

Table of Contents

Introduction	7
Participants List	9
Jaume's Glossary	13
Ll. Alsedà, M. Misiurewicz Random interval homeomorphisms	15
W. Aziz, C. Christopher On the integrability of some three-dimensional Lotka–Volterra equations with rank-1 resonances	37
L. Barreira, J. Li, C. Valls Irregular sets for ratios of Birkhoff averages are residual	49
F. Braun, J. Venato-Santos Half-Reeb components, Palais–Smale condition and global injectivity of local diffeomorphisms in \mathbb{R}^3	63
B. Campos, A. Garijo, X. Jarque, P. Vindel Newton's method on Bring–Jerrard polynomials	81
P. T. Cardin, P. R. da Silva, M. A. Teixeira Geometric singular perturbation theory for non-smooth dynamical systems	111
S. A. Carrillo, F. Sanz Briot–Bouquet's Theorem in high dimension	135
G. Chen, T. Li, C. Liu Lyapunov exponent and almost sure asymptotic stability of a stochastic SIRS model	153
A. Cima, A. Gasull, F. Mañosas On the global asymptotic stability of difference equations satisfying a Markus–Yamabe condition	167
N. Dobbs, T. Nowicki, G. Świrszcz Outer billiard around a curvilinear triangle with a fixed diameter	179
A. Ferragut, A. Gasull Non-algebraic oscillations for predator–prey models	195

J.-P. Franoise	
From Abel equations to Jacobian conjecture	209
E. Freire, E. Ponce, F. Torres	
The discontinuous matching of two planar linear foci can have three nested crossing limit cycles	221
J. Gin�, M. Grau, J. Llibre	
Polynomial and rational first integrals for planar homogeneous polynomial differential systems	255
Yu. Ilyashenko	
Complex length and persistence of limit cycles in a neighborhood of a hyperbolic polycycle	279
C. Li, J. Llibre	
Cubic homogeneous polynomial centers	297
E. Liz	
Delayed logistic population models revisited	309
J. Mart�nez-Alfaro, R. Oliveira	
Integrable systems on \mathbb{S}^3	333
K. R. Meyer, J. F. Palaci�n, P. Yanguas	
Invariant tori in the lunar problem	353
D. D. Novaes	
On nonsmooth perturbations of nondegenerate planar centers	395
W. M. Oliva	
A survey on stably dissipative Lotka–Volterra systems with an application to infinite dimensional Volterra equations	421
M. Sabatini	
Finding Hamiltonian isochronous centers by non-canonical transformations	453
D. Schlomiuk	
Topological and polynomial invariants, moduli spaces, in classification problems of polynomial vector fields	461
H. Wu	
Uniform methods to establish Poincar� type linearization theorems	497
Y. Yomdin	
Bautin ideals and Taylor domination	529