Conference Program

Plenary Lecture	MS: MiniSymposium	MS1: 1st MAMERN-FIC Porous Media Day	MS2: Approximation Methods and Applications
MS3: Nonstandard multiphase flows in porous media		MS4: Systems Theory: Modeling, Analysis and Control	
PMM: Numerical, Mathematical, Modeling, etc... in porous media		MCSG: Mathematics, Computation, and Statistical modeling in Geosciences	
SIP : Signal processing, Image processing and Patern recognition		Posters	

Tuesday May 16

Time	Registration (Campus du Savoir)
02:00 – 07:00 pm	

Wednesday May 17

08:00 – 09:30 am	Registration (Campus du Savoir)		
09:30 – 10:00 am	Opening Ceremony (Amphi de Conférences)		
10:00 – 11:00 am	PL1: Alfredo Bermúdez de Castro (Amphi)		Chair: Domingo Barrera
11:00 – 11:30 am	Coffee Break		
	MS2: Room 1 Chair: M. Passadas	MCSG: Room 2 Chair: M. Joannides	MS3: Room 3 Chair: M. Saad
11:30 – 12:00 am	MS2-1 D. Cardenas	MCSG-1 F. Foucher	MS3-1 M. Karkri
12:00 – 12:30 pm	MS2-2 P. Garrancho	MCSG-2 Y. Yachouti	MS3-2 H. Nasser ElDine
12:30 – 01:00 pm	MS2-3 J.A. Adell	MCSG-3 M. Boubekeur	MS3-3 J. Carrayrou
01:00 – 02:00 pm	Lunch		
02:30 – 03:30 pm	PL2: Clément Cancès (Amphi)		Chair: Brahim Amaziane
	MS2: Room 1 Chair: A. Tijini	MCSG: Room 2 Chair: A. Benbrik	MS3: Room 3 Chair: Z. Mghazli
03:30 – 04:00 pm	MS2-4 A. Kouibia	MCSG-4 T. Ganomanana	MS3-4 S. Daoudi
04:00 – 04:30 pm	MS2-5 B. Belkhatir	MCSG-5 N. Amarjouf	MS3-5 E. Quenjel
04:30 – 05:00 pm	Coffee Break		
	MS2: Room 1 Chair: P. González	SIP : Room 2 Chair: M. Elhitmy	MS3: Room 3 Chair: M. Karkri
05:00 – 05:30 pm	MS2-6 M. Addam	SIP-1 F. Lekhal	MS3-6 R. Abdellaoui
05:30 – 06:00 pm	MS2-7 D. Izquierdo	SIP-2 K. Baibai	MS3-7 N. Ould Esouid
06:00 – 06:30 pm	MS2-8 A. Tazdayte	SIP-3 W. Mrabti	MS3-8 Y. Ouakrim
06:30 – 07:00 pm	MS2-9 Y. Elyazidi	SIP-4 F.Z. Lamzouri	

Thursday May 18

Time			
09:00 – 10:00 am	PL3: Holger Class (Amphi)		Chair: M. Quintard
	MS1: Room 1 Chair: B. Amaziane	PMM: Room 2 Chair: J.F. Reinoso-Gordo	MS4: Room 3 Chair: A. Benbrik
10:00 – 10:30 am	MS1-1 M. Quintard	PMM-1 S. Ahmedou Bamba	MS4-1 M. Magri
10:30 – 11:00 am	MS1-2 E. Ahusborde	PMM-2 I. Abdaoui	MS4-2 T. Karite
11:00 – 11:30 am	Coffee Break		
	MS1: Room 1 Chair: B. Amaziane	PMM: Room 2 Chair: A. Serghini	MS4: Room 3 Chair: A. Benbrik
11:30 – 12:00 am	MS1-3 S. Ali Hassan	PMM-3 M. Machichi	MS4-3 A. Brouri
12:00 – 12:30 pm	MS1-4 O. Lazar	PMM-4 O. Moussaoui	MS4-4 Z. Hamidi
12:30 – 01:00 pm	MS1-5 Y. Crenner	PMM-5 M. Jabri	MS4-5 D. Bouagada
01:00 – 02:00 pm	Lunch		
02:30 – 03:30 pm	PL4: Martin Vohralik (Amphi)		Chair: Clément Cancès
	MS1: Room 1 Chair: M. Quintard	PMM: Room 2 Chair: A. Mazroui	MS4: Room 3 Chair: A. Boutoulout
03:30 – 04:00 pm	MS1-6 Y. Davit	PMM-6 M. Jai	MS4-6 S. Slassi
04:00 – 04:30 pm	MS1-7 R. di Chiara	PMM-7 L. Moutaouekkil	MS4-7 M. Benyassi
04:30 – 05:00 pm	Coffee Break		
	MS1: Room 1 Chair: M. Quintard	PMM: Room 2 Chair: M. Jai	MS4: Room 3 Chair: M. Magri
05:00 – 05:30 pm	MS1-8 D. Lasseux	PMM-8 S. Taarabti	MS4-8 M. Zahri
05:30 – 06:00 pm	MS1-9 Z. Mghazli	PMM-9 Y. Yousfi	MS4-9 K. Chouayakh
06:00 – 06:30 pm	MS1-10 K. Mitra	PMM-10 T. Rabyi	MS4-10 E. Lakhel
06:30 – 07:00 pm		PMM-11 A. Nifa	MS4-11 S. Raji
07:00 – 07:30 pm			MS4-12 H. Zouiten

Friday May 19

Time			
09:00 – 10:00 pm	PL5: Delfim F. M. Torres (Amphi)	Chair: Ali Boutoulout	
	MS2: Room 1 Chair: M. Buhmann	PMM: Room 2 Chair: J. Carrayrou	MCSG: Room 3 Chair: F. Foucher
10:00 – 10:30 am	MS2-10 D. Barrera	PMM-12 G. C. Buscaglia	MCSG-6 S. Buitrago Boret
10:30 – 11:00 am	MS2-11 M. Lamnii	PMM-13 E. Ben-Ahmed	MCSG-7 M. Joannides
11:00 – 11:30 am	MS2-12 P. González	PMM-14 R. Oujja	MCSG-8 A. Errahmouni
11:30 – 12:00 am	Coffee Break		
12:00 – 01:00 pm	POSTERS SESSION		
Relaxing Break			
02:00 – 03:00 pm	Lunch		
	MS2: Room 1 Chair: A. Kouibia	PMM: Room 2 Chair: G. C. Buscaglia	MCSG: Room 3 Chair: S. Buitrago Boret
03:00 – 03:30 pm	MS2-13 A. Lamnii	PMM-15 Y. Abouelhanoune	MCSG-9 M. Bahij
03:30 – 04:00 pm	MS2-14 A. Bouhiri	PMM-16 M. Bouchlaghem	MCSG-10 A. Gannouni
04:00 – 04:30 pm	MS2-15 D. Michel	PMM-17 Z. Mellah	MCSG-11 S. Hajji
04:30 – 05:00 pm	MS2-16 A. Mazroui	PMM-18 A. Moumna	MCSG-12 K. Djeddour
05:00 – 05:30 pm	Coffee Break		
	MS2: Room 1 Chair: A. Zidna	PMM: Room 2 Chair: M. Zahri	MCSG: Room Chair: A. Benbrik
05:30 – 06:00 pm	MS2-17 A. Mhamdi	PMM-19 Y. Filali	MCSG-13 G. Moutabir
06:00 – 06:30 pm	MS2-18 A. Bellour	PMM-20 R. Messaoudi	MCSG-14 S. Nahchel
06:30 – 07:00 pm	MS2-19 A. Abbadi	PMM-21 S. Kaouri	MCSG-15 S. Dardouri

08:30 pm	Gala Dinner

Saturday 20

09:00 – 10:00 am	PL6: Janin Jäger (Amphi)	Chair: J. Martínez-Aroza	
10:00 – 11:00 am	PL7: Martin Buhmann (Amphi)	Chair: D. Barrera	
11:00 – 11:30 am	Coffee Break		
	MS2: Room 1 Chair: V. Ramírez	PMM: Room 2 Chair: O. Moussaoui	MCSG: Room 3 Chair: A. Arroud
11:30 – 12:00 am	NMA-20 A. Mennouni	PMM-22 T. Ghouti	MCSG -16 L. Boulanba
12:00 – 12:30 pm	NMA-21 O. Abdoun	PMM-23 R. Korikache	MCSG -17 R. Naciri
01:00 – 01:30 pm	NMA-22 C. Tajani	PMM-24 A. El Madkouri	MCSG -18 R. Oubrahim
01:30 – 02:30 pm	Lunch		

03:00 – 8:30 pm	Visit: Beni-Snassen Mountains and Saidia city

List of Plenary Lectures, MiniSymposia, Contributed Talks and Posters

MiniSymposia

MS2	**Approximation Methods and Applications**	**Organizers:** Maria Jose Ibanez and Domingo Barrera, University of Granada, Spain	
MS2-1	Remarks on Bernstein operator estimates	D.Cárdenas-Morales	**98**
MS2-2	A unifying approach to different notions of convergence in approximation theory by linear operators	P. Garrancho	**123**
MS2-3	Fast computation of Stieltjes constants	J.A. Adell and A. Lekuona	**57**
MS2-4	Approximation of Generalized Offset Surfaces by Bicubic Splines	R. Akhrif, A. Kouibia, M.L. Márquez and M. Pasadas	**61**
MS2-5	An optimal G^2-Hermite interpolation by rational cubic curves	B. Belkhatir and D. Sbibih	**78**
MS2-6	On solving Timoshenko transverse vibrating equations via Polynomial Spline Galerkin approximation	M. Addam	**56**
MS2-7	1D RBF Approximation of explicit non-regular functions	D .Izquierdo, M.C. López de Silanes and M.C.Parra	**130**
MS2-8	Padé approximation and quartic B-spline collocation for second-order singular boundary value problems	H.Allouche, A.Tazdayte and K.Tigma	**66**
MS2-9	Identification of bilateral free boundaries by evolutionary algorithm	A.Ellabib and Y.ElYazidi	**113**
MS2-10	On the construction of trivariate near-minimally normed blending quasi-interpolation operators	D. Barrera, C. Dagnino, M.J. Ibáñez and S. Remogna	**74**
MS2-11	Cubic quasi-interpolation spline collocation method for convection diffusion equations	S. Bouhiri, A. Lamnii and M. Lamnii	**91**
MS2-12	Optimal knots allocation in bicubic spline interpolation	P. González, H. Idais, M. Pasadas and M. Yasin	**127**
MS2-13	Uniform Hyperbolic Trigonometric spline wavelets of order three	A. Lamnii and M. Lamnii	**142**
MS2-14	Wavelet bases of Hermite C^1-quadratic composite-splines on the interval [0,1]	S. Bouhiri, A. Lamnii and M. Lamnii	**90**
MS2-15	An adaptive knot placement algorithm for Handwriting compression	D. Michel and A. Zidna	**156**
MS2-16	Morphological disambiguation of Arab texts by quadratic splines	A. Mazroui and M. Boudchiche	**150**
MS2-17	Multifont Arabic Character Recognition Using Bézier Curves and Hidden Markov Models	A. Mhamdi and A. Mazroui	**155**
MS2-18	Iterative Collocation method for solving nonlinear Volterra integral equations	A. Bellour	**79**
MS2-119	A numerical computation of the integral by splines	A. Abbadi and D. Sbibih	**48**
MS2-20	New L^2 error estimates of two projection approximationsf or Cauchy integral equations via regularization	A. Mennouni	**153**
MS2-21	The Green Supply Chain Management: An Adaptive Immigration Genetic(AIG)Approach	O. Abdoun, C. Tajani and J. Abouchabaka	**53**
MS2-22	Solving a data completion problem for Laplace equation with Genetic Algorithm	C. Tajani and J. Abouchabaka	**176**

MS3	Nonstandard multiphase flows in porous media	Organizer: Mazen Saad, Ecole Centrale de Nantes, Nantes, France	
MS3-1	Computational homogenization for the thermo-mechanical analysis of phase change composite materials	M. Karkri	135
MS3-2	Numerical scheme for anisotropic Darcy-Brinkman's model of two-phase flows in porous media	H. Nasser ElDine and M. Saad	164
MS3-3	Modeling laboratory scale experiment (TRACE and SPECY) of Fe-Cr redox reaction along with precipitation and porosity change	J. Carrayrou, S. Loyaux-Lawniczak, F. Lehmann and Ph. Ackerer	99
MS3-4	A Two-dimensional Riemann Solver for numerical simulation of debris flows	F. Benkhaldoun, S. Daoudi, I. El Mahi and M. Seaid	81
MS3-5	Positive nonlinear CVFE scheme for the compressible two phase flow in heterogeneous and anisotropic porous media	M. Ghilani, E. Quenjel and M. Saad	126
MS3-6	Comparison between the RANS and LES models for free-surface flows	R. Abdellaoui and I. Elmahi	51
MS3-7	Efficient Finite Element Solvers for Darcy Flows in Porous Media	M. El-Amrani, N. Ould Esouid, M. Seaid and N. Yebari	110
MS3-8	Development of an adaptive inverse problem for a multi flow dispersion model	A. Ellabib and Y. Ouakrim	114

MS4	Systems Theory: Modeling, Analysis and Control	Organizer: A. Benbrik, Mohammed First University Oujda, Morocco	
MS4-1	Compensation problem in disturbed convection-diffusion systems	M. Magri, L. Afifi and M. Bahadi	149
MS4-2	Enlarged gradient controllability (E.G.C) of the semi linear heat equation	T. Karite, A. Boutoulout and F.Z. El Alaoui	134
MS4-3	Nonlinear system identification using filtering technic	A. Brouri and S. Smail	95
MS4-4	Strong stabilization of non-homogeneous bilinear systems	Z. Hamidi and M. Ouzahra	129
MS4-5	Stability Analysis of General nD discrete time linear systems	A.O. Elosmani, D. Bouagada, and P. Van Dooren	115
MS4-6	Identification of Nonlinear Systems	A. Brouri, S. Slassi and L. Kadi	94
MS4-7	Wiener Systems Identification	M. Benyassi and A. Brouri	85
MS4-8	Numerical solution of stochastic partial differential systems with additive noise on overlapping subdomains	M. Zahri	178
MS4-9	A mathematical model of grazer-predator dynamics with two harvesting optimal control policies	K .Chouayakh, M .Rachik, K.Satori, C. ElBekkali and I. Elmouki	101
MS4-10	Stochastic partial differential equations driven by fractional Brownian motion with infinite delay and impulses	L. Lakhel	140
MS4-11	Generating realistic wind speed time series for energy storage	S. Raji, A. Arbaoui and M. Sallaou	170
MS4-12	Boundary enlarged observability of the gradient via HUM approach	H. Zouiten, A. Bouloulout, F.Z. El Alaoui	178

Contributed Talks

PMM:	Numerical, Mathematical, Modeling, etc... in porous media		
PPM-1	Simulation of bio heat transfer in the human eye using domain decomposition methods	S. Ahmedou Bamba and A. Ellabib	59
PPM-2	A modified Block Arnoldi method for large-scale Sylvester equations	I. Abdaoui, L.Elbouyahyaoui, M. Heyouni	49
PPM-3	Comparative study between dose calculation algorithms in radiotherapy	M. Machichi, Y. Oulhouk, A. Rrhioua, M. Zerfaoui and D. Bakari	147
PPM-4	An Efficient System based on Wireless Sensor Network for a Real-Time Environmental Monitoring	O. Moussaoui and M. Jabri	158
PPM-5	Multi-objective optimization of the dissipated transmission energy in wireless sensor network system used for environmental monitoring	M. Jabri, O. Moussaoui and M. Moussaoui	131
PPM-6	Existence of compressible Navier-Stokes equations with non-homogeneous boundary conditions and rigorous derivation of the compressible Reynolds equation.	I.S. Ciuperca, E. Feireisl, M. Jai and A. Petrov	102
PPM-7	Sufficient conditions for the existence of periodic solutions for higher order p-Laplacian functional differential equation with sign-variable coefficient	A. Anane, O. Chakrone and L. Moutaouekkill	70
PPM-8	Existence and Multiplicity of solutions for a p(x)-Kirchhoff type problem Involving p(x)-biharmonic	S. Taarabti, Z. ElAllali, K. Ben Hadddouch	175
PPM-9	On weighted subdifferential and some applications	Y. Yousfi, S. Lahrech and A. Benbrik	177
PPM-10	Integration of hybrid energy system in the electrical grid	T. Rabyi and A. Brouri	168
PPM-11	Dynamical contact of two solids in large deformations: formulation, existence and Uniqueness results	A. Nifa and B. Bouali	165
PPM-12	A multiscale method with Robin boundary conditions for the porous media equations	G.C.Buscaglia, R.F. Ausas, F.S. Sousa, R.T. Guiraldello, and F. Pereira	97
PPM-13	A radial basis function partition of unity method for modelling water flow in three-dimensional porous media	E. Ben-Ahmed, M. Sadik and M. Wakrim	80
PPM-14	Numerical analysis of some frictional non clamped thermal contact problem	O. Chau and R. Oujja	100
PPM-15	Numerical simulation of heat diffusion in a homogeneous bar	Y. Abouelhanoune, M. ElJarroudi, S. Benlghrib	54
PPM-16	Analysis and numerical study of a mixed formulation of a two membranes problem	M. Bouchlaghem and B. Mermri	87
PPM-17	Implementation of the Finite Element Method with C program	Z. Mellah and B. Mermri	152
PPM-18	Unstructured finite volume discretization of shallow water equations with porosity coupled to morphodynamic model for the simulation of urban flooding	F. Benkhaldoun, I. Elmahi, A. Moumna and M. Seaid	83
PPM-19	Simplified P_N Finite Element Models for Natural Convection-Radiation Problems	J. Abadr, M.El-Amrani, Y. Filali, M. Seaid	47
PPM-20	Quadratic finite elements approximation of second order linear elliptic equations in divergence form with right-hand side in L^1	A. Lidouh, R. Messaoudi and B. Seddoug	146
PPM-21	Transparent boundary conditions for the Linear Regularized Long Wave equation	M. Abounouh,H. Al-Moatassime S. Kaouri	55
PPM-22	A posteriori error estimates for finite volume solution of nonlinear diffusion problems	H. Amor, F. Benkhaldoun, T. Ghoudi and M. Seaid	68
PPM-23	Error Estimates for the Completely Discretized Problem of the Dual Mixed Method for the Stokes Problem	R. Korikache and L. Paquet	138
PPM-24	Dual Reciprocity Boundary Element Method applied to parameter identification problem	A. Ellabib and A. El Madkouri	112
MCSG	Mathematics, Computation, and Statistical modeling in Geosciences		

MCSG-1	A finite volume scheme for the shallow-water equations with topography or Manning friction	F. Foucher, Ch. Berthon, S. Clain and V. Michel-Dansac	**119**
MCSG-2	Modelling and computation of residence time in coastal lagoons : The case of Nador lagoon	S. Daoudi, E. Deleersnijder, I. Elmahi and A. Yachouti	**105**
MCSG-3	GPU implementation of coupled models of suspended sediment and bed load transport in multi-layered shallow water model	M. Boubekeur and F. Benkhaldoun	**86**
MCSG-4	Regulation process of the system in management of renewable resources via graph theory and fuzzy set	T. Ganomanana, D. Hervé, S. Randriamahaleo and H. Rakotonirainy	**122**
MCSG-5	Contribution of hydraulic modelling in flood hazard mapping: Case of torrential wadis in Beni Ansar city	N. Amarjouf, M. Oujidi, A.M. DaCosta Lombá and Y.Douzi	**67**
MCSG-6	Surrogate Reservoir Models for Cyclic Steam Injection Well Probabilistic Production Forecast	S. Buitrago Boret and O. Romero	**96**
MCSG-7	Moment closure for a metapopulation model with cooperative patches	M. Joannides and O.Salles	**133**
MCSG-8	Numerical modeling of the flow and transport of contaminant elements in heterogeneous porous media of the Bokoya massif (Central Rif, Morocco)	A. Errahmouni, E. Gharibi, M. Ghalit and J.-D. Taupin	**116**
MCSG-9	The Stochastic Weibull Diffusion Process: Statistical Inference and Computational Aspects	A. Nafidi, M. Bahij, B. Achchab and R. Gutiérrez-Sánchez	**161**
MCSG-10	Solving stochastic green transportation problem using metaheuristic: Modeling and simulation	A. Gannouni, R. Ellaia and E-G. Talbi	**121**
MCSG-11	Transportation inequalities for Stochastic heat equation	B. Boufoussi and S. Hajji	**89**
MCSG-12	Properties of PLS regression estimators. Application to data from a cement plant in Setif	K. Djeddour and A. Sahraoui	**109**
MCSG-13	Stochastic square of the Brennan-Schwartz diffusion process: Computational aspects and application.	A. Nafidi, G. Moutabir, R. Gutiérrez-Sánchez and E. Ramos-Abalos	**162**
MCSG-14	An easy way to evaluate the accuracy of the calibration estimator	S. Nahchel, J. Allal and Z. Zarrouk	**163**
MCSG-15	Numerical simulation of dye adsorption in three layered soil and models comparison	S. Dardouri and J. Sghaier	**106**
MCSG-16	Moderate deviations for a stochastic general fractional kinetic equation	L. Boulanba and M. Mellouk	**92**
MCSG-17	Application of Invariant set in Probabilistic metric spaces to asymptotic complexity analysis of some algorithms	R. Naciri and A. Mbarki	**160**
MCSG-18	Probabilistic b-metric spaces and nonlinear contractions	A. Mbarki and R. Oubrahim	**151**

SIP	**Signal Processing, Image Processing and Pattern Recognition**		
SIP-1	Quality Control of Paving Decorations by Evolutionary Approaches	F. Lekhal and M. El Hitmy	**145**
SIP-2	New approach for 3D acquisition using multi-line projection for 3D shape recognition	K. Baibai, B. Bellach and N. Elfakhouri	**73**
SIP-3	A hybrid approach for human tracking in surveillance videos	W.Mrabti, B .Bellach and H. Tairi	**159**
SIP-4	Denoising multi-dimensional signals	F.Z. Lamzouri and B. Bouali	**143**

P	POSTERS		
P1	The numerical solution of weakly singular Hammerstein integral equations	C.Allouch ,D.Sbibih and M.Tahrichi	**64**
P2	An application of semi-hidden Markov models to analyse stock market behavior	J. Martínez-Aroza, J.F. Gómez-Lopera, D. Blanco-Navarro, J. Prieto-Gallego and R. Román-Roldán	**72**
P3	A goodness-of-fit test for the Poisson-Tweedy distribution	M.D. Jiménez-Gamero and M.V. Alba-Fernández	**132**
P4	Superconvergent quasi-interpolant and application to the numerical solution of Fredholm integral equations	C. Allouch, A.Boujraf, D. Sbibih and M. Tahrichi	**63**
P5	A mathematical model of the interaction between glucose, insulin, α-cells, β -cells and glucagon	W. Boutayeb, A. Boutayeb, M. Lamlili and Y. Lamlili	**93**
P6	Non-uniform quasi-interpolation for solving Fredholm integral equations of the second kind	D. Barrera, F. El Mokhtari and D. Sbibih	**75**
P7	Approximation error of 3D fuzzy data by smoothing bicubic splines	P. González, H. Idais, M. Pasadas and M. Yasin	**128**
P8	Mathematical Modeling and Numerical of the Atmospheric Pollution at the Level of Free Surfaces	M.Ghani, K. Gueraoui and S. Men-La-Yakhaf	**125**
P9	A new approximation method to implement the charge-flux representation of circuit models in resistive RMAs	D. Barrera, M.J. Ibáñez, F. Jiménez-Molinos, A.M. Roldán, and J.B. Roldán	**76**
P10	Hybridization of Curvature and Bezier Curve Applied to Hand-written Arabic Character Recognition	A. Kerkour Elmiad, B. Belkhatir and D. Sbibih	**137**
P11	A Mathematical model with Optimal Control for the impact of fish consumption and mortality heart disease in Morocco	M. Lamlili, A. Boutayeb, W. Boutayeb, A. Moussi and Y. Lamlili	**141**
P12	Statistical splicing of economic series by smoothing quadratic splines	L. Pedauga, B. Delgado, M.L. Márquez, and M. Pasadas	**167**
P13	Filling halls using mesh of filled curves	M. Pasadas, A. Palomares, P. González and M.A. Fortes	**166**
P14	Construction of a normalized basis of a univariate cubic C^2 spline space and application to the quasi-interpolation	A. Rahouti, A. Serghini and A. Tijini	**169**
P15	A new proposal for measuring electoral disproportionality: the quota index	V. Ramírez, M. Martíez-Panero, T. Peña, and V. Arredondo	**171**
P16	Computing automatic transformation between homologous cartographic features	J.F. Reinoso-Gordo, C. León-Robles, and J. Mataix-Sanjuán, and R. Romero-Zaliz	**173**
P17	Filling holes with edge reconstruction	M.A. Fortes, P. González, A. Palomares and M.L. Rodríguez	**118**