

MEMBERS OF THE SCIENTIFIC COMMITTEE



Ana Bela Cruzeiro

Born: Lisbon, August 26, 1957.

Graduation: Pure Mathematics, Faculdade de Ciências da Universidade de Lisboa, 1980.

Ph. D.: Université Pierre et Marie Curie, 1985.

Present position: Associated Professor, with *Aggregação*, Departamento de Matemática da Faculdade de Ciências da Universidade de Lisboa.

Field of research: Stochastic Analysis; Mathematical Physics.

Selected publications: *Equations différentielles sur l'espace de Wiener et formules de Cameron-Martin non linéaires*, J. Functional Anal. (1983); *Processus sur l'espace de Wiener associés à des opérateurs elliptiques à coefficients dans certains espaces de Sobolev*, J. Functional Anal. (1987); *Global flows with invariant (Gibbs) measures for Euler and Navier-Stokes two dimensional fluids*, with S. Albeverio, Comm. Math. Phys. (1990); *Malliavin Calculus and Euclidean Quantum Mechanics, I-Functional Calculus*, with J.C. Zambrini, J. Functional Anal. (1991); *Renormalized differential geometry on path space: structural equation, curvature*, with P. Malliavin, J. Functional Anal. (1996).



João Paulo Dias

Born: Lisbon, November 18, 1944.

Graduation: Mathematics, Faculdade de Ciências da Universidade de Lisboa, 1966.

Ph. D.: Mathematics, Université Pierre et Marie Curie, Paris, 1971.

Present position: Full Professor, Departamento de Matemática da Faculdade de Ciências da Universidade

de Lisboa.

Field of research: Partial differential equations.

Selected publications: *Une classe de problèmes variationnels non linéaires de type elliptique ou parabolique*, Ann. Mat. Pura et Appl. (1972); *Variational inequalities and eigenvalue problems for nonlinear maximal monotone operators in a Hilbert space*, American J. of Math. (1975); *A simplified variational model for the bidimensional coupled evolution equations of a nematic liquid crystal*, J. of Math. Anal. and Appl. (1979); *Sur l'existence d'une solution globale pour une équation de Dirac non linéaire avec masse nulle*, with M. Figueira, C.R. Acad. Sci. Paris, Série I (1987); *Scattering for a one-sided Klein-Gordon equation in quantum gravity*, with M. Figueira and J. Rauch, Ann. Inst. Henri Poincaré, Phys. Théorique (1994).

Additional information: Prémio Artur Malheiros, 1972. Prémio Gulbenkian de Ciência e Tecnologia, 1988.



Ivette Gomes

Born: July 21, 1948.

Graduation: Pure Mathematics, Faculdade de Ciências da Universidade de Lisboa, 1970.

Ph. D.: Probability and Statistics, University of Sheffield, U.K., 1978.

Present position: Full Professor, Departamento de Estatística, Investigação Operacional e Computação da Faculdade de Ciências da Universidade de Lisboa.

Field of research: Ordinal Statistics and extreme values; Computacional Statistics; Exploratory data analysis; Simulation; Jackknife and Bootstrap; Non-parametric methods.

Selected publications: *Penultimate limiting forms in extreme value theory*, Ann. Inst. Statist. Math. (1984); *Statistical theory of extremes – comparison of two approaches*, Statistics and Decision (1985); *Non-standard domains of attraction and rates of convergence*, with D.D. Pestana, New Perspectives in Theoretical and Applied Statistics (1987); *On the estimation of parameters of rare events in environmental time series*, Statistics for the Environment (1993); *Statistical choice of extreme value domains of attraction – a comparative analysis*, with M.I. Fraga Alves, Comm. in Statistics (1996).



José Basto Gonçalves

Born: Porto, January 28, 1952.

Graduation: Applied Mathematics, Faculdade de Ciências da Universidade do Porto, 1975.

Ph. D.: University of Warwick, 1981.

Present position: Full Professor, Departamento de Matemática Aplicada da Universidade do Porto.

Field of research: Geometric methods in non-linear control; Differential equations and Hamiltonian systems.

Selected publications: *Realization theory for Hamiltonian systems*, SIAM J. on Control and Optimization, 25 (1987). *Controllability in codimension one*, J. Differential Equations, 68 (1987). *Geometric conditions for local controllability*, J. Differential Equations, 89 (1991). *Reduction of Hamiltonian systems with symmetry*, J. Differential Equations, 92 (1991). *Local Controllability at critical points and generic systems in 3-space*, J. Mathematical Analysis and Applications, 201 (1996).

bra Appl. (1983); *On Matrix Groups Defined by Certain Polynomial Identities*, with J.A. Dias da Silva, Portugaliae Math. (1985/86); *Pairs of Matrices Satisfying Certain Polynomial Identities*, with M. Antónia Duffner, Linear Algebra Appl. (1994).

Additional information: President of Sociedade Portuguesa de Matemática (1986-1988). Vice-President of the International Society of Linear Algebra (1993-1995). Editor of the journals *Linear Algebra and its Applications* and *Portugaliae Mathematica*.



Paula Oliveira

Born: Coimbra, July 19, 1952.

Graduation: Pure Mathematics, Faculdade de Ciências e Tecnologia da Universidade de Coimbra, 1974.

Ph. D.: Mathematics, Universidade de Coimbra, 1981.

Present position: Full Professor, Departamento de Matemática da Faculdade de Ciências e Tecnologia da Universidade de Coimbra.

Field of research: Numerical methods in partial and ordinal differential equations; Positive methods for hyperbolic equations.



Graciano N. Oliveira

Born: Cabanas (Portugal), May 7, 1938.

Graduation: Mathematics, Universidade de Coimbra, 1961.

Ph. D.: Mathematics, Universidade de Coimbra, 1969.

Present position: Full Professor, Departamento de Matemática da Faculdade de Ciências e Tecnologia da Universidade de Coimbra.

Field of research: Linear Algebra.

Selected publications: *Matrices with Prescribed Characteristic Polynomial and a Prescribed Submatrix III*, Monats. Mathematik (1971); *Matrices with Prescribed Characteristic Polynomial and Several Prescribed Submatrices*, Linear Multil. Algebra (1975); *Equality of Decomposable Symmetrized Tensors and *-Matrix Groups*, with J.A. Dias da Silva, Linear Alge-

bra Appl. (1983); *On Matrix Groups Defined by Certain Polynomial Identities*, with J.A. Dias da Silva, Portugaliae Math. (1985/86); *Pairs of Matrices Satisfying Certain Polynomial Identities*, with M. Antónia Duffner, Linear Algebra Appl. (1994).

Additional information: President of Sociedade Portuguesa de Matemática (1986-1988). Vice-President of the International Society of Linear Algebra (1993-1995). Editor of the journals *Linear Algebra and its Applications* and *Portugaliae Mathematica*.

Selected publications: *Some theoretical considerations on regridding methods*, Teubner Texts in Mathematics, Berlin, 1991; *On fitting stability regions of second derivative multistep methods*, Communications in Applied Numerical Methods (1992); *On the characterization of finite differences "optimal" meshes*, Journal of Computational and Applied Math. (1991); *Supraconvergence properties of numerical discretizations and regridding methods*, with J.A. Ferreira, Journal of Computational and Applied Math. (1993); *Numerical Oscillations on nonuniform grids*, with F. Patrício, accepted for publication in Journal of Engineering Mathematics.



Luís Moniz Pereira

elliptic-parabolic type, with D. Kroner, J. Math. Pures et Appl. (1985); *Obstacle Problems in Mathematical Physics*, North-Holland Mathematical Studies (1987); *Remarks on the Reynolds problem of Elastohydrodynamic lubrication*, European J. Appl. Math. (1993); *Some Free Boundary Problems in Theoretical Glaciology*, with L. Santos, NATO ASI Series I: Global Environmental Change (1996).



Luís Sanchez

Born: Dezember 20, 1947.

Graduation: Electronics Engineering, Instituto Superior Técnico, 1971.

Ph. D.: University of Brunel, London, 1974.

Present position: Full Professor, Departamento de Informática da Universidade Nova de Lisboa.

Field of research: Artificial Intelligence; Logic Programming.

Selected publications: *Reasoning with Logic Programming*, with J.J. Alferes, Springer, LNAI (1996); *A logic programming system for non monotonic reasoning*, with J.J. Alferes and C.V. Damásio, J. of Automated Reasoning (1995); *Belief, Provability and Logic Programs*, with J.J. Alferes, J. of Applied Nonclassical Logics (1995); *Adding closed world assumptions to well founded semantics*, with J.J. Alferes and J.N. Aparício, Theoretical Computer Science (1994); *Non-monotonic reasoning with logic programming*, with J.J. Alferes and J.N. Aparício, J. of Logic Programming (1993).

Additional information: Prémio Gulbenkian de Ciência e Tecnologia (1984). Prémio Boa Esperança (1994).

José Francisco Rodrigues

Born: Lisbon, October 29, 1956.

Graduation: Mathematics, Universidade de Lisboa, 1978.

Ph. D.: Mathematics, Universidade de Lisboa, 1982.

Present position: Full Professor, Departamento de Matemática da Faculdade de Ciências da Universidade de Lisboa.

Selected publications: *Free boundary problems in the Homogenization of the One Phase Stefan Problem*, Trans. Amer. Math. Soc. (1982); *Global behaviour for bounded solutions of a porous media equation of*

Graduation: University of Connecticut, 1956.

Ph. D.: Syracuse University, 1960.

Present position: Full Professor, Department of Mathematics, University of Wisconsin - Madison.

Field of research: Matrix Theory and Combinatorics.

Selected publications: *On the spectral radius of $(0,1)$ -matrices with 1s in prescribed positions*, with S.G. Hwang, SIAM J. Matrix Analysis (1996); *Matrices of Sign Solvable Linear Systems*, with B.L. Shader, Cambridge Tracts in Mathematics, CUP (1995); *Combinatorial Matrix Theory*, with H.J. Ryser, CUP (1991); *Two extremal problems in graph theory*, with S. Mellen-dorf, Electronic J. Combinatorics (1994). *The symbiotic relationship between combinatorics and matrix theory*, Linear Algebra and its Applications (1992).

Additional information: *Chancellor's Award for Excellence in Teaching*, University of Wisconsin - Madison, 1986.



Jacob Palis

Born: Brasil, 1940.

Graduation: Universidade Federal do Rio de Janeiro, 1962.

Ph. D.: University of California, Berkeley, 1967.

Present position: Full Professor, Instituto de Matemática Pura e Aplicada, Rio de Janeiro.

Field of research: Global stability of dynamical systems; chaotic systems.

Selected publications: *Structural stability theorems*, with S. Smale, Proc. Inst. Global Anal., American Math. Society (1970); *Moduli of stability and bifurcation theory*, Proc. International Congress of Mathematicians (1978); *Cycles and measure of bifurcation sets for two-dimensional diffeomorphisms*, with F. Takens, Inventiones Math. (1985); *Homoclinic tangencies for hyperbolic sets of large Hausdorff dimension*, with J.C. Yoccoz, Acta Math. (1994); *High dimension diffeomorphisms displaying infinitely many sinks*, with M. Viana, Annals of Mathematics (1994).

Additional information: He has been awarded several prizes, of which the Interamerican Prize for Science (1994) was the last one; Director of IMPA since 1993.



Arrigo Cellina

Born: Varese (Italy), August 3, 1941.

Graduation: Physics, Università di Milano, 1965.

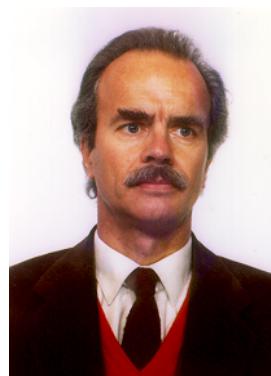
Ph. D.: Mathematics, University of Maryland, 1969.

Present position: Full Professor, SISSA/ISAS, Trieste.

Field of research: Calculus of variations; Differential inclusions.

Selected publications: *Continuous selections and differential relations*, with H.A. Antosiewicz, J. Diff. Eq. (1975); *On the nonexistence of solutions of differential equations in nonreflexive spaces*, Bull. Am. Math. Soc. (1972); *On minima of a functional of the gradient: necessary conditions*, Nonlinear Analysis TMA (1993); *On minima of a functional of the gradient: sufficient conditions*, Nonlinear Analysis TMA (1993); *Differential inclusions*, Grundlehren der Math. Wiss. Springer (1984)

Additional information: Member of the Scientific Council of the C.I.M.E. Foundation.



H. Beirão da Veiga

Born: Lisbon, April 3, 1943.

Graduation: Mathematics, Faculdade de Ciências da Universidade de Lisboa, 1965.

Ph. D.: Université Paris VI, 1971.

Present position: Full Professor, Università di Pisa.

Field of research: Partial differential equations; Functional analysis.

Selected publications: *On the barotropic motion of compressible perfect fluids*, Annali Scuola Nor-

male Superiore di Pisa (1981); *An L^p -theory for the n -dimensional stationary compressible, Navier-Stokes equations, and the incompressible limit for compressible fluids. The equilibrium solutions*, Communications in Math. Phys. (1987); *Perturbation theorems for linear hyperbolic mixed problems and applications to the Euler compressible equations*, Comm. Pure and Appl. Math. (1993); *Singular limits in compressible fluid dynamics*, Archive for Rational Mech. Anal. (1994); *On the semiconductor drift diffusion equations*, Differential and Integral Equations (1996).

Additional information: Prémio Artur Malheiros para as Ciências Matemáticas from Academia das Ciências de Lisboa (1972).



Bernd Wegner

Graduation: Mathematics, TU Berlin, 1967.

Ph. D.: TU Berlin, 1970.

Present position: Full Professor, TU Berlin.

Field of research: Differential Geometry; Discrete Geometry.

Selected publications: *Codazzi-Tensoren und Kennzeichnungen Sphärischer Immersionen*, J. Diff. Geometry (1974); *Einige Bemerkungen zur Geometrie transnormaler Mannigfaltigkeiten*, J. Diff. Geometry (1981); *On the projective invariance of shaky structures in Euclidean space*, Acta Mec. (1984); *On the rectangle property for plane continua and immersed topological hypersurfaces*, Geom. Dedicata (1990); *Partial infla-*

tion of closed polygons in the plane, Beitr. Algebra Geom. (1993)

Additional information: Editor-in-Chief of Zentralblatt für Mathematik. Managing Editor of Beiträge zur Algebra und Geometrie/Contributions to Algebra and Geometry.



Efim I. Zelmanov

Born: Former U.R.S.S., September 7, 1955.

Graduation: Novosibirsk State University, 1977.

Ph. D.: Novosibirsk State University, 1980.

Present position: Professor, Yale University.

Field of research: Algebra.

Selected publications: *On linear groups and Lie algebras over arbitrary rings of coefficients*, Jordan Algebras, Proc. of Conf. Oberwolfach (1994); *Extending the norm from Jordan-Banach algebras of Hermitian elements to their associative envelopes*, with A. Rodriguez-Palacios and A. Slinko, Commun. in Algebra (1994); *Nonassociative Algebras related to Hamiltonian operators in the formal calculus of variations*, J. Pure and Appl. Algebra (1995); *Lie methods in group theory*, Proc. Conf. Galway (1995); *Jordan Algebras of Gelfand-Kirillov Dimension One*, with C. Martinez, J. Algebra (1996).

Additional information: Editor of several journals, such as Journal of Algebra and Transactions of the American Mathematical Society. Fields Medal (1994).