

**PRODUCCIÓ CIENTÍFICA DERIVADA DE LES TESIS
DEFENSADES o DIPOSITADES en**

Gener 2013-Octubre 2016

PROGRAMA DE DOCTORAT EN MATEMÀTICA APLICADA – UPC

Facultat de Matemàtiques i Estadística¹

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Publicacions en revistes derivades de les tesis

¹ La primera versió d'aquest informe ha estat elaborada pel servei de biblioteca de l'FME. Posteriorment va ser enviat als directors i es van incorporar les seves correccions.

ASADIPOUR, NINA - Rheological models for tissue relaxation and fluidization

- Asadipour, N.; Trepas, X.; Muñoz, J. J.; Porous-based rheological model for tissue fluidisation. *J. Mech. Phys. Solids* 96 (2016), 535–549. ISSN: 0022-5096. Revista indexada al JCR Q1
- Muñoz, J. J.; Conte, V.; Asadipour, N.; et al. A truss element for modelling reversible softening in living tissues. *Mechanics research communications* 49 (2013) Revista indexada al JCR Q2
- P Mosaffa, N Asadipour, D Millán, A Rodríguez-Ferran and JJ Muñoz. "Cell-centred model for the simulation of curved cellular monolayers". *Computational Particle Mechanics*, 2(4): 359-370, 2015. Revista no indexada al JCR

DACHS CADEFAU, FERRAN - Multiplier Ideals in Two-Dimensional Local Rings with Rational Singularities

- Alberich-Carramiñana, Maria; Àlvarez Montaner, Josep; Dachs-Cadefau, Ferran. Multiplier ideals in two-dimensional local rings with rational singularities. *Michigan Math. J.* 65 (2016), no. 2, 287–320. ISSN: 0026-2285 ; E-ISSN: 1945-2365. Revista indexada al JCR Q2
- Alberich-Carramiñana, Maria; Àlvarez Montaner, Josep; Dachs-Cadefau, Ferran; González-Alonso, Víctor. Poincaré series of multiplier ideals in two-dimensional local rings with rational singularities. *Adv. Math.* 304 (2017), 769–792. ISSN: 0001-8708. Revista indexada al JCR Q1

JIMÉNEZ JIMÉNEZ, M. JOSÉ - Ecuaciones en diferencias lineales de segundo orden y su aplicación al Análisis Matricial

- Encinas, A. M.; Jiménez, M. J. Floquet theory for second order linear homogeneous difference equations. *J. Difference Equ. Appl.* 22 (2016), no. 3, 353–375. ISSN: 1023-6198 E-ISSN: 1563-5120. Revista indexada al JCR Q3
- Carmona, A.; Encinas, A. M.; Gago, S.; Jiménez, M. J.; Mitjana, M. The inverses of some circulant matrices. *Appl. Math. Comput.* 270 (2015), 785–793. ISSN: 0096-3003. Revista indexada al JCR Q2
- Jiménez, M. J.; Encinas, A. M. Combinatorial Recurrences and Linear Difference Equations, *Electron. Notes Discrete Math.*, 54 (2016). 313–318 **Revista no indexada al JCR (sense quartil)**
- Jiménez, M.J. Teoría de Floquet para ecuaciones en diferencias lineales de segundo orden y homogéneas, en *Avances en Matemática Discreta en Andalucía*, vol. IV (J. Cáceres y M.L. Puertas ed.), pp. 157-165. Universidad de Almería, 2015. ISBN: 978-84-8240-724-1 **Revista no indexada al JCR (sense quartil)**

LI, BIN - The variational approach to brittle fracture in materials with anisotropic surface energy and in thin sheets

- Li, Bin; Peco, Christian; Millán, Daniel; Arias, Irene; Arroyo, Marino. Phase-field modeling and simulation of fracture in brittle materials with strongly anisotropic surface energy. *Internat. J. Numer. Methods Engrg.* 102 (2015), no. 3-4, 711–727. ISSN: 0029-5981 E-ISSN: 1097-0207. Revista indexada al JCR Q1

ROIG MARANGES, ABDÓ - Descent in Lawson homology and morphic cohomology

- Roig-Maranges, Abdó Morphic cohomology of toric varieties. Homology Homotopy Appl. 14 (2012), no. 1, 113–132. ISSN: 1532-0073 ; E-ISSN: 1532-0081. Revista indexada al JCR Q4

SALES INGLES, VICENTE - Aportaciones al estudio de los sistemas electorales

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SERRA I MUSACH, JORDI - Estudi de l'evolució i el tractament del càncer des d'una perspectiva de la biologia de sistemes

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DANIELE CASAZZA - Stark-Heegner points and p-adic L-functions

- Casazza, Daniele; Rotger, Victor. Stark points and the Hida-Rankin p-adic L-function. Ramanujan Journal of Mathematics, accepted. Revista indexada al JCR Q2.

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- Hierro, Alba; Badia, Santiago; Kus, Pavel. Shock capturing techniques for hp-adaptive finite elements. Computer methods in applied mechanics and engineering 309 (2016) Revista indexada al JCR Q1
- Badia, Santiago; Hierro, Alba. On discrete maximum principles for discontinuous Galerkin methods. Computer methods in applied mechanics and engineering 286 (2015) Revista indexada al JCR Q1
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ANNA KIESENHOFER – Integrable systems on b-symplectic manifolds

- Kiesenhofer, Anna; Miranda, Eva. Non-commutative integrable systems on b-symplectic manifolds, Journal of Regular and Chaotic Dynamics, Volume 21, Issue 6, 2016. Revista indexada al JCR Q2.
 - Kiesenhofer, Anna; Miranda, Eva. Cotangent models for integrable systems, Communications in Mathematical Physics, 2016, 1-23, DOI 10.1007/s00220-016-2720-x. Revista indexada al JCR Q1.
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 - Kiesenhofer, Anna; Miranda, Eva; Scott, Geoffrey. Action-angle variables and a KAM theorem for b-Poisson manifolds, J. Math. Pures Appl. (9) 105 (2016), no. 1, 66-85. Revista indexada al JCR Q1.
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CASTEJÓN I COMPANY, ORIOL - Study of invariant manifolds in two different problems: the Hopf-zero singularity and neural synchrony

- Castejón, Oriol; Guillamon, Antoni; Huguet, Gemma Phase-amplitude response functions for transient-state stimuli. *J. Math. Neurosci.* 3 (2013), Art. 13, 26 pp. ISSN: 2190-8567 **Revista no indexada al JCR (sense quartil)**
- Baldomá, I.; Castejón, O.; Seara, T. M. Exponentially small heteroclinic breakdown in the generic Hopf-zero singularity. *J. Dynam. Differential Equations* 25 (2013), no. 2, 335–392. ISSN: 1040-7294 ; E-ISSN: 1572-9222. Revista indexada al JCR Q2

DALL, AARON MATTHEW - Matroids: h-vectors, zonotopes, and Lawrence polytopes

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GRAU GOTÉS, MARIA ÀNGELA - On iterative methods to solve nonlinear equations

- Ezquerro, José A.; Grau, Angela; Grau-Sánchez, Miquel; Hernández-Verón, Miguel A. A new class of secant-like methods for solving nonlinear systems of equations. *Commun. Appl. Math. Comput. Sci.* 9 (2014), no. 2, 201–213. ISSN: 1559-3940 ; E-ISSN: 2157-5452. Revista indexada al JCR Q2
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HASHEMIAN, BEHROOZ - Machine learning in multiscale modeling and simulation of molecular systems

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- Hashemian, Behrooz; Millan, Daniel; Arroyo, Marino. Modeling and enhanced sampling of molecular systems with smooth and nonlinear data-driven collective variables. *Journal of Chemical Physics* (2013) Revista indexada al JCR Q2

MONTORO LOPEZ, MARIA EULALIA - SUBESPACIOS HIPERINVARIANTES Y CARACTERÍSTICOS: UNA APROXIMACIÓN GEOMÉTRICA

- Ferrer, Josep; Minguez, David; Montoro, M. Eulàlia Counting d -dimensional hyperinvariant subspaces of a Weyr matrix. *Linear Algebra Appl.* 493 (2016), 14–27. ISSN: 0024-3795. Revista indexada al JCR Q2
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- Diez-Machío, H.; Clotet, J.; García-Planas, M. I.; Magret, M. D.; Montoro, M. E. Singular switched linear systems: some geometric aspects. *Internat. J. Modern Phys. B* 26 (2012), no. 25, 1246006, 10 pp. ISSN: 0217-9792 ; E-ISSN: 1793-6578. Revista indexada al JCR Q4
- Magret, M. Dolors; Montoro, M. Eulalia On the existence of a common eigenvector for all matrices in the commutant of a single matrix. *Linear Algebra Appl.* 437 (2012), no. 5, 1285–1292. ISSN: 0024-3795. Revista indexada al JCR Q2

ORTEGO MARTÍNEZ, MARÍA ISABEL - Estimación bayesiana de cópulas extremales en procesos de Poisson

- Egozcue, J. J.; Pawlowsky-Glahn, V.; Tolosana-Delgado, R.; Ortego, M. I.; van den Boogaart, K. G. Bayes spaces: use of improper distributions and exponential families. *Rev. R. Acad. Cienc. Exactas Fís. Nat. Ser. A Math. RACSAM* 107 (2013), no. 2, 475–486. ISSN: 1578-7303 ; E-ISSN: 1579-1505. Revista indexada al JCR Q3

SIMON LÓPEZ, ADRIÀ - DIFFUSION THROUGH NON-TRANSVERSE HETEROCLINIC CHAINS: A LONG-TIME INSTABILITY FOR THE NLS

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SÁNCHEZ MARTÍN, PATRICIA - APPLICATION OF DYNAMICAL SYSTEM METHODS TO GALACTIC DYNAMICS: FROM WARPS TO DOUBLE BARS

- Romero-Gómez, Mercè; Sánchez-Martín, Patricia; Masdemont, Josep J. How invariant manifolds form spirals and rings in barred galaxies. *Butl. Soc. Catalana Mat.* 29 (2014), no. 1, 51–75, 110. ISSN: 0214-316X ; E-ISSN: 2013-9829 **Revista no indexada al JCR (sense quartil)**

TAMARIT SARIOL, ANNA - SINGULAR PHENOMENA IN THE LENGTH SPECTRUM OF ANALYTIC CONVEX CURVES

- Martín, P.; Ramírez-Ros, R.; Tamarit-Sariol, A. Exponentially small asymptotic formulas for the length spectrum in some billiard tables. *Exp. Math.* 25 (2016), no. 4, 416–440. ISSN: 1058-6458; E-ISSN: 1944-950X. Revista indexada al JCR Q3
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TEIXIDÓ ROMÁN, MIGUEL - A cotangent bundle hamiltonian tube theorem and its applications in reduction theory

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UM, LAURENCE EMILIE - A CONTRIBUTION TO THE THEORY OF CONVOLUTIONAL CODES FROM SYSTEMS THEORY POINT OF VIEW

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VILALTELLA CASTANYER, JOAN - CONTRIBUCIONS A LA TEORIA DE L'ARESTA-ACOLORIMENT DE GRAFS: SNARKS I MULTIPOLS

- Fiol, M. A.; Vilaltella, J. Some results on the structure of multipoles in the study of snarks. *Electron. J. Combin.* 22 (2015), no. 1, Paper 1.45, 20 pp. ISSN: 1077-8926. Revista indexada al JCR Q3
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COULON, ANNE-CHARLINE BERNADETTE - Propagation in reaction-diffusion equations with fractional diffusion

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DE LA ROSA IBARRA, ABRAHAM - Global instability in the elliptic restricted three body problem

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DE VERA PIQUERO, CARLOS - Rational points on Shimura curves and Galois representations

- de Vera-Piquero, Carlos. Local points on Shimura coverings of Shimura curves at bad reduction primes. *Mosc. Math. J.* 16 (2016), no. 2, 323–370. ISSN: 1609-3321; E-ISSN: 1609-4514. Revista indexada al JCR Q2
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FONT MARTÍNEZ, FRANCESC - Beyond the classical Stefan problem

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LORENZO GARCÍA, ELISA - Arithmetic properties of non-hyperelliptic genus 3 curves

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MACDEVETTE, MICHELLE MARI - Heat transfer analysis of nanofluids and phase change materials

- Myers, Tim G.; MacDevette, Michelle M.; Font, Francesc; Cregan, Vincent Continuum mathematics at the nanoscale. *J. Math. Ind.* 4 (2014), Art. 11, 13 pp. ISSN: 2190-5983. Revista no indexada al JCR (sense quartil)
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PRIETO MARTÍNEZ, PEDRO DANIEL - Geometrical structures of higher-order dynamical systems and field theories

- Prieto-Martínez, Pedro Daniel; Román-Roy, Narciso Variational principles for multisymplectic second-order classical field theories. *Int. J. Geom. Methods Mod. Phys.* 12 (2015), no. 8, 1560019, 7 pp. ISSN: 0219-8878 ; E-ISSN: 1793-6977. Revista indexada al JCR Q4
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RABIEI, SEYEDNIMA - Decomposition Techniques for Computational Limit Analysis

- Rabiei, Nima; Muñoz, Jose J. AAR-based decomposition algorithm for non-linear convex optimisation. *Comput. Optim. Appl.* 62 (2015), no. 3, 761–786. ISSN: 0926-6003 ; E-ISSN: 1573-2894. Revista indexada al JCR Q2

- JJ Muñoz and N Rabiei. "AAR-based decomposition method for lower bound limit analysis". *ICE - Engineering and Computational Mechanics*, 168(4): 169–177, 2015. **Revista no indexada al JCR**

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- Ros-Oton, Xavier; Serra, Joaquim, Boundary regularity for fully nonlinear integro-differential equations. *Duke Math. J.* 165 (2016), 2079-2154. Revista indexada al JCR Q1.
- Ros-Oton, Xavier, Regularity for the fractional Gelfand problem up to dimension 7. *J. Math. Anal. Appl.* 419 (2014), 10-19. Revista indexada al JCR Q1.
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SERRA MONTOLÍ, JOAQUIM - Elliptic and parabolic PDEs: regularity for nonlocal diffusion equations and two isoperimetric problems

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