

Special Sessions

Session 1, Affine Algebraic Geometry

Wednesday 18, Room 310

- 15:30–16:00 *Jacobian quotients of polynomial mappings*
Enrique Artal Bartolo
- 16:00–16:30 *Generic fibrations by A^1 and A^* over discrete valuation rings*
Nobuharu Onoda
- 16:30–17:00 *Jacobian relations and formal inverse*
David Wright
- 17:30–18:00 *Purely inseparable k -forms of affine algebraic curves*
Teruo Asanuma
- 18:00–18:30 *On the two-dimensional subalgebras of polynomial algebras*
Leonid Makar-Limanov
- 18:30–19:00 *Symmetric matrices, invariants and the Jacobian conjecture*
Arno van den Essen
- 19:00–19:30 *Trivial, locally trivial and proper G_a -actions on affine n -space*
Peter van Rossum
- 19:30–20:00 *The explicit factorization of the Cremona transformation which is an extension of the Nagata automorphism into elementary links*
Takashi Kishimoto

Thursday 19, Room 309

- 18:30–19:00 *Computing unirational fields of arbitrary transcendence degree*
Jaime Gutiérrez
- 19:00–19:30 *Verbal subgroups and subalgebras in skew fields*
Alexander Lichtman
- 19:30–20:00 *Some new examples of 4-dimensional algebraic exotic structures*
Manuel González Villa

Friday 20, Room 310

- 10:30–11:00 *The tame and wild polynomial automorphisms*
Ivan Shestakov
- 11:00–11:30 *Birational maps from C^2 to C^2*
Pierrette Cassou-Noguès
- 11:30–12:00 *Inverse limits of polynomial rings*
Tatsuji Kambayashi
- 12:00–12:30 *Affine surfaces with trivial Makar-Limanov invariant*
Daniel Daigle
- 12:30–13:00 *Embeddings of Danielewski surfaces*
Gene Freudenburg
- 13:00–13:30 *Tame and wild coordinates of $R[x,y]$*
Chi Ming Lam

Saturday 21, Room 309

08:30–09:00 *The monodromy group of a generic curve covering P^1*

Tony Shaska

09:00–09:30 *Pseudorandom walks on elliptic curves*

Igor Shparlinski

Session 2, Algebraic Geometry

Wednesday 18, Room 301

19:00–20:00 *Invariants of curves and surfaces from Abel to Jung and Severi*
Shreeram Abhyankar

Thursday 19, Room 303

11:30–12:30 *Motivic Igusa zeta function and monodromy conjecture*
Ignacio Luengo Velasco

12:30–13:00 *On sections with isolated zeroes of twisted vector bundles*
Jorge Olivares Vázquez

13:00–13:30 *Polyhedrality of the cone of curves of a rational surface*
Francisco José Monserrat Delpalillo

15:30–16:00 *Geometry of the plane Cremona maps*
María Alberich Carramiñana

16:00–17:00 *Integrable systems, matrix models, and open GW invariants*
Ron Donagi

17:30–18:00 *Rationality of moduli spaces of stable vector bundles*
Laura Costa

18:00–19:00 *Tetrahedral Curves*
Juan Migliore

19:00–20:00 *Dimension of families of determinantal schemes*
Rosa María Miró–Roig

Saturday 21, Room 303

08:30–09:00 *Addition formulae for non-abelian theta functions*
Francisco José Plaza Martín

09:00–10:00 *Equations of Hurwitz schemes in the infinite Grassmannian*
José María Muñoz Porras

10:00–11:00 *On the geometric Langlands correspondence*
Edward Frenkel

Session 3, Algebraic Topology

Wednesday 18, Room 213

- 15:30–16:30 *The normalizer of the torus in a compact Lie group*
William Dwyer
- 17:30–18:30 *Homology decompositions of spaces*
Natàlia Castellana Vila
- 18:30–19:00 *Elliptic spaces and a conjecture of Anick*
Aniceto Murillo

Thursday 19, Room 213

- 11:30–12:30 *Fixity and group actions*
Alejandro Adem Díaz de León
- 12:30–13:30 *Stable localizations preserve certain ring spectra*
Carles Casacuberta Vergés
- 15:30–16:30 *A proof of the Martino–Priddy conjecture*
Bob Oliver
- 16:30–17:00 *p -local finite groups*
Carles Broto Blanco
- 17:30–18:30 *The equivariant topology of cycles on Brauer–Severi varieties*
Pedro F. dos Santos

Friday 20, Room 213

- 10:30–11:30 *On localizations of perfect groups and related topics*
José Luis Rodríguez Blancas
- 12:30–13:00 *Classification of p -local finite groups over the extraspecial group of order p^3 and exponent p*
Antonio Viruel
- 13:00–13:30 *Formality and symplectic geometry*
Vicente Muñoz Velázquez

Saturday 21, Room 213

- 09:30–10:30 *Homotopy G spheres*
Jeffrey Smith
- 10:30–11:00 *p -compact groups and p -local groups*
Jesper Grodal

Session 4, Banach Spaces of Analytic Functions

Wednesday 18, Room 208

- 15:30–16:00 *Harmonic measure on Swiss cheeses with uniformly spaced holes*
Kristian Seip
- 16:00–16:30 *Recent results related to the Bloch and Landau covering constants*
Albert Baernstein II
- 16:30–17:00 *Uniformly discrete sets and Bergman spaces*
Peter Duren
- 17:30–18:00 *On $Q_p(R)$ for Riemann surfaces*
Rauno Aulaskari
- 18:00–18:30 *Equivalence of summatory conditions along sequences for bounded holomorphic functions*
Pascal Thomas
- 18:30–19:00 *Hausdorff matrices acting on spaces of analytic functions*
Aristomenis Siskakis
- 19:00–19:30 *A unified approach to Farrell and Mergelyan sets*
Fernando Pérez-González
- 19:30–20:00 *Differential operators, the Laguerre–Pólya class and the Riemann ξ -function*
George Csordas

Thursday 19, Room 208

- 18:30–19:00 *Schwarz–Christoffel mapping of multiply connected domains*
John Pfaltzgraff
- 19:00–19:30 *Complemented invariant subspaces in Bergman spaces*
Kehe Zhu
- 19:30–20:00 *Luecking’s condition for zeros of Bloch functions*
Maria Nowak

Friday 20, Room 208

- 10:30–11:00 *Interpolation in the Nevanlinna class and harmonic majorants*
Artur Nicolau Nos
- 11:00–11:30 *Weak compactnes in $*$ -invariant subspaces*
Dmitry Khavinson
- 11:30–12:00 *Holomorphic functions and quasiconformal mappings with smooth moduli*
Konstantin Dyakonov
- 12:00–12:30 *Interpolation and approximation by rational functions with prescribed poles outside the unit circle*
Pablo González Vera
- 12:30–13:00 *On the modulus of mean oscillation*
Óscar Blasco de la Cruz
- 13:00–13:30 *Some thoughts on Toeplitz operators on the Hardy space*
Dragan Vukotic Jovsic

Saturday 21, Room 208

08:30–09:00 *Finite type subnormals, vector Toeplitz and separating real algebraic curves*

Dmitry Yakubovich

09:00–09:30 *On removable singularities for analytic functions in the little Zygmund space*

Juan Jesús Donaire Benito

Session 5, Biomolecular Mathematics

Wednesday 18, Room 312

- 15:30–16:30 *Another class of semi-simple splicing languages*
Carlos Martín Vide
- 16:30–17:00 *Using automated reasoning systems in natural computing*
Mario J. Pérez–Jiménez
- 17:30–18:30 *Synonymous codon bias and gene expression*
Alessandra Carbone
- 18:30–19:30 *Mathematics of gene assembly*
Tero Harju
- 19:30–20:00 *On some abstract metrics for arbitrary contact structures*
Francesc A. Rosselló Llompарт

Thursday 19, Room 312

- 18:30–19:30 *Membrane computing – power and efficiency: Recent results*
Gheorghe Paun
- 19:30–20:00 *Complexity classes in cellular computing with membranes*
Mario J. Pérez–Jiménez

Friday 20, Room 312

- 10:30–11:30 *Test tube systems*
Rudolf Freund
- 11:30–12:30 *Circular DNA-based algorithms to solve hard problems*
Rani Siromoney
- 12:30–13:30 *Agent based computational models of cells and tissue*
Mike Holcombe

Saturday 21, Room 312

- 08:30–09:30 *Recent results in natural computing*
Tom Head

Session 6, Classical and Harmonic Analysis

Wednesday 18, Room 209

- 15:30–16:00 *Some recent results about bilinear pseudodifferential operators*
Rodolfo Torres
- 16:00–16:30 *On the Carleson Hunt theorem in classical Fourier analysis*
Camil Muscalu
- 16:30–17:00 *The Boundedness of the Hilbert transform along vector fields*
Sanja Hukovic
- 17:30–18:00 *Bilipschitz maps, analytic capacity, and the Cauchy integral*
Xavier Tolsa
- 18:00–18:30 *Bellman functions and continuous problems*
Stefanie Petermichl
- 18:30–19:00 *Beltrami-type operators and geometry of curves*
María José González

Thursday 19, Room 209

- 11:30–12:00 *A multiparameter version of the Coifman–Meyer multilinear theorem*
Jill Pipher
- 12:00–12:30 *L^p bounds for Riesz transforms and square roots associated to second order elliptic operators*
José María Martell Berrocal
- 12:30–13:00 *Dyadic models for the equations of fluid motion*
Natasa Pavlovic
- 13:00–13:30 *On the Fatou theorem for non-linear equations on trees*
José González Llorente
- 15:30–16:00 *Mapping properties of the elliptic maximal function*
Mehmet Burak Erdogan
- 16:00–16:30 *Mixed norm inequalities for directional operators and K -plane transforms*
Osane Orue–Echevarría Fernández de la Peña
- 16:30–17:00 *An almost-orthogonality principle for directional maximal functions*
María Angeles Alfonseca Cubero
- 17:30–18:00 *Variants of the Erdos and Falconer distance problems*
Alex Iosevich
- 18:00–18:30 *B -convex and K -convex operator spaces*
Javier Parcet Hernández

Friday 20, Room 209

- 10:30–11:00 *Maximal function estimates for the KP-I equation*
Sarah Ziesler
- 11:00–11:30 *A maximal operator associated to space curves*
Malabika Pramanik
- 11:30–12:00 *Estimates for oscillatory integrals and the Schrödinger equation*
Giacomo Gigante
- 12:00–12:30 *Weighted inequalities for the Fourier extension operator*
Jonathan Bennett
- 12:30–13:00 *Weighted estimates for elliptic systems in Lipschitz domains*
Zhongwei Shen
- 13:00–13:30 *On the Calderón–Zygmund Principle for some singular integral operators*
Rodrigo Trujillo González

Saturday 21, Room 209

- 09:30–10:00 *Large solutions for Yamabe and similar problems on domains in Riemannian manifolds*
Martin Dindos
- 10:00–10:30 *Signed Riesz capacities*
Joan Mateu
- 10:30–11:00 *Some applications of large sieve*
Fernando Chamizo Lorente

Session 7, Combinatorics

Thursday 19, Room 212

- 11:30–12:00 *Convex sets in graphs*
Alberto Márquez Pérez
- 12:00–12:30 *Representation functions of additive bases in combinatorial number theory*
Melvyn Nathanson
- 12:30–13:00 *Sidon sets*
Javier Cilleruelo Mateo
- 13:00–13:00 *Sets with small sum in Z/pZ : beyond Vosper theorem*
Oriol Serra Albó
- 15:30–16:00 *Steiner intervals and Steiner geodetic numbers in distance-hereditary graphs*
Ortrud Oellermann
- 16:00–16:30 *Lattice path matroids*
Anna de Mier Vinue
- 16:30–17:00 *Constructing matroids with the same Tutte polynomial*
Joseph Bonin
- 17:30–18:00 *Combinatorics of isoperimetric orders*
Sergei Bezrukov
- 18:00–18:30 *Bijections for refined restricted permutations*
Sergi Elizalde

Saturday 21, Room 212

- 09:00–10:00 *Non-crossing graphs on a planar point set form the face poset of a polyhedron*
Francisco Santos Leal
- 10:00–10:30 *Combinatorial pointed pseudo-triangulations*
Brigitte Servatius
- 10:30–11:00 *The rank and kernel of several nonlinear codes*
Josep Rifà Coma

Session 8, Commutative Algebra: geometric, homological, combinatorial and computational aspects

Wednesday 18, Room 305

- 19:00–19:30 *Linearly presented ideals*
David Eisenbud
- 19:30–20:00 *A formula for the core of ideals*
Bernd Ulrich

Thursday 19, Room 304

- 11:30–12:00 *Divisors of integrally closed modules*
Wolmer Vasconcelos
- 12:00–12:30 *Monomial ideals and their core*
Claudia Polini
- 12:30–13:00 *Saturation and Castelnuovo–Mumford regularity*
Isabel Bermejo
- 13:00–13:30 *Ideals of linear type in Cremona maps*
Aron Simis
- 15:30–16:00 *Secant varieties to Grassmann varieties*
Anthony Geramita
- 16:00–16:30 *The structure of the Rao module and the geometry of schemes*
Marta Casanellas Rius
- 16:30–17:00 *Liaison of varieties of small dimension and deficiency modules*
Marc Chardin
- 17:30–18:00 *Asymptotic behaviour of cohomology*
Markus Brodmann
- 18:00–18:30 *Positive combinatorial formulae for quiver polynomials*
Ezra Miller
- 18:30–19:00 *The equality $I^2 = QI$ in Buchsbaum rings*
Hideto Sakurai
- 19:00–19:30 *Multiplier ideals in exotic settings*
Ana Bravo
- 19:30–20:00 *On birational Macaulayfications and Cohen–Macaulay canonical modules*
Peter Schenzel

Saturday 21, Room 304

- 08:30–09:00 *Poincaré series of resolution of surface singularities*
Steven Dale Cutkosky
- 09:00–09:30 *Resolution of singularities; aspects of the implementation*
Orlando Villamayor
- 09:30–10:00 *Monomial ideals and normality*
Rafael Villarreal
- 10:00–10:30 *Some numerical invariants of local rings*
Josep Álvarez Montaner
- 10:30–11:00 *Deformations of monomial ideals*
Aldo Conca

Session 9, Computational Methods in Algebra and Analysis

Wednesday 18, Room 306

- 15:30–16:30 *How to use exterior algebras in elimination theory*
David Eisenbud
- 16:30–17:00 *Balanced configurations and rational hypergeometric functions*
Eduardo Cattani
- 17:30–18:00 *Determinantal formulas for resultants in low dimension*
Amit Khetan
- 18:00–18:30 *Classical and modern approaches to bivariate hypergeometric systems*
Alicia Dickenstein
- 18:30–19:00 *Computational K-theory for polynomial rings over Dedekind domains*
Manuel Jesús Gago Vargas
- 19:00–19:30 *Computational methods for rational curves and surfaces*
Juan Rafael Sendra Pons
- 19:30–20:00 *Computer algebra and computer aided geometric design*
Laureano González-Vega

Thursday 19, Room 306

- 18:30–19:30 *Algorithms for the ring of differential operators and their applications*
Nobuki Takayama
- 19:30–20:00 *Hypergeometric systems and local cohomology*
Laura Felicia Matusevich

Friday 20, Room 306

- 10:30–11:30 *Poincaré series, topology and cyclotomic factors*
Antonio Campillo
- 11:30–12:00 *On Bernstein–Sato ideals*
José María Ucha Enríquez
- 12:00–12:30 *Explicit calculation of slopes in hypergeometric systems*
María Isabel Hartillo Hermoso
- 12:30–13:00 *Finite dimensional representations of invariants under tori of the Weyl algebra*
Sonia L. Rueda Pérez
- 13:00–13:30 *Stratifications induced by homomorphisms between holonomic sheaves*
Uli Walther

Saturday 21, Room 306

- 08:30–09:00 *Computing with locally effective matrices*
Julio Jesús Rubio García
- 09:00–09:30 *Computation of Ratliff–Rush closure*
Juan Elías

Session 10, Constructive Approximation Theory

Wednesday 18, Room 207

- 15:30–16:30 *The mathematics of analogue to digital encoding*
Ronald DeVore
- 16:30–17:00 *Asymptotic expansions of integrals: application to singular perturbation problems*
application to singular perturbation problems
José L. López
- 17:30–18:00 *Recent trends in Sobolev orthogonal polynomials*
Francisco Marcellán Español
- 18:00–18:30 *Advances on Hermite–Padé approximation of Nikishin systems*
Guillermo Tomás López Lagomasino
- 18:30–19:00 *Jacobi polynomials with general parameters*
Andrei Martínez Finkelshtein

Friday 20, Room 207

- 10:30–11:30 *Orthogonal polynomials for exponential weights*
Doron Lubinsky
- 11:30–12:30 *Information entropies of special functions and orthogonal polynomials*
Jesús Sánchez–Dehesa
- 12:30–13:00 *On q -polynomials on the exponential lattice*
Renato Álvarez–Nodarse
- 13:00–13:30 *The Schwarzian derivative and hyperbolically convex functions*
Roger Barnard

Session 11, Control and Geometric Mechanics

Wednesday 18, Room 202

- 15:30–16:00 *Flagellar motion via geometric mechanics*
Jair Koiller
- 16:00–16:30 *Cartan's approach applied to nonholonomic mechanics*
Kurt Ehlers
- 16:30–17:00 *Nonholonomic systems with symmetry: Some recent results and open questions*
Hernán Cendra
- 17:30–18:00 *Cartan forms for first order constrained variational problems*
Pedro Luis García Pérez
- 18:00–18:30 *Geometry of optimal control for PDEs*
Carlos López Lacasta
- 18:30–19:00 *Homogeneous Lagrangian systems*
David Saunders

Thursday 19, Room 202

- 11:30–12:00 *Planar propulsion through the manipulation of circulatory flows*
Scott Kelly
- 12:00–12:30 *The role of controllability in motion planning for affine connection control systems*
Andrew Lewis
- 12:30–13:00 *Control and kinematical systems*
Miguel-C. Muñoz-Lecanda
- 13:00–13:30 *Trajectory design for mechanical control systems: from geometry to algorithms*
Francesco Bullo
- 16:00–16:30 *Quantum optimal control on a compact Riemann manifold with boundary*
Alberto Ibert
- 16:30–17:00 *Constrained Poisson systems*
Victor Planas
- 17:30–18:00 *Lie algebroids and control theory*
Eduardo Martínez Fernández
- 18:00–18:30 *Quasi-bi versus bi-quasi Hamiltonian systems*
Willy Sarlet

Friday 20, Room 202

- 10:30–11:00 *A distribution theoretical approach to reduction and Hamiltonian conservation laws*
Juan–Pablo Ortega
- 11:00–11:30 *Lie groups and control theory*
José Cariñena
- 11:30–12:00 *Geometric integrators in constrained mechanics*
David Martín de Diego
- 12:00–12:30 *Covariant Poisson reduction: first steps*
Marco Castrillón López
- 12:30–13:00 *Integrability properties of chained systems in nonholonomic mechanics*
Felipe Monroy–Pérez
- 13:00–13:30 *On separation of variables for algebraically integrable Hamiltonian*
Franco Magri

Saturday 21, Room 202

- 10:00–10:30 *Gradient control systems*
Jorge Cortes
- 10:30–11:00 *On the global stabilization of the inverted pendulum*
Javier Aracil

Session 12, Differential Galois Theory

Wednesday 18, Room 308

- 15:30–16:00 *Model theory and differential Galois theory*
David Marker
- 16:00–16:30 *Principal invariant ideals for some polynomial derivations*
Andrzej Nowicki
- 16:30–17:00 *D-modules and irreducible plane curves*
Orlando Neto
- 18:00–18:30 *Connections on vector bundles, differential equations and Fuchs' relations*
Eduardo Corel
- 18:30–19:00 *Discussion*

Thursday 19, Room 308

- 11:30–12:00 *A reduction for regular differential systems*
Manuel Bronstein
- 12:00–12:30 *On a characterization of the Painlevé equations based on differential Galois theory of infinite dimension*
Hiroshi Umemura
- 12:30–13:00 *The multidimensional Jouanolou system*
Henryk Zoladek
- 13:00–13:30 *Lame differential operators with finite monodromy*
Razvan-Dinu Litcanu
- 15:30–16:00 *The differential Galois theory of strongly normal extensions*
Jerald Kovacic
- 16:00–16:30 *Differential Galois theory and integrability*
Juan José Morales Ruiz
- 16:30–17:00 *Application of a criterium for testing the non complete integrability of a hamiltonian system*
Delphine Boucher
- 17:30–18:00 *Non-integrability of the heavy top problem. A differential Galois approach*
Andrzej J. Maciejewski
- 18:00–18:30 *Discussion*

Friday 20, Room 308

- 10:30–11:00 *Inverse differential problems*
Claude Mitschi
- 11:00–11:30 *Invariant theory and Galois theory for q -difference equations*
Jean–Pierre Ramis
- 11:30–12:00 *Algebraic solutions of the Lamé equations*
Robert Maier
- 12:00–12:30 *The ring of all solutions of all linear differential equations and categorical duality*
Andy Magid
- 12:30–13:00 *Generic Picard–Vessiot extensions and examples*
Lourdes Juan
- 13:00–13:30 *Discussion*

Saturday 21, Room 308

- 09:30–10:00 *Picard–Vessiot theory in positive characteristic*
Anand Pillay
- 10:00–10:30 *Differential jet schemes for PDEs*
Thomas Scanlon
- 10:30–11:00 *Differential Galois realization of covers*
Zbigniew Hajto

Session 13, Differential structures and homological methods in commutative algebra and algebraic geometry

Wednesday 18, Room 309

19:00–20:00 *The p -adic exponents of a differential equation*
Zoghman Mebkhout

Thursday 19, Room 310

11:30–12:30 *On the residue theorem for formal schemes*
Joseph Lipman

12:30–13:00 *Bousfield localizations in algebraic geometry*
Leovigildo Alonso Tarrío

13:00–13:30 *Algorithmic proofs of two theorems of Stafford*
Anton Leykin

15:30–16:30 *Nonabelian Hodge theory in characteristic p*
Arthur Ogus

16:30–17:00 *The Hodge filtration for the de Rham complex of higher level*
Adolfo Quirós Gracián

17:30–18:30 *Cohomological descent and weight filtration*
Francisco Guillén Santos

18:30–19:00 *Explicit models for perverse sheaves*
Félix Gudiel Rodríguez

19:00–20:00 *A p -local approach to cohomology*
Eric Friedlander

Saturday 21, Room 310

08:30–09:00 *Differential operators on toric schemes*
William Traves

09:00–09:30 *Meromorphic functions with respect to a locally quasi-homogeneous free divisor*

Francisco Javier Calderón Moreno

09:30–10:00 *On the formal stationary phase*
Ricardo García López

10:00–11:00 *Riemann Roch and the exponential map*
Henri Gillet

Session 14, Discrete and Computational Geometry

Wednesday 18, Room 212

- 15:30–16:00 *On parallel diagonal flips in triangulations*
Prosenjit Bose
- 16:00–16:30 *Jacobi submanifolds of multiple Morse functions*
Herbert Edelsbrunner
- 16:30–17:00 *Relative geometric Inequalities*
Salvador Segura Gomis
- 17:30–18:00 *On polyhedra induced by point sets in space*
Godfried Toussaint
- 18:00–18:30 *A lower bound for the rectilinear crossing number of the complete graph*
Silvia Fernández
- 18:30–19:00 *Small point sets whose graph of triangulations is not connected*
Francisco Santos Leal
- 19:00–19:30 *A note on contracting edges in convex decompositions*
Eduardo Rivera Campo

Thursday 19, Room 212

- 18:30–19:00 *Games on triangulations*
Ferran Hurtado Díaz
- 19:00–19:30 *Sets in euclidean position in 2-orbifolds*
Alberto Márquez Pérez
- 19:30–20:00 *The convex hull of vertices in random hyperplane arrangements*
William Steiger

Friday 20, Room 212

- 10:30–11:00 *Proximate planar point location*
Stefan Langerman
- 11:00–11:30 *Delaunay graphs of order k*
Pedro Antonio Ramos Alonso
- 11:30–12:00 *Sphere-based computation of Delaunay diagrams*
Jack Snoeyink
- 12:00–12:30 *Delaunay complexity of points on surfaces*
Jeff Erickson
- 12:30–13:00 *Graph embeddings with partial oriented matroid constraints*
Ileana Streinu
- 13:00–13:30 *Spanning trees, cycles and minimum weight spanning trees for colored point sets on the plane*
Jorge Urrutia Galicia

Session 15, Dynamical systems

Wednesday 18, Room 204

- 15:30–16:00 *On the inverse integrating factor and its applications*
Jaume Llibre Saló
- 16:00–16:30 *The cyclicity of the elliptic segment loops of reversible quadratic Hamiltonian systems under quadratic perturbations*
Chengzhi Li
- 16:30–17:00 *Maximum number of limit cycles through Bendixson–Dulac criterion*
Armengol Gasull Embid
- 17:30–18:00 *Applications of bounded homeomorphisms*
David Richeson
- 18:00–18:30 *Patterns and minimal dynamics for graph maps*
John Guaschi
- 18:30–19:00 *Symbolic dynamics from arbitrary matrices*
Jim Wiseman

Thursday 19, Room 204

- 11:30–12:00 *Results about the unfolding of the nilpotent singularity of codimension three*
Santiago Ibáñez Mesa
- 12:00–12:30 *Persistence of homoclinic orbits for billiards and twist maps*
Sergey Bolotin
- 12:30–13:00 *High frequency perturbations of classical 1-DOF Hamiltonian systems with a parabolic fixed point*
Ernest Fontich Julià
- 13:00–13:30 *Cycles and systems of iterated functions*
Lorenzo J. Díaz
- 15:30–16:00 *Invariant manifolds in quasiperiodic systems: theory, computation and applications*
Alejandro Haro Provinciale
- 16:00–16:30 *On the Hamiltonian–Hopf bifurcation*
Angel Jorba
- 16:30–17:00 *Inverse topological pressure and applications*
Eugen Mihailescu
- 17:30–18:00 *Minimal subsets of a class of convex monotone skew-product semiflows*
Rafael Obaya García
- 18:00–18:30 *Sets of periods for tree maps: a characterization*
Lluís Alsedà Soler

Friday 20, Room 204

- 10:30–11:00 *A geometric mechanism for diffusion in Hamiltonian systems overcoming the large gap problem*
Amadeu Delshams
- 11:00–11:30 *Geometric mechanisms for diffusion in Hamiltonian systems*
Rafael de la Llave
- 11:30–12:00 *Functional differential equation on a Banach space*
Mustapha Yebdri
- 12:00–12:30 *Quantitative estimates on the size of Herman rings of the complex standard family using geometrical methods*
Jordi Villanueva Castelltort
- 12:30–13:00 *Accessible points in the Julia set for stable exponentials*
Mónica Moreno Rocha
- 13:00–13:30 *Parametrized dynamics of the Weierstrass elliptic function*
Lorelei Koss

Saturday 21, Room 204

- 09:30–10:00 *Graphs of NMS flows on S^3 without heteroclinic trajectories*
Pura Vindel
- 10:00–10:30 *On Newhouse's phenomenon*
Vadim Kaloshin
- 10:30–11:00 *Asymptotic randomization of sofic shifts by linear cellular automata*
Marcus Pivato

Session 16, Effective Analytic Geometry over Complete Fields

Wednesday 18, Room 307

- 16:00–17:00 *Average bit length of initial points in linear homotopy polynomial solving*
Luis M. Pardo
- 17:30–18:30 *Solving linear differential equations in H -fields*
Lou van den Dries
- 18:30–19:30 *p -adic integration and exponential sums*
Raf Cluckers
- 19:30–20:00 *Discussion*

Thursday 19, Room 308

- 18:30–19:30 *A p -adic nullstellensatz*
Simon Kochen

Friday 20, Room 307

- 10:30–11:30 *Betti numbers of definable sets*
Andrei Gabrielov
- 11:30–12:30 *Analytic difference rings*
Thomas Scanlon
- 12:30–13:30 *Non-archimedean semi-analytic and subanalytic sets*
Leonard Lipshitz

Saturday 21, Room 308

- 08:30–09:00 *An introduction to ultrametric fewnomial theory*
J. Maurice Rojas
- 09:00–09:30 *Discussion*

Session 17, Geometric Methods in Group Theory

Wednesday 18, Room 309

- 15:30–16:00 *Representations of the braid group by automorphisms of groups*
Luis Paris
- 16:00–16:30 *Braids and Nielsen–Thurston theory*
Juan González–Meneses López
- 16:30–17:00 *An analogue of a Magnus’ theorem for surface groups and some other one-relator groups*
Oleg Bogopolski
- 17:30–18:00 *Generic properties of the Whitehead algorithm, of stabilizers in $\text{Aut}(F_k)$ and of one-relator groups*
Ilya Kapovich
- 18:00–18:30 *Shift automorphisms of free groups*
Edward Turner
- 18:30–19:00 *Amenability and random walks*
Christophe Pittet

Thursday 19, Room 309

- 11:30–12:00 *Measured laminations and equations over free groups*
Mladen Bestvina
- 12:00–12:30 *Small cancellation and non-positive curvature*
Noel Brady
- 12:30–13:00 *Existence of $\text{CAT}(0)$ structures for finite type Artin groups*
Jon McCammond
- 15:30–16:00 *Minimal almost convexity*
Susan Hermiller
- 16:00–16:30 *Thompson’s group F is not almost convex*
Sean Cleary
- 16:30–17:00 *Counting elements in automorphic orbits*
Vladimir Shpilrain
- 17:30–18:30 *Automorphisms of canonical splittings*
Gilbert Levitt

Friday 20, Room 309

- 10:30–11:00 *Algorithms for fully residually free groups*
Olga Kharlampovich
- 11:00–11:30 *Groups acting on trees and infinite words*
Alexei Miasnikov
- 11:30–12:30 *Geometry of the word problem: space and time as geometric notions*
Steve Gersten
- 12:30–13:00 *Strong rigidity in even Coxeter groups*
Patrick Bahls
- 13:00–13:30 *Examples of groups acting freely on non-archimedean trees*
Armando Martino

Saturday 21, Room 309

- 09:30–10:00 *Foldings and the rank problem of Fuchsian groups*
Richard Weidmann
- 10:00–10:30 *The prefix membership problem for one-relator groups*
John Meakin
- 10:30–11:00 *Properly 3-realizable groups*
Manuel Enrique Cárdenas Escudero

Session 18, History of Modern Mathematics—Gauss to Wiles

Thursday 19, Room 206

- 11:30–12:30 *On a long neglected aspect of Hermann Weyl's contributions to cosmology*
Erhard Scholz
- 12:30–13:30 *Einstein, relativity, and the world of mathematics*
José Manuel Sánchez Ron
- 18:30–19:00 *Hilbert and logicism*
José Ferreirós Domínguez
- 19:00–19:30 *On the early reception of GRT: Some mathematical, philosophical, and physical perspectives*
David Rowe
- 19:30–20:00 *On Hilbert, Bourbaki and eternal truths in Mathematics*
Jesús Hernández

Saturday 21, Room 206

- 08:30–09:00 *Daniel Kan's discovery of adjoint functors*
Jean-Pierre Marquis
- 09:00–09:30 *The politics of infinitesimals: Marx, Mao, nonstandard analysis, and the Cultural Revolution*
Joseph W. Dauben
- 09:30–10:00 *Alfred Tarski: building an empire*
Solomon Feferman
- 10:00–11:00 *Alfred Tarski: the Warsaw years*
Anita Burdman Feferman

Session 19, Homological methods in Banach space theory

Wednesday 18, Room 210

- 15:30–16:00 *Representations of the dual of a Banach space*
Manuel González Ortiz
- 16:00–16:30 *Local complementation on Banach spaces and some applications*
Ricardo García González
- 16:30–17:00 *Domination by strictly singular and co-singular operators*
Francisco L. Hernández Rodríguez
- 17:30–18:30 *An extension of the Krein–Smulian theorem*
Antonio Suárez Granero
- 18:30–19:00 *Convex sets which are intersections of closed balls*
José Pedro Moreno Díaz
- 19:00–20:00 *A perturbative characterization for non-convergent martingale preserving operators*
Javier Pello García

Thursday 19, Room 210

- 11:30–12:30 *On the splitting of long exact sequences*
Pawel Domanski
- 12:30–13:30 *Nonlinear centralizers in homology, with applications*
Félix Cabello Sánchez
- 15:30–16:30 *On the Pelczynski–Lindenstrauss–Rosenthal–Johnson–Kalton–Zippin cycle of ideas (A homological vision of the hexagonal garden)*
Jesús M. F. Castillo
- 16:30–17:00 *On the Lindenstrauss–Rosenthal theorem*
Yolanda Moreno Salguero
- 17:30–18:30 *Stochastic approximation properties in Banach spaces*
William Johnson

Friday 20, Room 210

- 11:30–12:30 *Lipschitz quotients and metric trees*
Joram Lindenstrauss
- 12:30–13:30 *Uniform liftings of quotient maps*
Nigel Kalton

Saturday 21, Room 210

- 09:30–10:00 *A local property of projections' norms and its applications*
Mordecai Zippin
- 10:00–10:30 *Existence of Hermitian operators on finite-dimensional Banach spaces: geometrical consequences*
Miguel Martín Suárez
- 10:30–11:00 *Zeros of quadratic functionals on nonseparable Banach space*
Anatolij Plichko

Session 20, Homotopy Algebras

Wednesday 18, Room 214

- 15:30–16:30 *Finite dimensional L_∞ algebras*
Tom Lada
- 16:30–17:00 *HPT and cohomology operations*
Pedro Real Jurado
- 17:30–18:30 *Linearization through generalized Seiberg–Witten map in the Poisson–Sigma model*
Glenn Barnich
- 18:30–19:00 *Transferring TTP–structures up to homology equivalence*
Víctor Álvarez Solano

Thursday 19, Room 214

- 11:30–12:30 *Algebraic models for homotopy types*
Francis Sergeraert
- 12:30–13:30 *Homotopy theory of algebras over “n–dimensional little cube” operad*
Vladimir Smirnov
- 15:30–16:30 *HPT and the miniversal deformation*
Johannes Huebschmann
- 16:30–17:00 *$A(\infty)$ –structures and inversion theory*
María José Jiménez Rodríguez
- 17:30–18:30 *Homotopy invariance of homotopy algebras*
Martin Markl

Friday 20, Room 214

- 10:30–11:30 *Brane topology and BV_n –algebras*
Alexander A. Voronov
- 11:30–12:30 *Chicken or egg... Homotopy BV algebra or homotopy G algebra?*
Fusun Akman
- 12:30–13:30 *The biderivative operator and A–infinity Hopf algebras*
Ron Umble

Saturday 21, Room 214

- 09:30–10:30 *Homotopy algebra structure on homology*
Tornike Kadeishvili

Session 21, Interpolation Theory, Function Spaces and Applications

Wednesday 18, Room 207

- 19:00–19:30 *The Gustavsson–Peetre method for several Banach spaces*
Pedro Fernández Martínez
- 19:30–20:00 *Complex interpolation, minimal methods and compact operators*
Antonio Martínez Martínez

Thursday 19, Room 207

- 11:30–12:00 *Recent theorems on interpolation of operators*
Ronald DeVore
- 12:00–12:30 *Entropy function spaces*
Joan Cerdà Martín
- 12:30–13:00 *Smoothness spaces and multiresolution analysis with redundant basis elements*
Robert C. Sharpley
- 13:00–13:30 *Weighted L^p estimates for classical operators using analytic families of operators*
María Jesús Carro Rossell
- 15:30–16:00 *Optimal domains for the kernel operator associated with Sobolev's inequality*
Guillermo Curbera Costello
- 16:00–16:30 *An axiomatic approach to function spaces and spectral synthesis*
Lars Inge Hedberg
- 16:30–17:00 *Form boundedness of Schrödinger operators and related function spaces*
Igor Verbitsky
- 17:30–18:00 *Inclusion indices of function spaces and applications*
Luz M. Fernández–Cabrera Marín
- 18:00–18:30 *Interpolation properties of a scale of spaces*
Elijah Liflyand
- 18:30–19:00 *St. Louis interpolation method and weak compactness*
Andrzej Kryczka

Saturday 21, Room 207

- 09:00–09:30 *Best possible compactness results of Lions–Peetre type for N -tuples*
Raúl Romero Martín
- 09:30–10:00 *Compactness of certain Hardt–type operators*
Pankaj Jain
- 10:00–10:30 *Interpolation of entropy function spaces*
Joaquín Martín Pedret
- 10:30–11:00 *Interpolation by J - and K -methods of certain closed operator ideals*
Antonio Manzano Rodríguez

Session 22, Lorentzian Geometry and Mathematical Relativity

Wednesday 18, Room 303

- 17:30–18:00 *Asymptotically simple space-times*
Helmut Friedrich
- 18:00–18:30 *Gowdy phenomenology in scale free variables*
Lars Andersson
- 18:30–19:00 *Spacelike energy of timelike unit vector fields on a Lorentzian manifold*
Ana Hurtado Cortegana
- 19:00–19:30 *The qualitative behaviour of plane wave type spacetimes*
Miguel Sánchez

Thursday 19, Room 302

- 11:30–12:00 *Conformal deformation of metrics*
José F. Escobar
- 12:00–12:30 *Quasiconvex foliations and asymptotically flat metrics of non-negative scalar curvature*
Gilbert Weinstein
- 12:30–13:00 *Relativistic particles with rigidity and torsion*
Manuel Barros Díaz
- 13:00–13:30 *Geometry and physics of lightlike curves*
Ángel Ferrández Izquierdo
- 15:30–16:00 *Integral formulae for spacelike hypersurfaces in conformally stationary spacetimes and applications*
Antonio Colares
- 16:00–16:30 *On the Penrose inequality for general horizons*
Marc Mars Lloret
- 16:30–17:00 *The Penrose inequality and null hypersurfaces*
Göran Bergqvist
- 17:30–18:00 *AdS/CFT and uniqueness of the AdS soliton spacetime*
Eric Woolgar
- 18:00–18:30 *Black hole non-existence results in spacetimes with a negative cosmological constant*
Sumati Surya

Saturday 21, Room 302

- 08:30–09:00 *The Bochner technique on Lorentzian manifolds*
Alfonso Romero Sarabia
- 09:00–09:30 *Conformal Killing spinors in Lorentzian geometry*
Helga Baum
- 09:30–10:00 *The Bjorling problem in Lorentz–Minkowski spaces*
Pablo Mira Carrillo
- 10:00–10:30 *Symplectic methods and index theory in semi-Riemannian geometry*
Paolo Piccione
- 10:30–11:00 *Recent advances on Osserman manifolds*
Eduardo García Ríó

Session 23, Mathematical aspects of semiconductor modeling and nano-technology

Thursday 19, Room 312

- 11:30–12:00 *Quantum collisions in the Boltzmann equation via local extensions to Fermi's golden rule*
Christian Ringhofer
- 12:00–12:30 *A WENO solver for the transients of Boltzmann–Poisson system*
Chi–Wang Shu
- 12:30–13:00 *A direct solver for 2D non-stationary Boltzmann–Poisson systems for semiconductor devices*
Armando Majorana
- 15:30–16:00 *The Boltzmann–Poisson system in semiconductors: Numerical simulations for Silicon and GaAs devices*
María José Cáceres Granados
- 16:00–16:30 *Low-field limit for a nonlinear discrete drift–diffusion model*
Óscar Sánchez Romero
- 16:30–17:00 *Non-linear transport in semiconductor multiquantum Wells doped with magnetic impurities*
Gloria Platero
- 17:30–18:00 *Stochastic and deterministic switching dynamics in semiconductor superlattices*
Stephen Teitworth
- 18:00–18:30 *Recent progress in quantum hydrodynamic models for semiconductors*
Peter Markowich

Saturday 21, Room 312

- 09:30–10:00 *The half space problem for kinetic relaxation under a strong force field scaling*
Irene Martinez Gamba
- 10:00–10:30 *Quantum device simulations by Wigner equations*
Jing Shi
- 10:30–11:00 *New advances in numerical micromagnetics simulations*
Carlos Javier García Cervera

Session 24, Mathematical Fluid Dynamics

Wednesday 18, Room 201

- 15:30–16:30 *Squirt singularities*
Charles Fefferman
- 16:30–17:00 *Dynamics of oil spill*
Vadim Kaloshin
- 17:30–18:00 *Long-time asymptotics for nonlinear fourth order diffusion equations*
José Antonio Carrillo de la Plata
- 18:00–18:30 *Blow up in a 3-d vector model for the Euler equations*
Susan Friedlander
- 18:30–19:00 *On the evolution of sharp fronts for the quasi-geostrophic equation*
Jose Luis Rodrigo Diez

Friday 20, Room 201

- 10:30–11:00 *Formation of singularities under the localized induction approximation*
Susana Gutiérrez de Gracia
- 11:00–11:30 *Why viscous fluids adhere to rugose walls*
Enrique Fernández Cara
- 11:30–12:00 *On the dissipative quasi-geostrophic equation*
Diego Córdoba Gazolaz
- 12:30–13:00 *On surface water waves*
Walter Craig
- 13:00–13:30 *On weak solutions for generalized Oldroyd model for laminar and turbulent flows of nonlinear viscous-elastic fluid*
Mokhtar Kirane

Session 25, Mathematical Methods in Finance and Risk Management

Wednesday 18, Room 206

- 15:30–16:00 *Projective systems of equivalent martingale measures*
Alejandro Balbás de la Corte
- 16:00–16:30 *On risk management of portfolios of energy bilateral trading contracts*
José María Amigó García
- 16:30–17:00 *Malliavin calculus for Levy processes and applications to jump–diffusion market models*
Josep Vives Santa–Eulalia
- 17:30–18:00 *On the zero coupon bond pricing using Merton’s nonlinear mean reversion*
Antonio Falco Montesinos
- 18:00–18:30 *Characteristics/finite elements method for pricing callable bonds with notice*
Carlos Vázquez Cendón

Friday 20, Room 206

- 10:30–11:30 *Hedging simple options with transaction costs*
Charles Fefferman
- 11:30–12:30 *Optimal glider flying*
Robert Almgren
- 12:30–13:30 *Portfolio optimization in a Gaussian mixture environment*
Ian Buckley

Session 26, Moduli Spaces in Geometry and Physics

Wednesday 18, Room 301

- 15:30–16:30 *Comments on traditional vanishing theorems*
Sundararaman Ramanan
- 16:30–17:00 *Fourier–Mukai transforms and local systems*
Fabio Pioli
- 17:30–18:30 *Stable principal bundles on projective varieties*
Tomás L Gómez
- 18:30–19:00 *Birational equivalence of Higgs moduli*
Mridul Mehta

Thursday 19, Room 301

- 11:30–12:30 *Hamiltonian Gromov–Witten invariants coupled to gravity*
Ignasi Mundet i Riera
- 12:30–13:30 *Mirror symmetry and Fukaya Seidel categories*
Ludmil Katzarkov
- 15:30–16:30 *The Hilbert compactification*
Alexander Schmitt
- 17:30–18:30 *Fourier–Mukai and D branes on Calabi–Yau manifolds*
Daniel Hernández Ruipérez

Friday 20, Room 301

- 10:30–11:30 *Deformations of Picard bundles*
Peter Newstead
- 11:30–12:30 *Brill–Noether theory and coherent systems*
Vicente Muñoz Velázquez
- 12:30–13:30 *A new look at the moduli of sheaves*
Luis Álvarez–Cónsul

Saturday 21, Room 301

- 09:30–10:00 *Moduli problems in Sasakian geometry*
Charles Boyer
- 10:00–11:00 *Some examples of relative $SL(2)$ -character varieties over surfaces*
William Goldman

Session 27, Nonassociative Algebras and Their Applications

Wednesday 18, Room 305

- 15:30–16:30 *Life on the wedge*
Georgia Benkart
- 16:30–17:00 *On locally finite split Lie triple systems*
Antonio Jesús Calderón Martín
- 17:30–18:00 *On derivations and automorphisms of Lie algebras*
Vicente Ramón Varea Agudo
- 18:00–18:30 *On an interesting family of nilpotent Lie superalgebras*
José Ramón Gómez Martín
- 18:30–19:00 *Algebras of quotients of Lie algebras*
Mercedes Siles Molina

Thursday 19, Room 305

- 11:30–12:00 Σ_3 associative algebras and operads
Elisabeth Remm
- 12:00–12:30 *A maximal algebra of quotients of a Jordan algebra*
Irene Paniello Alastruey
- 12:30–13:00 *Growing hearts in associative systems and Jordan cubes*
Teresa Cortés Gracia
- 13:00–13:30 *Semiregular associative pairs*
Inmaculada de las Peñas Cabrera
- 15:30–16:00 *Complex structures in real non-associative algebras*
Zalman Balanov
- 16:00–16:30 *Analytic functions in nonassociative algebras*
Yakov Krasnov
- 16:30–17:00 *Surjective isometries between real JB*-triples*
Francisco José Fernández Polo
- 17:30–18:00 *On algebras satisfying Moufang identities*
José Antonio Cuenca Mira
- 18:00–18:30 *Structure theory for multiplicatively semiprime algebras*
Juan Carlos Cabello Piñar

Friday 20, Room 305

- 10:30–11:00 *Lie–Yamaguti algebras related to G_2*
Cristina Draper Fontanals
- 11:00–11:30 *Representations of $B(1,2)$*
María Concepción López–Díaz
- 11:30–12:00 *Finite semifields*
Ignacio Fernández Rúa
- 12:00–12:30 *Auto-invariant of some non-associative algebras*
Ki-Bong Nam
- 12:30–13:00 *Ternary derivations of finite dimensional real division algebras*
Clara Jiménez Gestal
- 13:00–13:30 *Jordan pairs and irreducible Lie–Yamaguti algebras*
Fabián Martín Herce

Saturday 21, Room 305

09:30–10:00 *Jordan superalgebras: Substructures and decompositions*
Sara Sacristán

10:00–10:30 *3-graded Lie algebras with Jordan finiteness conditions*
Antonio Fernández López

10:30–11:00 *One-sided modules and unital bimodules over Jordan superalgebras*
Consuelo Martínez López

Session 28, Nonlinear Dispersive Equations

Wednesday 18, Room 205

- 15:30–16:00 *Wellposedness for the Benjamin–Ono equation for rough initial data*
Herbert Koch
- 16:00–16:30 *Global existence for the critical generalized KdV equation*
Felipe Linares
- 16:30–17:00 *Carleman estimates for the heat and Stokes equations and applications to controllability*
Enrique Fernández Cara
- 17:30–18:00 *KP I versus KP I–BBM*
Jean–Claude Saut
- 18:00–18:30 *Capturing the semi–classical limit of the focusing nonlinear Schrödinger equation*
Hector Ceniceros
- 18:30–19:00 *Asymptotic behavior to dissipative quasi–geostrophic flow*
Maria Schonbek

Thursday 19, Room 205

- 11:30–12:00 *Two–scale compensated compactness*
Bjorn Birnir
- 12:00–12:30 *Drops: the collapse of a capillary jet*
Antonio Córdoba Barba
- 12:30–13:00 *On the unique continuation of solutions to the generalized KdV equation*
Gustavo Ponce
- 13:00–13:30 *Dispersive estimates for the wave equation with potential*
Vladimir Georgiev
- 15:30–16:00 *Blow up behavior of solutions to the Ricci flow on R^2*
Panagiota Daskalopoulos
- 16:00–16:30 *The incompressible limit in nonlinear elasticity*
Thomas C. Sideris
- 16:30–17:00 *The Cauchy problem for quasilinear Schrödinger equations*
Carlos Kenig
- 17:30–18:00 *Long–time and orbital stability for the Vlasov–Poisson system in the stellardynamics case*
Juan Soler Vizcaíno
- 18:00–18:30 *Stabilité des N –solitons pour l’équation de KdV*
Yvan Martel

Friday 20, Room 205

10:30–11:00 *On global well-posedness for Schroedinger maps in the energy norm*
Atanas Stefanov

11:00–11:30 *Bilinear Strichartz estimates*
Maricruz Vilela

12:00–12:30 *Nonrelativistic limits in atomic models*
Maria J. Esteban Galarza

12:30–13:00 *Nodal solutions of a Schroedinger equation with critical nonlinearity*
Mónica Clapp

13:00–13:30 *A Chebyshev collocation method for a Stokes problem*
Henar Herrero Sanz

Session 29, Numerical linear algebra

Thursday 19, Room 306

- 11:30–12:00 *Speeding up backfitting of large linear additive models*
Gene Golub
- 12:00–12:30 *On the sensitivity of orthonormal bases of invariant subspaces of Hermitian matrices*
Julio Moro Carreño
- 12:30–13:00 *A Krylov subspace method for quadratic matrix polynomials with application to constrained least squares problems*
Qiang Ye
- 15:30–16:00 *An implicitly restarted Block–Lanczos method for large Hermitian eigenproblems*
Daniela Calvetti
- 16:00–16:30 *An orthogonal high relative accuracy algorithm for the symmetric eigenproblem*
Froilán Martínez–Dopico
- 16:30–17:00 *On the eigenproblem for orthogonal Hessenberg matrices*
Bill Gragg
- 17:30–18:00 *Comrade matrices and unified algorithms for DCT/DST's*
Vadim Olshevsky
- 18:00–18:30 *On the shifted QR iteration applied to a Frobenius matrix*
Dario Andrea Bini

Saturday 21, Room 306

- 09:30–10:00 *On the stability of some pivoting strategies for Gauss elimination*
Juan Manuel Peña Ferrández
- 10:00–10:30 *SVD computation on a grid*
Franklin Luk
- 10:30–11:00 *Pole placement preconditioning*
Lothar Reichel

Session 30, Operator Theory and Spaces of Analytic Functions

Thursday 19, Room 208

- 11:30–12:00 *Multivariate operator theory and complex geometry*
Ronald G. Douglas
- 12:00–12:30 *Gleason's problem and tangential homogeneous interpolation for hyperholomorphic quaternionic functions*
Daniel Alpay
- 12:30–13:00 *Operator theory on varieties in the bidisk*
John McCarthy
- 13:00–13:30 *The Schur-class of analytical functions: multivariable generalizations*
Joseph A. Ball
- 15:30–16:00 *Hypercyclic commutators of generalized backward shifts*
Alfredo Peris Manguillot
- 16:00–16:30 *A skew normal dilation on the numerical range of an operator*
Mihai Putinar
- 16:30–17:00 *Projective description of weighted (LF) -spaces of holomorphic functions on the disc*
Klaus D. Bierstedt
- 17:30–18:00 *On the properties of generalized Toeplitz-type operators*
Laszlo Kerchy
- 18:00–18:30 *Generalizations of Koplienko–Neidhardt trace formula*
Stefania Marcantognini

Saturday 21, Room 208

- 09:30–10:00 *Weighted composition operators on the Bergman space*
Zeljko Cuckovic
- 10:00–10:30 *Semigroups of composition operators on the disk algebra*
Manuel D. Contreras Márquez
- 10:30–11:00 *Noncommutative function theory, tensor algebras, and interpolation*
Paul Muhly

Session 31, PDE Methods in Continuum Mechanics

Wednesday 18, Room 201

- 19:00–19:30 *Free boundary problems for operators with variable coefficients: regularity*
Sandro Salsa
- 19:30–20:00 *A free boundary problem from nonlocal combustion*
Claudia B. Lederman

Thursday 19, Room 201

- 11:30–12:00 *Homogenization in free boundary problems*
Ki Ahm Lee
- 12:00–12:30 *Free boundary regularity*
Henrik Shahgholian
- 13:00–13:30 *Explicit solutions of the denoising problem in image processing*
Vicent Caselles
- 15:30–16:00 *Harnack inequality and spectral instantaneous and complete blow-up for some parabolic equations related to*
Ireneo Peral Alonso
- 16:00–16:30 *Comparison principles for viscosity solutions of equations generated by vector fields*
Juan J. Manfredi
- 16:30–17:00 *Functionals with non standard growth and regularity of minimizers*
Giuseppe Mingione
- 17:30–18:00 *The total variation flow with measure initial data*
José M. Mazón Ruiz
- 18:30–19:00 *Thermal avalanche for blow-up solutions of semilinear heat equations*
Fernando Quirós Gracián
- 19:00–19:30 *On the quenching set for a fast diffusion equation. Regional quenching*
Arturo de Pablo Martínez
- 19:30–20:00 *Nonlinear diffusion equation and free boundaries*
Juan Luis Vázquez Suárez

Saturday 21, Room 201

- 08:30–09:00 *On thermo-elasticity with second sound*
Salim Messaoudi
- 09:00–09:30 *Capillarity driven spreading of power-law fluids*
Marco Antonio Fontelos López
- 09:30–10:00 *Ostrovsky equation, special functions and long-time asymptotics*
Vladimir Varlamov
- 10:00–10:30 *Anisotropy and microstructure*
Nicholas Alikakos
- 10:30–11:00 *Sobolev gradients and variational problems*
John W. Neuberger

Session 32, Polynomials and Multilinear Analysis in Infinite Dimensions

Wednesday 18, Room 211

- 15:30–16:00 *Inequalities for the derivatives of polynomials on Banach spaces*
Lawrence Harris
- 16:00–16:30 *A characterization of real Hilbert spaces using complex techniques*
Gustavo Muñoz
- 16:30–17:00 *Rolle's theorem for the generalized gradient*
Juan Ferrera Cuesta
- 17:30–18:00 *A strong approximate Morse–Sard theorem in infinite dimensions*
Daniel Azagra Rueda
- 18:00–18:30 *Polynomial sequential continuity on $C(K,E)$ spaces*
Fernando Bombal Gordón
- 18:30–19:00 *Norm attaining polynomials at extreme points on $C(K)$*
Domingo García
- 19:00–19:30 *Polynomials defined in the dual of a Banach space*
Luiza Amalia Moraes
- 19:30–20:00 *Two properties of the Aron–Berner extension of polynomials*
Manuel Maestre

Friday 20, Room 211

- 10:30–11:00 *On weakly sequentially continuous polynomials*
Maite Fernández Unzueta
- 11:00–11:30 *Spaces with unconditional basis admitting a separating polynomial*
Raquel Gonzalo Palomar
- 11:30–12:00 *Polynomials generated by linear operators*
Mary Lillian Lourenço
- 12:00–12:30 *The approximation property on spaces of holomorphic functions*
M^a Pilar Rueda Segado
- 12:30–13:00 *On the Markov constants of homogeneous polynomials on real normed spaces*
Yannis Sarantopoulos
- 13:00–13:30 $\tau_o = \tau_\omega$
Christopher Boyd

Saturday 21, Room 211

08:30–09:00 *Cotype and absolutely summing homogeneous polynomials in L_p spaces*
Daniel Pellegrino

09:00–09:30 *Multiple p -summing operators on Banach spaces*
Ignacio Villanueva Díez

09:30–10:00 *Holomorphic functions that attain its maximum modulus at extreme points*

María Dolores Acosta Vigil

10:00–10:30 *Numerical radius and Aron–Berner extension*

Yun Sung Choi

10:30–11:00 *Ideals of polynomials generated by weakly compact operators*

Geraldo Botelho

Session 33, Quantitative Results in Real Algebra and Geometry

Wednesday 18, Room 308

- 19:00–19:30 *Virtual roots, Budan Fourier theorem, Bernstein basis and root isolation*
Marie–Francoise Roy
- 19:30–20:00 *Sum of squares decompositions for structured polynomials*
Pablo Parrilo

Thursday 19, Room 307

- 11:30–12:00 *On the enumerative geometry of real algebraic curves*
Johannes Huisman
- 12:30–13:00 *Ovals of real cyclic p -gonal Riemann surfaces*
Milagros Izquierdo Barrios
- 13:00–13:30 *The degree of difficulty in avoiding singularities when writing polynomials as sums of squares of real rational functions*
Charles Delzell
- 15:30–16:00 *Positive polynomials on semialgebraic sets*
Niels Schwartz
- 16:00–16:30 *Global semianalytic sets*
Francesca Acquistapace
- 16:30–17:00 *Bounds on Betti numbers of semialgebraic sets*
Nicolai Vorobjov
- 17:30–18:00 *Complexity of representations of positive polynomials with applications to optimization*
Markus Schweighofer
- 18:30–19:00 *Computing the Betti numbers of arrangements via spectral sequences*
Saugata Basu
- 19:00–19:30 *An algorithm for convexity of semilinear sets over ordered fields*
M^a Pilar Vélez Melón
- 19:30–20:00 *Computational aspects of the Pierce–Birkhoff conjecture*
Laureano González–Vega

Saturday 21, Room 307

- 09:30–10:00 *Representation of polynomials positive on subsets of the real line, with applications to the multidimensional moment problem*
Salma Kuhlmann
- 10:00–10:30 *Convexity properties of the cone of nonnegative polynomials*
Grigoriy Blekherman
- 10:30–11:00 *Eight points in the plane*
Bruce Reznick

Session 34, Recent Developments in the Mathematical Theory of Inverse Problems

Wednesday 18, Room 203

- 15:30–16:30 *Nonlinear network tomography*
Francisco Alberto Grunbaum
- 16:30–17:00 *Unique continuation for parabolic equations and applications*
Luis Escauriaza Zubiria
- 17:30–18:00 *Recovery of singularities from backscattering in R^2 and R^3*
Ana Vargas Rey
- 18:00–19:00 *Uniqueness of the continuation and inverse problems for elasticity system*
Victor Isakov

Thursday 19, Room 203

- 11:30–12:30 *Lipschitz stability for the inverse conductivity problem*
Giovanni Alessandrini
- 12:30–13:00 *Uniform estimates for solutions of Helmholtz's equation for the spherical Laplacian*
Juan Antonio Barceló Valcárcel
- 13:00–13:30 *Electromagnetic inverse problems*
Petri Ola
- 15:30–16:30 *Gromov compactness and stability of inverse spectral problems*
Matti Lassas
- 16:30–17:00 *Hausdorff moments in an inverse problem for the heat equation*
Yaroslav Kurylev
- 17:30–18:00 *Concentration of waves in highly heterogeneous media*
Carlos Castro Barbero
- 18:00–18:30 *Reconstructing conductivities in the plane*
Kim Knudsen

Friday 20, Room 203

- 10:30–11:30 *A resolution study for imaging and time reversal in random media*
Liliana Borcea
- 11:30–12:30 *Inverse problems in N -body scattering*
Andras Vasy
- 12:30–13:00 *Smooth objective functionals for seismic velocity inversion*
Christiaan Stolk
- 13:00–13:30 *Lower order perturbations of the evolution Schrödinger equation*
Alberto Ruiz González

Saturday 21, Room 203

- 09:30–10:00 *Recovery of a function from its spherical means*
David Finch
- 10:00–10:30 *Regularity for the coefficient in the inverse conductivity problem*
Russell Brown
- 10:30–11:00 *Reconstruction of label images*
Gabor Herman

Session 35, Riemannian Foliations

Wednesday 18, Room 304

- 15:30–16:30 *The molino conjecture for singular Riemannian foliations*
Gilbert Hector
- 16:30–17:00 *The basic intersection cohomology of singular Riemannian foliations*
Martintxo Saralegi Aranguren
- 17:30–18:30 *Basic index theory*
Ken Richardson
- 18:30–19:00 *Morse inequalities for orbit spaces. A Witten approach*
Manuel Calaza Cabanas
- 19:00–19:30 *A coincidence formula for foliated manifolds*
Bernd Mümken
- 19:30–20:00 *Morphisms of pseudogroups and foliation maps*
Jesús Álvarez

Thursday 19, Room 305

- 18:30–19:30 *The $\bar{\partial}_{\mathcal{F}}$ -problem along the leaves*
Aziz El Kacimi
- 19:30–20:00 *The diffeomorphism group of a Lie foliation*
Enrique Macías Virgós

Friday 20, Room 304

- 10:30–11:30 *Topological characterization of Riemannian foliations*
Alberto Candel
- 11:30–12:30 *Characteristic class of Riemannian foliations*
Steven Hurder
- 12:30–13:00 *LS category of Riemannian foliations*
Helen Colman
- 13:00–13:30 *Conformal foliations*
Óscar Alfredo Palmas Velasco

Saturday 21, Room 305

- 08:30–09:30 *A class of transversely Kahlerian foliations*
Marcel Nicolau Reig

Session 36, Ring Theory and related topics

Wednesday 18, Room 311

- 15:30–16:00 *Is there a one-sided quantum group?*
Earl Taft
- 16:00–16:30 *Corings and Morita(-like) contexts*
Tomasz Brzezinski
- 16:30–17:00 *Tilting theory and the finitistic dimension*
Lidia Angeleri Huegel
- 17:30–18:00 *On multiplicative invariants of finite groups*
Martin Lorenz
- 18:00–18:30 *Degeneration, rigidity and irreducible components of Hopf algebras*
Abdenacer Makhlof
- 18:30–19:00 *c -Injectivity over principal ideal domains*
Catarina Santa-Clara

Thursday 19, Room 311

- 11:30–12:00 *Dual Krull dimension and quotient finite dimensionality*
Mark Teply
- 12:00–12:30 *Quotient finite dimensionality in lattices, Grothendieck categories, and torsion theories*
Toma Albu
- 12:30–13:00 *Baer modules*
Syed Tariq Rizvi
- 13:00–13:30 *Ring hulls*
Gary Birkenmeier
- 15:30–16:00 *Sigma-cotorsion rings*
Ivo Herzog
- 16:00–16:30 *Nonunital rings, categories and topology*
Leandro Marín
- 16:30–17:00 *Towards a classification of the isomorphism classes of matrix rings over a fixed ring of scalars*
Gene Abrams
- 17:30–18:00 *Coinvariant theory for quantum matrices*
Thomas Lenagan
- 18:00–18:30 *Full functors in nature*
Claudia Menini

Friday 20, Room 311

- 10:30–11:00 *Modules whose direct sums are CS and their indecomposable decompositions*
José Luis Gómez Pardo
- 11:00–11:30 *Simple modules over small von Neumann regular rings*
Dolors Herbera Espinal
- 11:30–12:00 *Quillen's small object argument in the category of quasi-coherent sheaves on a scheme*
Sergio Estrada Domínguez
- 12:00–12:30 *Torsion theoretic properties of $\sigma[M]$*
Robert Wisbauer
- 12:30–13:00 *Prime and Irreducible preradicals over associative rings*
Federico Francisco Raggi Cárdenas
- 13:00–13:30 *Cyclic homology of Hopf algebras*
Pascual Jara

Saturday 21, Room 311

- 09:30–10:00 *The fixed subalgebra of the group of automorphisms of a commutative algebra*
Manuel Saorín Castaño
- 10:00–10:30 *When is a smash product semiprime?*
Christian Lomp
- 10:30–11:00 *CC coGalois groups of torsion free covers*
Edgar Enochs

Session 37, The Mathematics of Electronmicroscopic Imaging

Thursday 19, Room 211

- 11:30–12:30 *Algebraic reconstruction of 2D crystals from their projections*
Gabor Herman
- 12:30–13:00 *Parallel and distributed computing for efficient tomographic reconstructions*
Inmaculada García Fernández
- 13:00–13:30 *Simplification of 3D densities*
Herbert Edelsbrunner
- 15:30–16:00 *Computational challenges in 3-D reconstruction of virus particles*
Wah Chiu
- 16:00–16:30 *Fourier transforms of trains of pulses on various grids*
Edgar Garduño
- 16:30–17:00 *Reconstruction by Chahine's method from projections corrupted by electron microscope aberrations*
Jorge Zubelli
- 17:30–18:30 *Angular assignment in 3D electron microscopy using PCA and wavelet decomposition*
Carlos Óscar Sánchez Sorzano
- 18:30–19:00 *A method for estimating the CTF in electron microscopy and its application to 3D reconstruction*
Roberto Marabini
- 19:00–19:30 *Image processing in biological 3D electron microscopy*
José M. Carazo García
- 19:30–20:00 *Self-organizing maps for the analysis of electron microscopy images*
Alberto Pascual Montano

Session 38, Variational Problems for Submanifolds

Wednesday 18, Room 302

- 15:30–16:30 *Willmore surfaces of high normal bundle degree*
Franz Pedit
- 16:30–17:00 *On some isoperimetric problems in R^n*
Manuel César Rosales Lombardo
- 17:30–18:30 *Complete embedded maximal surfaces in L^3 with isolated singularities*
Francisco José López Fernández
- 18:30–19:30 *Plane like minimal surfaces in periodic media*
Rafael de la Llave
- 19:30–20:00 *Proper minimal surfaces in R^3*
Santiago Morales Domingo

Thursday 19, Room 302

- 18:30–19:30 *Harmonic diffeomorphisms onto the hyperbolic plane*
Michael Wolf
- 19:30–20:00 *The periodic isoperimetric problem*
Antonio Ros Mulero

Friday 20, Room 302

- 10:30–11:30 *Geometric results in classical minimal surface theory*
William H. Meeks, III
- 11:30–12:30 *Dirac operator and hypersurfaces*
Sebastián Montiel Gómez
- 12:30–13:30 *Double bubble problems*
Frank Morgan

Session 39, Contributed Papers

Wednesday 18, Room 215

- 15:30–16:00 *A characterization of Painlevé transcendents under changes of the independent variable*
Ángel María Martín del Rey
- 16:00–16:30 *Un nuevo método numérico para la obtención de soluciones de la ecuación integro–diferencial de Volterra*
Miguel Ángel Fortes Escalona
- 16:30–17:00 *Complete linear Weingarten surfaces of maximal type*
Juan Ángel Aledo Sánchez
- 17:30–18:00 *Chaotic polynomials on infinite dimensional spaces*
Félix Martínez Giménez
- 18:00–18:30 *On a construction for substitutional quasiperiodic tilings*
Juan García Escudero
- 18:30–19:00 *Inheritance of regularity by Peirce gradings*
José Ángel Anquela Vicente
- 19:00–19:30 *Caracterización de elipsoides por secciones*
Pedro Martín Jiménez

Wednesday 18, Room 216

- 15:30–16:00 *Szegő–Padé approximants for Stieltjes functions*
Manuel Bello Hernández
- 16:00–16:30 *Long ascending paths in dimension 4*
Julian Pfeifle
- 16:30–17:00 *Complete spacelike hypersurfaces with constant mean curvature in the de Sitter space: A gap theorem*
Aldir Brasil Junior
- 17:30–18:00 *Polynomials for Kloosterman sums*
Stan Gurak
- 18:00–18:30 *Modeling analytic maps of the unit ball*
Alexander Richman
- 18:30–19:00
- 19:00–19:30 *Homogenization of Dirichlet problems for general monotone elliptic and parabolic operators in general perforated domains*
Carmen Calvo Jurado
- 19:30–20:00 *Grey noise and some difference fractional differential equations*
Khairia El–Nadi

Wednesday 18, Room 217

- 16:00–16:30 *Banach function spaces from vector measures*
Olvido Delgado Garrido
- 16:30–17:00 *Cesaro means for Fourier–Neumann series*
Juan Luis Varona Malumbres
- 17:30–18:00 *Hasse–Schmidt derivations and coefficient fields in positive characteristics*
María Magdalena Fernández Lebrón
- 18:00–18:30 *MLUR renormable Banach spaces*
Sebastián Lajara López
- 18:30–19:00 *Filtrations on finitely presented algebras*
Fco. Javier Lobillo Borrero
- 19:00–19:30 *Teoremas de inserción y propiedades de tipo normalidad en espacios L -topológicamente generados*
Iraide Mardones Pérez

Thursday 19, Room 215

- 11:30–12:00 *Estudio de la \mathcal{O} -torsión en un \mathcal{D} -módulo*
M^a Ángeles Moreno Frías
- 12:00–12:30 *Unsolvability of algebraic equations leads to iterative methods*
José Orlando Gomes Freitas
- 12:30–13:00 *A note on exact and approximate solutions of integral equations of the second kind using maple software*
Javad Abdalkhani
- 15:30–16:00 *Martindale-like Jordan systems of quotients*
Esther García González
- 16:00–16:30 *Weak sufficient convergence conditions and applications for Newton methods*
Ioannis Argyros
- 16:30–17:00 *Growth estimates for generalized factors of H^p spaces*
Angeliki Kazas
- 17:30–18:00 *Derivadas parciales de funciones en conjuntos cúbicos, aplicaciones en aproximación de funciones, cálculos de homología y estudio de datos*
Eduardo Sáenz de Cabezón Irigaray
- 18:00–18:30 *Two weight inequalities arise from a Campbell-type formula*
Óscar Ciaurri Ramírez
- 18:30–19:00 *Asturian MDS-codes*
Elena Couselo Hernández
- 19:00–19:30 *Local–global properties for semistar operations*
Pascual Jara

Thursday 19, Room 216

- 11:30–12:00 *Renormalized solutions of a nonlinear parabolic–elliptic system*
María Teresa González Montesinos
- 12:00–12:30 *A Bohr type theorem in Hardy spaces*
Catherine Beneteau
- 12:30–13:00 *Topological quantum field theories and gerbes*
Roger Picken
- 13:00–13:30 *Radial slit regions and the univalent Bloch constant*
Philip Brown
- 15:30–16:00 *On the semilocal convergence of Newton’s methods under unifying conditions*
José Manuel Gutiérrez Jiménez
- 16:00–16:30 *Isotonies on ordered cones through the concept of a decreasing scale*
Esteban Induráin Eraso
- 16:30–17:00 *Estimates for some kinds of exponential sums over singular varieties*
Antonio Rojas León
- 17:30–18:00 *Irrationality bases, super Liouville numbers, and Euler’s constant*
Jonathan Sondow
- 18:00–18:30 *Resonance in an interacting induced dipoles polarization model*
Francisco Torrens Zaragoza
- 18:30–19:00 *Stability of stochastic differential equations under discretization*
Andrzej Korzeniowski
- 19:00–19:30 *On Leibniz 3–algebras*
Manuel Ladra González

Thursday 19, Room 217

- 11:30–12:00 *Los inicios de la combinatoria*
Mary Sol de Mora Charles
- 12:00–12:30 *Weighted function spaces: Primitives and derivatives*
Luis Manuel Tovar Sánchez
- 12:30–13:00 *Classification of the 5–dimensional power–associative 2nd–order Bernstein algebras*
Pilar Vicente Matilla
- 13:00–13:30 *A topological method for geodesic connectedness of spacetimes*
José Luis Flores Dorado
- 16:00–16:30 *Constructive approximation on Riemann surfaces*
Paul Gauthier
- 16:30–17:00 *On infinite dimensional Lie algebras having a cartan decomposition*
Manuel Forero Piulestán
- 17:30–18:00 *Point distributions and circle packings*
George Brock Williams
- 18:00–18:30 *Finite Blaschke products of contractions*
Pei Yuan Wu
- 18:30–19:00 *Extended centroid of essential ideals*
Miguel Cabrera García
- 19:00–19:30 *Relatively weakly open sets in closed balls of C^* –algebras*
Julio Becerra Guerrero

Friday 20, Room 215

- 10:30–11:00 *Formulas for $Pi(x)$ and the n -th prime*
Sebastián Martín Ruiz
- 11:00–11:30 *Initial-value problems and schauder bases*
Domingo Gámez Domingo
- 11:30–12:00 *Shapley–Bondareva theorem for games on partially ordered linear spaces*
Justo Puerto Albandoz
- 12:00–12:30 *Hyperbolic groups, geodesic flows and so on*
Igor Mineyev
- 12:30–13:00 *Soluciones renormalizadas para algunos problemas parabólicos con difusión singular y datos en L^1*
Concepción García Vázquez
- 13:00–13:30 *On the proper homotopy classification of locally compact A_n^2 -polyhedra*
Fernando Muro Jiménez

Friday 20, Room 216

- 10:30–11:00 *Discrete valuations of $k((X_1, \dots, X_n))$*
Miguel Ángel Olalla Acosta
- 11:00–11:30 *On a family of naturally graded Lie Algebras no p -filiform*
Alfonso González Regaña
- 11:30–12:00 *A computational method to construct the Lie correspondence on a matrix nilpotent Lie group*
Juan Carlos Benjumea Acevedo
- 12:00–12:30 *Higher order Painleve equations*
Andrew Pickering
- 12:30–13:00 *Pappus–Guldin versus Weyl’s tube formulae*
Vicente Miquel Molina
- 13:00–13:30 *Tangles and matroids*
Stephen Huggett

Friday 20, Room 217

- 10:30–11:00 *High order algorithms for N -th root approximation*
Natalia Romero Álvarez
- 11:00–11:30 *Uniqueness of best L_1 -approximation from the set of splines with infinitely many simple knots*
Antonio Damas Serrano
- 11:30–12:00 *On the Hurwitz problem for groups of exponent n*
Anthony Weaver
- 12:00–12:30 *Hyperbolic temperature of two bodies in contact*
Macarena Trujillo Guillén
- 12:30–13:00 *Convergence of ray sequences of Padé approximants for ${}_2F_1(a, 1; c; z)$, $(c > a > 0)$*
Kathy Driver
- 13:00–13:30 *On tensor norms and operator ideals defined by an Orlicz sequence*
Gabriel Ignacio Loaiza Ossa

Saturday 21, Room 215

- 09:00–09:30 *Transitivity and reflexivity of spaces of Hankel operators*
Ruben Martinez Avendaño
- 09:30–10:00 *Attracting periodic orbits of some classical third order iterative methods*
Sergio Amat Plata
- 10:00–10:30 *On the dynamics of the classical third-order iterative methods*
Sonia Busquier Sáez

Saturday 21, Room 216

- 09:00–09:30 *Locating pursuers on the plane*
Francisco Alonso Ortega Riejos
- 09:30–10:00 *On ideal and subalgebra coefficients in certain k -algebras*
María Isabel González Vasco
- 10:00–10:30 *Homotopy classification of Poincaré duality pairs of dimension three*
Beatrice Bleile

Saturday 21, Room 217

- 09:00–09:30 *Linear differential equations and analytic function spaces*
Jouni Rättyä
- 09:30–10:00 *Rogers–Ramanujan type identities and the Fibonacci sequence*
Jose Plinio Santos
- 10:00–10:30 *Aproximación de soluciones de ecuaciones no lineales mediante procesos iterativos que no utilizan derivadas*
José Antonio Ezquerro Fernández