3D Darcy flow in fractured porous media with a 1D free gas flow, Y. Zang
PM-05	Continuum-fracture model for transport processes, J. Brezina
PM-06	Phase Field Approach to Fluid Filled Fractures using Discontinuous Galerkin Methods, L. Schumacher

PM-07	A Meshless method coupled with PSO for Parameter Estimation in Groundwater Flow System, S. Boddula
PM-08	Quadrilateral Grid Generation with Complex Internal Boundaries Using Gradient Techniques, S. Buitrago
PM-09	Steady State Infiltration in Continuously Stratified Unsaturated Soils, N. Mansouri
PM-10	Development of an adaptive mesh refinement strategy for the MELODIE software simulating flow and radionuclides transport in heterogeneous porous media, F. Benkhaldoun
PM-11	A reactive-transport model for the co-precipitation of Halite and Gypsum under evaporation conditions from porous media, E. Mejri
PM-12	In-Situ Bioremediation of BTEX Contaminated Groundwater using FEM, D. Naraboyina
PM-13	A Lagrangian-Eulerian algorithm for solving hyperbolic conservation laws with applications, A. Santo

	Approximation methods
AM-01	Uniformly stable wavelets on nonuniform triangulations, S. Bruvoll
AM-02	Applying Natural and Quasi Cubic Interpolation to Solve Fredholm Integral Equations, D. Sbibih
AM-03	Superconvergent Nyström method for Urysohn integral equations, M. Tahrichi
AM-04	Superconvergent integro cubic spline quasi-interpolants, A. Boujraf

	Posters
P-01	Fast goodness-of-fit tests for the two-sample problem based on the characeristic function, M. V. Alba-Fernández
P-02	Estimation in the generalized half-logistic distribution for progressively type-II censored samples, I. Barranco-Chamorro
P-03	Note on a new piecewise linear finite element approximation of order four for one dimensional second order elliptic problems on general meshes, A. Bradji
P-04	Some discrete a priori estimates for a finite volume scheme appearing in the discretization of a time dependent Joule heating system, A. Bradji
P-05	The Shannon entropy as an image edge detector by means of gray-level histogram clustering, J. F. Gómez-Lopera
P-06	The evaluation problem in discrete semi-hidden Markov models, J. F. Gómez-Lopera
P-07	Estimation of optimum parameters in a shape-preserving hole filling problem, P. Gonzalez
P-08	A Numerical Modeling of Residence Time of Water in The Nador Lagoon (Morocco) , M. Jeyar
P-09	Filling surface holes with volume constraints by using radial basis functions, M. Pasadas
P-10	Parallelizing drainage network algorithm using free software: Octave as a solution, J. F. Reinoso-Gordo
P-11	A Determination Coefficient in a Fuzzy Random Environment, C. Roldan
P-12	Solving nonlinear equations systems in B-spline form, A. Zidna