Program of the 2016 International Conference on Computational and Mathematical Methods in Science and Engineering

Costa Ballena, Cádiz, Spain
July 4– 8, 2016

- **From the reception level (lobby):**
  - **Rooms 1 & 2 are one floor up.**
  - **Rooms 3 & 4 are one floor down.**
  - **All the posters are outside lobby (July 5 & 6).**
- **All talks 20 min (excepts QSSQCP).**
- **Registration OPEN:**

✓ **July 3:**
19:00 – 20:30

✓ **July 4 and 5:**
8:30 – 10:00 & 20:00 – 20:30

✓ **July 6 and 7:**
9:00 – 10:00

Monday, July 4, 2016

Registration: 8:30 – 10:00

Room 1: Welcome to Participants: 9:10 – 9:30

Room 1: Plenary Lecture 9:30 – 10:30

Applications of directional monotonicity in image processing and classification.
Prof. Humberto Bustince, UPN, **Spain**

Chair: M. Ojeda

Parallel Sessions: 10:30 – 14:00

Room 1:		***Uncertainty and Imprecision Modelling in Decision Making.*** ***Chair: H. Bustince***
Prof.	N. Madrid	*Relationship of the conflation in the Belnap's logic with the (crisp) stable model semantics.*
Prof.	A. Tallón	*Taking out even more features from the input subset based on feature ranking*
Prof.	D. Cagigas	*Time Series on Functional Service Life of Buildings using Fuzzy Delphi Method*
Prof.	M. Todinov	*On two optimization problems related to unsatisfied demand on a time interval.*
Prof.	P. Alonso	*On some properties of color morphology operators*
Prof.	S. Montes	*Strategies for colour mathematical morphology*
Prof.	H. Bustince	*QL-fuzzy Implications by Means of Overlap and Grouping Functions*

Room 2:		***HPC*** ***Chair: Diego Llanos***
Prof.	D. Giménez	*Exploiting Multi-level Parallelism on a Many-core System for the Application of Hyperheuristics to a Docking Problem*
Prof.	A.J. Díaz	*Fast Intra Mode Decision for an H.264/AVC to HEVC Video Transcoder*
Prof.	D. Llanos	*Critical Sections and Software Transactional Memory Comparison in the Context of a TLS Runtime Library*
Prof.	E. Gabaldón	*Black-List Genetic Algorithm Scheduling for Energy Saving in Heterogeneous Environments*
Prof.	G. Cebrián	*Two-Stage Intra Prediction Algorithm for HEVC*
Prof.	G. Bernabé	*Parallelization of the 3D Fast Wavelet Transform on a Cluster of Raspberry Pi 2 Boards*
Prof.	H. Migallón	*Tile partition analysis for a parallel HEVC encoder*
Prof.	J. Cuenca	*Empirical Modeling: an Auto-tuning Method for Linear Algebra Routines on CPU+multiGPUs Platforms*

	Room 3:	***Numerical Methods for Solving Nonlinear Problems.*** ***Chair: J.R. Torregrosa***
Prof.	P. Maroju	*A family of second derivative free forth order continuation method for solving nonlinear equations.*
Prof.	A. Magreñán	*Convergence of Newton's method under Vertgeim conditions: new extensions using restricted convergence domains*
Prof.	A. Magreñán	*Improved convergence analysis for Newton-like methods*
Prof.	A. Cordero	*On the dynamics of a class of iterative methods with memory for solving nonlinear equations*
Prof.	J. García	*Dynamical study of Ostrowski' and Chun's methods for solving nonlinear systems*

	Room 4:	***Mathematics in the Information Society.*** ***Chair: Pino Caballero***
Prof.	V. Herranz	*Serial concatenation of a block code and a 2D convolutional code*
Prof.	A.S. Corona	*Thwarting randomness reveals in group key agreement*
Prof.	A. Rivero	*Assistance Management Application based on IBSC for Emergency Situations*
Prof.	I. Santos	*Certificate Graph Based Authentication for Communications in Emergency Situations*
Prof.	J.J. Climent	*The correlation attack to LFSRs as a syndrome decoding problem*
Prof.	F. Temiz	*On Cyclic Codes over Zq+uZq*
Prof.	F. Kürüz	*m-adic Residue Codes over Fq[v]/(v^2-v) and DNA Codes*

LUNCH BREAK 14:00 – 16:00

Parallel Sessions 16:00 – 19:00

	Room 1:	***Mathematical Methods for Computer Science.*** ***Chair: M. Ojeda***
Prof.	J. Medina	*Computing the validity of attribute implications in multi-adjoint concept lattices*
Prof.	J.M. Rodriguez	*Analyzing criminal networks using Formal Concept Analysis with negative attributes*
Prof.	J. Moreno	*Time series representation using fuzzy logic*
Prof.	M. Ojeda	*The natural embedding of fuzzy preposet and its residual mapping*
Prof.	M. Enciso	*Dialogue in recommendation systems*
Prof.	P. Real	*An almost fully parallel algorithm for computing the component tree of a binary digital image based on HSF*

	Room 2:	***HPC.*** ***Chair: Pau San Juan***
Prof.	J.A. Belloch	*Performance Evaluation of the Iteratively Reweighted Least Squares Algorithm (IRLS) on a Multi-core Platform*
Prof.	O. García	*Parallel landing sites detection using LiDAR data on many core systems*
Prof.	J.M. Haut	*Cloud implementation of the K-means algorithm for hyperspectral image analysis*
Prof.	L. Jiménez	*Efficient Implementation of Morphological Index for Building/Shadow Extraction from Remotely Sensed Images*
Prof.	Bondarenco	*A trade off between explicit and implicit schemes to solve differential equations on GPUs*
Prof.	M. Barreda	*Energy Consumption of Stencil-Based MPDATA Algorithm*
Prof.	M. Martín	*Stop&Restart vs Resilient MPI applications*
Prof.	M. Boratto	*Auto-Tuning TRSM with an Asynchronous Task Assignment Model on Multicore, GPU and Coprocessor Systems*
Prof.	N. Calvo	*On applying a parallel Teaching-Learning-Based optimization procedure for automatic heliostat aiming*
		Room 2: CAPAP-H4 Network Meeting

	Room 3:	***Numerical Methods for Solving Nonlinear Problems.*** ***Chair: Alicia Cordero***
Prof.	J.A. Sicilia	*Improving the domain of parameters for Newton's method*
Prof.	J.R. Torregrosa	*Approximating the matrix sign function by means of Chebyshev-Halley type method*
Prof.	M. Vassileva	*On a sixth-order family for solving nonlinear models combining derivatives and divided differences*
Prof.	N. Romero	*Solving algebraic Riccati equations with an efficient iterative process with fourth order of convergence*
Prof.	R. Behl	*Some novel and optimal families of King's method with eighth and sixteenth-order of convergence*

	Room 4:	***Mathematics in the Information Society.*** ***Chair: J.A. López Ramos***
Prof.	N. Álvarez	*Safe Control of Luggage with Homomorphic Cryptography*
Prof.	R. Ten	*Linear and Cyclic Codes over direct product of Finite Chain Rings*
Prof.	S.D Cardell	*The modified self-shrinking generator via the generalized self-shrinking generator*
Prof.	S.D Cardell	*On a simple construction of primitive polynomials*
Prof.	M.A. López	*Hedonic and spatial analyses applied to the massive*
Prof.	J.A. Lopez	*Distributed Group Key Exchanges reusing randomness*

22:30 MUSICAL PERFORMANCE
The musicians interact with the public in **English & Spanish**

Tuesday, July 5, 2016

Room 1: Plenary Lecture 09:00 – 09:55

Figure Materials
Prof. Motoko Kotani, Tohoku University. **Japan**
Chair: *Peter Schwerdtfeger*

Parallel Sessions: 10:00 – 14:00

	Room 1:	***From clusters to the solid state.*** ***Chair: Ian Hamilton***
Prof.	W Grochala	*Maximum Hardness Principle in atoms, molecules and solids*
Prof.	M. Schütz	*Ab initio calculation of electronically excited states for large molecular systems*
Prof.	A. Berger	*Advances in time-dependent current-density functional theory*
Prof.	B. Tadic	*Geometrical Interpretation of Complex Signals as a Tool to Study Fluctuations at Nanoscale*
Prof.	E. Pahl	*Argon under High Pressure*
11:40 — 12:10 COFFEE BREAK & POSTER SESSION P-1/P-15		
Prof.	F. Hummel	*Tensor Rank Decomposition of the Coulomb Integrals*
Prof.	F. Calvo	*Coating of C60 by para-H2 and ortho-D2: revisiting the solvation shell*
Prof.	H. Kitamura	*Density matrix simulations of quantum electron dynamics in perturbed atoms and electron gas*
Prof.	I Garzón	*Chirality at the Nanoscale*
Prof.	J Akola	*QM/MM simulations of Au nanoclusters and glutathione ligands in water solvent*

	Room 2:	***HPC (10:00h-12:40h)/Comp Physic and Chemistry. (12:40-14:00)*** ***Chair: T. Margalef / Ian Hamilton***
Prof.	P. Sanjuan	*A first approach to column updating of NonNegative Matrix Factorization*
Prof.	V. Galiano	*Parallel processing in GPUs for intra-picture prediction in HEVC*
Prof.	P. Cuenca	*On the capabilities of the open-source hevc codecs*
Prof.	R. Uribe	*Optimizing a pivot-based algorithm for similarity search on a GPU-based platform*
Prof.	S. Bernabé	*Multi-core Implementation of Spatial-Spectral Preprocessing for Hyperspectral Unmixing*
11:40 — 12:10 COFFEE BREAK & POSTER SESSION P-1/P-15		
Prof.	T. Margalef	*Accelerating Schur Complement DDM for Wind Field Calculation*

		---------- *Comp. Physics and Chemistry* ----------
Prof.	F Chávez	*A non-singular and positive Bhattacharya method for the numerical modeling of the dewetting process of thin films*
Prof.	I Alhama	*Study of influence of surface mass coefficient of free chloride in reinforced concrete using Spice code*
Prof.	J Rodriguez	*On the Geometric-Arithmetic Index by decompositions*

	Room 3:	***Bio-Mathematics.*** ***Chair: Ezio Venturino & Maira Aguiar***
Prof.	M. Aguiar	*The impact of newly licensed dengue vaccine in endemic countries: Part I*
Prof.	M. Aguiar	*The impact of newly licensed dengue vaccine in endemic countries: Part II*
Prof.	M Esteva	A model for Leshmaniasias disease transmission considering asymptomatics and reservoirs
Prof.	V Kozlov	Persistence analysis of the age-structured population model on several patches
11:40 — 12:10 COFFEE BREAK & POSTER SESSION P-1/P-15		
Prof.	E Venturino	An ecoepidemic predator-prey model with prey vaccination
Prof.	I Bulai	Competition between algae and fungi in a lake: a mathematical model
Prof.	F Cordova	*Modelling the effects of differentiated mortality by phenotypic on genotypic distribution*
Prof.	J Ripoll	Basic reproduction number in a spatially structured model for gut microbiota

	Room 4:	***Computational Linear and Nonlinear Algebra.*** ***Chair: Peter Alonso***
Prof.	J Nuñez	Minimal Faithful Upper-Triangular Matrix Representations for Solvable Lie Algebras
Prof.	V Tomeo	Factorization and inversion of finite and infinite bordered tridiagonal matrices
Prof.	Abderraman	Fast algorithms for solving general k-tridiagonal matrix linear equations
Prof.	M Villar	Hub-directed multigraphs and arrowhead matrices
Prof.	R Falcon	A faithful functor among algebras and graphs
11:40 — 12:10 COFFEE BREAK & POSTER SESSION P-1/P-15		

LUNCH BREAK 14:00 – 16:00

Parallel Sessions 16:00 – 20:00

	Room 1:	***From clusters to the solid state.*** ***Chair: Peter Schwerdtfeger***
Prof.	J. Thijssen	*Bias-induced effects in single molecule charge transport*
Prof.	Steenbergen	*Melting mercury with a quantum model - clusters and bulk*
Prof.	L.Giacomazzi	*Paramagnetic H-related defects in silica: a first-principles investigation.*
Prof.	Hammerschmidt	*Solid State Materials With Transition-Metal Clusters and Fullerenes as Building Blocks*
Prof.	L. Trombach	*Golden Dual Fullerenes and their Topological Relationship to Fullerenes*
Prof.	M.B. Torres	*Transition-metal oxide clusters: structural and magnetic properties, infrared spectra and perspectives with applications in catalysis*
Prof.	M Stepanova	*Essential Collective Dynamics of Biological Polymers*
Prof.	*Mena-Osteritz*	*Insight into the Organic Donor-Acceptor Semiconductor Interface*
Prof.	N Gaston	*From Clusters to the Liquid State*
Prof.	P Jerabek	*Insights into the Bonding Situation of Interstitial Gold Clusters and Ligand Stabilized Au(0) Complexes*

	Room 2:	***Analytical and Numerical Solution of Differential Equations.*** ***Chair: J Macías***
Prof.	J Macías	*A deterministic model for the distribution of the stopping time in a stochastic model and its numerical solution*
Prof.	Y Fang	*TF explicit symmetric six-step methods*
Prof.	A Gallegos	*A modified exponential method to approximate positive and bounded solutions of the Burgers-Fisher equation*
Prof.	D Agirseven	*Bounded Solutions of Nonlinear Parabolic Equations with Time Delay*
Prof.	L Gavete	*Solving second order non-linear elliptic partial differential equations using generalized finite difference method*
Prof.	N Reguera	*A technique to avoid order reduction in the integration of linear initial boundary value problems with Lie-Trotter method*
Prof.	V Erturk	*A numerical approximation to the solution of the first Painlevé equation of fractional order*
Prof.	A Ashyralyev	*FDM for Stochastic Partial Differential Equations*
Prof.	Y Xiong	*Phase fitted splitting methods*

	Room 3:	***Bio-Mathematics.*** ***Chair: Ezio Venturino***
Prof.	Stollenwerk	*Lyapunov spectra for torus bifurcations and ways to deterministic chaos in population biology*
Prof.	M Bodnar	The influence of distributed delays on Hes1 gene expression model
Prof.	Piotrowska	Tumour--immune system interaction model with distributed delays
Prof.	O Angulo	*Natural grid numerical methods revisited in cell population balance models with asymmetric division*
Prof.	*P Bajger*	*Role of Cell Competition in Acquired Chemotherapy Resistance*
Prof.	F Reyes	*Calculated Forecast for Technical Obsolescence in Computerized Tomography Equipment*
Prof.	*P Ghaffari*	*Using Optimal Control Theory with Mosquito Repellents and Vaccination Applied to Dengue Disease Prevention and Reduction Management, a First Toy Study with Analytically Treatable Models*

	Room 4:	***Quasi-Solvable Systems in Quantum Chemistry and Physics. (50 min talk)*** ***Chair: Peter Gill***
Prof.	J Cioslowski	Rovibrational States of Wigner Molecules in Spherically Symmetric Confining Potentials
Prof.	Y Kurokawa	Solving the Schrödinger Equation of Harmonium Systems with the Free-Complement Local-Schrödinger Equation Method
Prof.	C Yannouleas	Quantum Wigner molecules in semiconductor quantum dots and cold-atom optical traps and their mathematical symmetries
Prof.	E Matito	Benchmarking of third-order reduced density matrices approximations using the harmonium atom.
Prof.	K Giesbertz	Two-body interactions and the physics of natural occupation numbers and amplitudes

22:15 SHERRY DEGUSTATION at the Garden:

After dinner We will taste 3 different types of Sherry: dry Sherry, Sweet Sherry (a dry Sherry that has been sweetened with Pedro Ximénez grapes that have been dried like raisins) and pure Pedro Ximénez.
All the wines will be served by a professional cellar master.

Wednesday, July 6, 2016

Room 1: Plenary Lecture 09:00 – 09:55

"Route to chaos via torus destruction in models of dengue fever "

Nico Stollenwerk, Lisbon University, **Portugal**

Chair: Ezio Venturino

Parallel Sessions: 10:00 – 14:00

	Room 1:	***From clusters to the solid state.*** ***Chair: Ian Hamilton***
Prof.	A Kozubski	*Surface-induced L10 ordering processes in nanostructured intermetallics with magnetic anisotropy: Monte Carlo simulation*
Prof.	P Hawrylak	*Optical properties of graphene quantum dots:*
Prof.	R Tonner	*Ab initio modelling of semiconductor epitaxy processes – gas phase, surface and interfaces*
Prof.	R Fournier	*Global Optimization-Density Functional Theory Study of Tin Oxide Clusters: Structures, Energies, and Trends*
Prof.	S Hendy	*The nanofluidics of small droplets on hydrophobic surfaces*
11:40 — 12:10 COFFEE BREAK & POSTER SESSION P-16/P-30		
Prof.	T Mineva	*Vibrational correlation formalism applied to internal conversion rate constants in metal clusters*
Prof.	W de Jong	*Advancing Algorithms to Increase Performance of Correlated and Dynamical Electronic Structure Simulations*
Prof.	I Hamilton	*Properties and Optical Spectra oh Helical Gold Nanorods and Related Nanostructures*

	Room 2:	***Mathematical Modeling & Differential Equations.*** ***Chair: Carmelo Clavero***
Prof.	C Clavero	*A method to solve 2D parabolic convection-diffusion SPP with turning points*
Prof.	J A López	*A consistent first order theory about the equilibrium figures in close binary systems*
Prof.	M Lampart	*Dynamics of a bouncing ball*
Prof.	J Camacho	*Exact solutions and conservation laws of a Generalized Fornberg-Whitham Equation*
Prof.	M Gürbüz	*Natural Convection MHD Stokes Flow in a Square Cavity*
11:40 — 12:10 COFFEE BREAK & POSTER SESSION P-16/P-30		
Prof.	P Senel	*DRBEM Solution of Biomagnetic Fluid Flow under a Point Source Magnetic Field*
Prof.	Y Kanetsuki	*Smoothed particle hydrodynamics method with partially defined fluid particles*
Prof.	C Calvo	*Isolated inhomogeneities of arbitrary shape with polynomial fields prescribed at infinity. The potential problem in two dimensions.*
Prof.	I. Alhama	*Network model for simulating 1-D soil consolidation proc. under load-unload condition*

	Room 3:	***General Session*** ***Chair: C. Vargas***
Prof.	J Vršek	*Contour curves and isophotes on ruled surfaces*
Prof.	L Orcos	*A methodology for the understanding of geometry by applying 3D and ICT resources in the classroom*
Prof.	C Pérez	*Stabilization of switched linear systems by using projections*
Prof.	JB García	*Invariant set for third-order switched systems*
Prof.	M. Bizzarri	*Rational blends of two cones from square-root parameterized medial axis transforms*
	11:40 — 12:10 COFFEE BREAK & POSTER SESSION P-16/P-30	
Prof.	S Romero	*On the quasi-positive systems*
Prof.	C Vargas	*Controlling Oscillations of a Hanging String with a Tip Mass*

	Room 4:	***Quasi-Solvable Systems in Quantum Chemistry and Physics.*** ***Chair: Jerzy Cioslowski*** *(50 min talks)*
Prof.	P Gill	Exact solutions of the Schrodinger equation for two electrons on a sphere
Prof.	A Escobar	Two charges on a plane in a magnetic field: hidden algebra, (particular) integrability, polynomial eigenfunctions
	11:40 — 12:10 COFFEE BREAK & POSTER SESSION P-16/P-30	
Prof.	P Loos	Nodal surfaces in quasi-exactly solvable models
Prof.	C Schilling	One-particle picture for Moshinsky-type atoms and significance of generalized Pauli constraints

LUNCH BREAK 14:00-16:00

Parallel Sessions 16:00 – 20:00

	Room 1:	***Interpolation and Nonlinear Optimization.*** ***Chair: M.T. Monteiro***
Prof.	A Lemos	*An epidemic model for cholera with treatment through quarantine*
Prof.	A V Merwe	*A mathematical ranking model in learning analytics*
Prof.	D Torres	*Stability and Optimal Control of a Delayed HIV Model*
Prof.	I García	*Inverse estimation of terminal connections in the cardiac conduction system*
Prof.	M Dupac	*Piecewise Modelling and Simulation of a Rotating Extensible Manipulator Link for Base Placement and Path Smoothness*
Prof.	T Monteiro	*A fractional Malthusian growth model with variable order using an optimization approach*
Prof.	Z Sir	*Approximating Support Function at Inflection Points for CNC Manufacturing*

	Room 2:	***Mathematical Modeling & Differential Equations.*** ***Chair: Carmen Calvo-Jurado***
Prof.	M Rosa	*Symmetry reductions and Conservation laws for a type of Fisher equations*
Prof.	S Simonenko	*Numerical simulation of cable truss systems using meshfree RBF method*
Prof.	I Alhama	*Stress-strains contours in heterogeneous soils under arbitrary loads a the surface*
Prof.	M Tezer	*A DRBEM approach for the Stokes eigenvalue problem*
Prof.	E Tosyalı	*Numerical Solutions of GPE under Gaussian Trap*

	Room 3:	***Fixed Point Theory in various abstract spaces & applications.*** ***Chair: J. Aledo***
Prof.	J. Aledo	Fixed Point Theorems for Graph Dynamical Systems
Prof.	A Roldán	RS-spaces and Fixed Point Theory
Prof.	J Martínez	Fuzzy relation-theoretic contraction principle
Prof.	S Phiangsungnen	The Generalized Hyers-Ulam Stability of Additive ρ-Functional Inequalities in Random Normed Spaces

	Room 4:	***Mathematical Modeling and Computational PDE .*** ***Chair: Z. Li***
Prof.	T Garrido	Lie symmetries and equivalence transformations for the Barenblatt-Gilman model
Prof.	A Portillo	Explicit and efficient exponential splitting time integrator for the Klein-Gordon equation with Absorbing Boundary Conditions
Prof.	A Muelas	Application of GFDM: Modelling of Geophysical Methods
Prof.	E Tosyalı	Dynamical Study of Gursey Instantons with Bichromatic Force
Prof.	M Ureña	Generalized FDM to reflection and transmission problems in seismic SH waves
Prof.	Z Li	(40 min talk) Analysis of a 2D adaptive mesh refinement method using lid-driven cavity flow

22:30 FLAMENCO SHOW.

Andalusian Style: singing, guitar playing, dance, vocalizations, handclapping and finger snapping

The organization invites a drink during the show, please pick up your ticket during the show.

Thursday, July 7, 2016

8:00—14:00 Excursion to Seville

(Breakfast opens at 7:15 for participants)

Parallel Sessions 16:00 – 20:00

	Room 1:	***From clusters to the solid state.*** **Chair: Ian Hamilton**
Prof.	A Garden	*Size and temperature dependence of the atomic structure of Au clusters including 100 to 4000 atoms*
Prof.	B Paulus	*A LCCSD(T) study for encapsulated systems applying the method of increments*
Prof.	P Schwerdtfeger	*The Extended Lennard-Jones Potential for Cubic Solids*
Prof.	T Söhnel	*Examining Electronic Structure and Magnetic Property of Layered Transition Metal-Tin Compounds Using First-principles Calculations*
Prof.	D. Pfannkuche	*Monitoring correlated electron dynamics by attosecond transient absorption spectroscopy*
Prof.	M Stepanova	*Modelling of Nanoparticle-Enzyme Complex*

	Room 2:	***Computational Finance & Economics.*** **Chair: Y Tangman**
Prof.	A Rasulov	*Monte Carlo Approach for the Pricing of European Multi-Asset Options*
Prof.	A Roldán	*A novel fuzzy regression model based on finite fuzzy numbers*
Prof.	H Mora	*Analytical study of labor markets based on graph theory*
Prof.	Y Tangman	*A superconvergent partial differential equation approach to price variance swaps*

	Room 3:	***Numerical methods for evolution & functional diff. Equations.*** **Chair: W.S.Wang**
Prof.	S Li	*An overview of canonical Euler splitting methods for composite stiff problems in evolution equations*
Prof.	X Cao	*The implicit midpoint method for the modified anomalous sub-diffusion equation with a nonlinear source term*
Prof.	W Wang	*Fast numerical valuation of European options under Merton's jump-diffusion model*
Prof.	L Weng	*Exact and discretized dissipativity of the nonlinear functional-integro-differential equations*
Prof.	A Vega	*Analysis and Prediction of Crossing effect on Inherent Deformation during the Line Heating Process – Multiple Crossed heating lines*

	Room 4:	***Mathematical Models on Transport.*** ***Chair: Marina Yashenina***
Prof.	M Lavicka	Modelling parts of branched skins using rational envelope surfaces
Prof.	T Martinovič	Dynamical properties of traffic speed
Prof.	A Buslaev	Mathematical Aspects on Traffic of Incompressible Worms on Simple Circular Structures
Prof.	A Karapetyan	Dynamics of a Disk on a Rotating Plane with Friction
Prof.	M Munitsyna	The Dynamics of a Heavy Ridid Ellipsoid on a Horizontal Plane with Friction

Friday, July 8, 2016

10:00 – 12:50

Room 1: Session Organizers and CMMSE plenary speakers

- **Consideration of proposals for: Plenary lectures, Special sessions, and location of the conference next year.**

All suggestions are welcome: please contact J. Vigo-Aguiar

Room 3: Late Talks. You can move your talk here if you have any kind of incidence

Room 2: POSTER SESSION
Tuesday 5, P-1/P-15 & Wednesday 6, P-16/P-27

Posters will be presented during coffee breaks.
Poster format: approx. A0 (841mm x 1188mm)

P-1. **Consensus formation in a system of difference equations modeling controversial opinion dynamics with pairwise interactions.**
Maria Guadalupe Medina Guevara

P-2. **A Rendezvous Framework for the Automatic Deployment of Services in Cluster Computing**
Antonio Díaz

P-3. **Numerical solution of Love's integral equation by quasi-interpolation**
Domingo Barrera

P-4. **Numerical solution of two-dimensional nonlinear Volterra integral equations**
Domingo Gámez

P-5. **Accelerating Microrheology models on HPC architectures**
Gloria Ortega

P-6. **Evaluation of an Evolutionary Multi-Objective Optimization algorithm on a ARM+GPU system**
Gloria Ortega

P-7. **How group size influences the efficiency of FMM**
Jesus A. Lopez-Fernandez

P-8. **An energy evaluation of data-parallel applications in heterogeneous systems**
José Luis Bosque

P-9. **Windows for escaping particles in quartic galactic potentials**
Juan Francisco Navarro

P-10. **A Hybrid GPU Technique for Real-Time Terrain Visualization**
Juan Manuel Orduña Huertas

P-11. **An efficient method for solving two-dimensional Fredholm integral equations**
María Isabel Berenguer

P-12. **Parameter Extraction in Electron Devices by means of Polynomial Pattern Analysis**
María José Ibáñez

P-13. **Backward error analysis of almost strictly sign regular matrices**
Pedro Alonso

P-14. **Real-Time Audio-to-Score Alignment using Multi-core Architectures**
Raquel Cortina

P-15. **A class of tests for the two-sample problem for count data based on the empirical probability generating function**
M. Virtudes Alba-Fernández

P-16. **Extension of Newton's method for solving systems of equations when the classical Newton method fails**
Higinio Ramos

P-17. **Design and dissemination of the MENTOR Tutorial Attention Plan in the School of Industrial Engineering of the Universidad de Valladolid**
Ana M. Portillo

P-18. **Distribution function estimates from dual frame context**
Antonio Arcos

P-19. **Comparison of data mining tools**
Antonio J. Tallón-Ballesteros

P-20. **Multicriteria design of energy-conscious fuzzy rule-based classifiers for embedded devices**
José Ranilla Pastor

P-21. **A secure and efficient ecc based method to avoid impersonation for the SIP protocol.**
J.A. Alvarez

P-22. **An improved class of estimators of a linear parameter using auxiliary information in randomized response surveys**
María del Mar Rueda

P-23. **An extension of the Muth distribution**
Pedro Jodrá

P-24. **Extension of confidence bands based on the exact distribution of the order statistics for Normal S-P Plots**
Sonia Castillo-Gutiérrez

P-25. **Widely Linear Quaternion Signal Filter from One-Step Delayed Observations**
José Domingo Jiménez-López

P-26. **A fuzzy regression approach using Bernstein polynomials for the spreads and an application to a real Economic context**
Concepcion Aguilar