LIVIO PIZZOCCHERO

Breve curriculum, attività scientifica e pubblicazioni (Italiano)

Short curriculum, scientific activity and publications (English)

ITALIANO

Livio Pizzocchero (laureato in Fisica, con lode, nel 1986 e Dottore di Ricerca in Fisica Teorica nel 1990 presso l'Università degli Sudi di Milano) dal novembre 2005 è Professore Associato confermato di Fisica Matematica presso il Dipartimento di Matematica dell'Università degli Studi di Milano, dove in precedenza ha prestato servizio come Ricercatore (novembre 1991-novembre 2002) e Professore Associato non confermato (novembre 2002-novembre 2005). Il 17 ottobre 2014 ha conseguito l'abilitazione a Professore Ordinario di Fisica Matematica (Abilitazione Scientifica Nazionale, tornata 2013).
Livio Pizzocchero è affiliato all'Istituto Nazionale di Fisica Nucleare, con incarico di ricerca, e aderisce al Gruppo Nazionale per la Fisica Matematica dell'INdAM. Ha partecipato a progetti di ricerca finanziati dal MIUR e dall'Istituto Nazionale di Fisica Nucleare. Ha svolto l'attivita di referee per conto di riviste internazionali di fisica matematica e fisica teorica.
Le pubblicazioni scientifiche di Livio Pizzocchero, elencate di seguito, sono a grande maggioranza articoli su riviste internazionali con referee registrate nei database ISI-Web of Science e Scopus; agli articoli su rivista si aggiunge un libro, pubblicato da un editore scientifico internazionale.
Il presente curriculum contiene una selezione di citazioni raccolte da tali pubblicazioni nella letteratura scientifica (per l'elenco di tutte le citazioni si veda la versione estesa del curriculum pubblicata in questo sito).

Nella sua attività scientifica, Livio Pizzocchero ha trattato i seguenti temi di ricerca:

• Teoria delle varietà simplettiche, riemanniane e kähleriane infinito-dimensionali. Uso di questi strumenti geometrico-differenziali in rapporto a questioni fondazionali di meccanica quantistica [2] [3] [4] [5].
• Applicazione degli stessi strumenti alla teoria delle C^*-algebre: costruzione di versioni non commutative del teorema di rappresentazione funzionale di Gelfand [7].
• Struttura differenziale dei tori invarianti per i sistemi hamiltoniani integrabili con spazio delle fasi infinito-dimensionale [1].

• Strutture geometriche ed algebriche fondamentali nella teoria dei sistemi integrabili: formalismo di Lax e bi-hamiltoniano, teoria della matrice R. Applicazioni alle equazioni solitoniche, ai reticoli di tipo Toda e alla teoria del corpo rigido multidimensionale [10] [12] [13] [14] [15] [16] [24] [25].
• Supersimmetrizzazione delle equazioni solitoniche; aspetti generali della teoria dei sistemi integrabili su supervarietà [6] [8] [9] [11] [20].
• Studi di storia della matematica: la geometria differenziale in Italia, con particolare riferimento al periodo tra le due guerre mondiali [17].
• Metodi di approssimazione per funzioni speciali [22].
• Aspetti deterministici e stocastici nei processi con nucleazione e crescita di grani [28] [30].
• Risultati di esistenza su tempi lunghi e stima dell'errore del metodo della media per sistemi integrabili finito-dimensionali perturbati. Applicazioni al moto dei satelliti [27] [31] [32].
• Spazi di Sobolev: disuguaglianze di immersione, stime alla Nash-Moser sul prodotto puntuale di funzioni e sugli operatori nonlineari di composizione con una funzione data (operatori di Nemytskij). Stime sulle migliori costanti in alcune di queste disuguaglianze [18] [19] [21] [26] [36] [38] [46] [48].
• Equazioni di evoluzione semi- o quasi- lineari in spazi di Banach; stime sull'intervallo di esistenza e proprietà di regolarità delle soluzioni esatte, deducibili dall'analisi " a posteriori" di soluzioni approssimate [23] [29].
• Applicazioni dello schema precedente alle equazioni di Eulero o Navier-Stokes: esistenza e regolarità locale o globale delle soluzioni, tramite analisi a posteriori di soluzioni approssimate [34] [37] [39] [40] [41] [43]. Estensione di questo approccio alla magnetoidrodinamica (MHD) [53].
• Approccio rigoroso alla rinormalizzazione in teoria quantistica dei campi: applicazioni all'effetto Casimir [35] [44] [45] [47] [49].
• Teoria della relatività generale: spazi-tempi con curve temporali chiuse [50] e "wormholes" [51] [54].
• Modelli cosmologici che coinvolgono campi scalari [52] [55].

ENGLISH

Livio Pizzocchero (degree in Physics, summa cum laude, in 1986 and PhD in Theoretical Physics in 1990 at the University of Milano) is currently Associate Professor of Mathematical Physics in the Department of Mathematics of the Università degli Studi di Milano; on October 17, 2014 he obtained the Italian national habilitation for a Full Professorship in Mathematical Physics (Abilitazione Scientifica Nazionale, tornata 2013).
Livio Pizzocchero is affiliated to the Italian Istituto Nazionale di Fisica Nucleare and to the Italian Istituto Nazionale di Alta Matematica. He took part in several research projects sponsored by by the Italian Ministry of University and by the Istituto Nazionale di Fisica Nucleare. He served as a referee for several international journals in the areas mathematical physics or theoretical physics.
The scientific publications of Livio Pizzocchero are listed hereafter. Most of them are articles in international refereed journals recorded in the databases ISI-Web of Science and Scopus; in addition, a book by an international publisher should be mentioned.
The present curriculum contains some selected citations of these publications in the scientific literature (for the list of all citations, see the extended version of the curriculum available on this web site).

The scientific activity of Livio Pizzocchero has dealt with the following subjects:

• Infinite-dimensional symplectic, Riemannian and Kählerian manifolds: general theory, and applications to quantum mechanics [2] [3] [4] [5].
• Applications of the same geometrical tools to the theory of C^*-algebras: non commutative versions of Gelfand's functional representation theorem [7].
• Integrable Hamiltonian systems with infinte-dimensional phase space, and differential structures for their invariant tori [1].
• Basic algebraic and geometrical structures in the theory of integrable systems: Lax and biHamiltonian formalism, R-matrix theory. Applications to soliton equations, to lattices of the Toda type and to the multidimensional rigid body [10] [12] [13] [14] [15] [16] [24] [25].
• Supersymmetric soliton equations; general aspects in the theory of integrable systems on supermanifolds [6] [8] [9] [11] [20].

• History of Italian mathematics (especially, of differential geometry in the period between the two World Wars) [17].
• Approximation techniques for special functions [22].
• Deterministic and stochastic models for crystal growth [28] [30].
• Existence results over long times and error estimates about the averaging method for pertubations of finite-dimensional integrable systems. Applications to satellite motions [27] [31] [32].
• Sobolev spaces: imbedding inequalities, estimates of the Nash-Moser type on pointwise multiplication and on the nonlinear operators of composition with a given function (Nemytskij operators). Estimates on the best constants in some of these inequalities [18] [19] [21] [26] [36] [38] [46] [48].
• Semi- or quasi-linear evolution equations in Banach spaces: estimates on the interval of existence and regularity properties of exact solutions, derivable from the "a posteriori analysis" of approximate solutions [23] [29].
• Applications of the previous framework to the Euler or Navier-Stokes equations: local or global existence and regularity of the solutions, via a posteriori analysis of approximate solutions [34] [37] [39] [40] [41] [42] [43]. Extension of this approach to magnetohydrodinamics (MHD) [53].
• Rigorous approach to renormalization in quantum field theory; applications to the Casimir effect [35] [44] [45] [47] [49].
• General relativity: spacetimes with closed timelike curves [50], wormholes [51] [54].
• Cosmological models involving scalar fields [52] [55].

`ARTICLE`:= link to the published article;

`E-PRINT`:= link to the arXiv e-print

[1] R. Cirelli, L. Pizzocchero, *On the Integrability of Quantum Mechanics as an Infinite-Dimensional Hamiltonian System*, Nonlinearity **3**, 1057-1080 (1990). `ARTICLE`

[2] R. Cirelli, A. Manià, L. Pizzocchero, *Quantum Mechanics as an Infinite-Dimensional Hamiltonian System with Uncertainty Structure. Part I*, J. Math. Phys. **31**, 2891-2897 (1990). `ARTICLE`

[3] R. Cirelli, A. Manià, L. Pizzocchero, *Quantum Mechanics as an Infinite-Dimensional Hamiltonian System with Uncertainty Structure. Part II*, J. Math. Phys. **31**, 2898-2903 (1990). `ARTICLE`

[4] L. Pizzocchero, *La meccanica di Schrödinger nell' approccio geometrico. Completa integrabilità*, Tesi di dottorato, III Ciclo, Università degli Studi di Milano (1990).

[5] R. Cirelli, A. Manià, L. Pizzocchero, *Quantum Phase Space Formulation of Schrödinger Mechanics*, Int. J. Mod. Phys. A **6**, 2133-2146 (1991). `ARTICLE`

[6] C. Morosi, L. Pizzocchero, *On the biHamiltonian Structure of the Supersymmetric KdV Hierarchies. A Lie Superalgebraic Approach*, Commun. Math. Phys. **158**, 267-288 (1993). `ARTICLE`

[7] R. Cirelli, A. Manià, L. Pizzocchero, *A Functional Representation for Non Commutative C^*-Algebras*, Rev. Math. Phys. **6**, 675-697 (1994). `ARTICLE`

[8] C. Morosi, L. Pizzocchero, *Osp(3,2) and gl(3,3) Supersymmetric KdV hierarchies*, Phys. Lett. A **185**, 241-252 (1994). `ARTICLE`

[9] C. Morosi, L. Pizzocchero, *On the Equivalence of two Super KdV Theories: a BiHamiltonian Viewpoint*, J. Math. Phys. **35**, 2397-2407 (1994). `ARTICLE`

[10] C. Morosi, L. Pizzocchero, *On the biHamiltonian Interpretation of the Lax Formalism*, Rev. Math. Phys. **7**, 389-430 (1995). `ARTICLE`

[11] C. Morosi, L. Pizzocchero, *A Fully Supersymmetric AKNS Theory*, Commun. Math. Phys. **176**, 353-381 (1996). ARTICLE

[12] C. Morosi, L. Pizzocchero, *On the Euler Equation: biHamiltonian Structure and Integrals in Involution*, Letters in Math. Phys. **37**, 117-135 (1996). ARTICLE

[13] C. Morosi, L. Pizzocchero, *R-matrix Theory, Formal Casimirs and the Periodic Toda Lattice*, J. Math. Phys. **37**, 4484-4513 (1996). ARTICLE

[14] C. Morosi, L. Pizzocchero, *On the Continuous Limit of Integrable Lattices I. The Kac-Moerbeke System and KdV Theory*, Commun. Math. Phys. **180**, 505-528 (1996). ARTICLE

[15] C. Morosi, L. Pizzocchero, *On the Continuous Limit of Integrable Lattices II. Volterra Systems and $sp(N)$ Theories*, Rev. Math. Phys. **10**, 235-270 (1998). ARTICLE

[16] C. Morosi, L. Pizzocchero, *On the Continuous Limit of Integrable Lattices III. Kupershmidt Systems and $sl(N+1)$ KdV Theories*, J. Phys. A: Math. Gen. **31**, 2727-2746 (1998). ARTICLE

[17] L. Pizzocchero, *Geometria differenziale*, a chapter of the book "La matematica in Italia dopo l' unità. Il periodo tra le due guerre mondiali" ("Italian Mathematics after Unification. The period between the World Wars"), pp. 321-379; edited by S. Di Sieno, A. Guerraggio, P. Nastasi, Ed. Marcos y Marcos, Milano. First edition, 1998, Second Edition, 2000.

[18] C. Morosi, L. Pizzocchero, *On the constants for some Sobolev imbeddings*, Journal of Inequalities and Applications **6**, 665-679 (2001). ARTICLE, E-PRINT

[19] C. Morosi, L. Pizzocchero, *On the constants in some inequalities for the Sobolev norms and pointwise product*, Journal of Inequalities and Applications **7**, 421-452 (2002). ARTICLE, E-PRINT

[20] C. Morosi, L. Pizzocchero, *Bihamiltonian reduction and SUSY KdVs*, in "Concise Encyclopedia of Supersymmetry", pages 58-80, edited by J. Bagger, S. Duplij, W. Siegel, Kluwer Academic Publishers (2004) ([1]). ARTICLE

[1] Among the contributors to this Encyclopedia, there are A. Connes (Fields medalist) and G. t'Hooft (Nobel Prize for Physics).

[21] C. Morosi, L. Pizzocchero, *Quantitative functional calculus in Sobolev spaces*, Journal of Function Spaces and Applications **2**(3), pp. 279-321 (2004). ARTICLE, E-PRINT

[22] C. Morosi, L. Pizzocchero, *On the expansion of the Kummer function in terms of incomplete Gamma functions*, Archives of Inequalities and Applications **2** (1), pp. 49-72 (2004). ARTICLE, E-PRINT

[23] C. Morosi, L. Pizzocchero, *On approximate solutions of semilinear evolution equations*, Rev. Math. Phys. **16**(3) pp. 383-420 (2004). ARTICLE, E-PRINT

[24] C. Morosi, L. Pizzocchero, *On a theorem by Treves*, J.Math. Phys. **45**(9), pp. 3558-3564 (2004). ARTICLE, E-PRINT

[25] C. Morosi, L. Pizzocchero, *On the Treves theorem for the Ablowitz-Kaup- Newell- Segur equation*, J.Math. Phys. **45**(12), pp. 4737-4753 (2004). ARTICLE, E-PRINT

[26] C. Morosi, L. Pizzocchero, *On the constants for multiplication in Sobolev spaces*, Advances in Applied Mathematics **36**(4), pp. 319-363 (2006). ARTICLE, E-PRINT

[27] C. Morosi, L. Pizzocchero, *On the average principle for one frequency systems*, J. Phys. A: Math. Gen. **39**(14), pp. 3673-3702 (2006). ARTICLE, E-PRINT

[28] M. Burger, V. Capasso, L. Pizzocchero, *Mesoscale averaging of nucleation and growth models*, Multiscale Modeling and Simulation **5**(2), pp. 564–592 (2006). ARTICLE

[29] C. Morosi, L. Pizzocchero, *On approximate solutions of semilinear evolution equations II. Generalizations, and applications to Navier-Stokes equations*, Reviews in Mathematical Physics **20**(6), 625-706 (2008). ARTICLE, E-PRINT

[30] D. Aquilano, V. Capasso, A. Micheletti, S. Patti, L. Pizzocchero, M. Rubbo, *A birth and growth model for kinetic-driven crystallization processes, Part I: Modeling*, Nonlinear Analysis, Real World Applications, **10**(1), pp. 71-92 (2009). ARTICLE

[31] C. Morosi, L. Pizzocchero, *On the averaging principle for one frequency systems. Seminorm estimates for the error*, Nonlinear Dynamics **57**(3), pp. 321-334 (2009). ARTICLE, E-PRINT

[32] C. Morosi, L. Pizzocchero, *On the averaging principle for one frequency systems. An application to satellite motions*, Nonlinear Dynamics **58**(1-2), 273-294 (2009). ARTICLE, E-PRINT

[33] C. Morosi, L. Pizzocchero, *New results on multiplication in Sobolev spaces*, Advances in Applied Mathematics **44**(4), pp. 393-432 (2010). ARTICLE, E-PRINT

[34] C. Morosi, L. Pizzocchero, *An H^1 setting for the Navier-Stokes equations: quantitative estimates*, Nonlinear Analysis **74**(6), pp. 2398-2414 (2011). ARTICLE, E-PRINT

[35] D. Fermi, L. Pizzocchero, *Local zeta regularization and the Casimir effect*, Prog. Theor. Phys. **126**(3), pp. 419-434 (2011). ARTICLE, E-PRINT

[36] C. Morosi, L. Pizzocchero, *On the constants in a Kato inequality for the Euler and Navier-Stokes equations*, Commun. Pure Appl. Analysis **11**(2), pp. 557-586 (2012). ARTICLE, E-PRINT

[37] C. Morosi, L. Pizzocchero, *On approximate solutions of the incompressible Euler and Navier-Stokes equations*, Nonlinear Analysis **75**(4), pp. 2209-2235 (2012). ARTICLE, E-PRINT

[38] C. Morosi, L. Pizzocchero, *On the constants in a basic inequality for the Euler and Navier-Stokes equations*, Applied Mathematics Letters **26**(2), pp. 277-284 (2013). ARTICLE

The published version is an abridged version of the manuscript arXiv:1007.4412v3 [math.AP] 5 Sep 2012 E-PRINT.

[39] C. Morosi, M. Pernici, L. Pizzocchero, *On power series solutions for the Euler equation, and the Behr-Nečas-Wu initial datum*, ESAIM: Mathematical Modelling and Numerical Analysis **47**(3), pp. 663-688 (2013). (published on line on September 2012. DOI: 10.1051/m2an/2012041) ARTICLE, E-PRINT

[40] C. Morosi, L. Pizzocchero, *On the Reynolds number expansion for the Navier-Stokes equations*, Nonlinear Analysis: Theory Methods and Applications **95** (January 2014), 156-174. ARTICLE, E-PRINT

[41] C. Morosi, M. Pernici, L. Pizzocchero, *A posteriori estimates for Euler and Navier-Stokes equations*, in *Hyperbolic Problems: Theory, Numerics and Applications. Proceedings of the XIV International Conference held in Padova (June 25-29, 2012)*, edited by F. Ancona, A. Bressan, P. Marcati, A. Marson, AIMS Series on Applied Mathematics **8** (2014), 847-855. ARTICLE, E-PRINT

[42] C. Morosi, L. Pizzocchero, *Smooth solutions of the Euler and Navier-Stokes equations from the a posteriori analysis of approximate solutions*, Nonlinear Analysis **113** (2015), 298-308. ARTICLE, E-PRINT

[43] C. Morosi, M. Pernici, L. Pizzocchero, *Large order Reynolds expansions for the Navier-Stokes equations*, Appl. Math. Letters **49** (2015), 58-66. ARTICLE

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[44] D. Fermi, L. Pizzocchero, *Local zeta regularization and the scalar Casimir effect III. The case with a background harmonic potential*, Internat. J. Modern Phys. A **30** (35) (2015), 1550213 (42 pages). ARTICLE, E-PRINT

[45] D. Fermi, L. Pizzocchero, *Local zeta regularization and the scalar Casimir effect IV. The case of a rectangular box*, arXiv:1505.03276 [math-ph] (2015), Internat. J. Modern Phys. A **31** (4-5) (2016), 1650003 (56 pages). ARTICLE, E-PRINT

[46] C. Morosi, M. Pernici, L. Pizzocchero, *New results on the constants in some inequalities for the Navier-Stokes quadratic nonlinearity*, Applied Mathematics and Computation **308** (2017), 54-72. ARTICLE

The published version is an abridged version of the manuscript arXiv:1511.00533 [math.AP] E-PRINT.

[47] **BOOK:** D. Fermi, L. Pizzocchero, *Local zeta regularization and the scalar Casimir effect. A general approach based on integral kernels* (276 pp.), World Scientific Publishing (November 2017). ISBN: 978-981-3224-99-5 (hardcover), ISSN 978-981-3225-01-5 (e-book). LINK TO PUBLISHER

[48] C. Morosi, L. Pizzocchero, *On the constants for some fractional Gagliardo-Nirenberg and Sobolev inequalities*, Expositiones Mathematicae **36**(1)(2018), 32-77 (published online on 30 August 2017, DOI 10.1016/j.exmath.2017.08.007). ARTICLE, E-PRINT

[49] D. Fermi, L. Pizzocchero, *Local Casimir effect for a scalar field in presence of a point impurity*, Symmetry 2018, **10**(2), 38 (20 pages); doi:10.3390/sym10020038, Special Issue "Casimir Physics and Applications". ARTICLE (OPEN ACCESS)

[50] D. Fermi, L. Pizzocchero, *A time machine for free fall into the past*, Classical and Quantum Gravity **35**(16) (2018), 165003 (42pp). ARTICLE, E-PRINT

[51] F. Cremona, F. Pirotta, L. Pizzocchero, *On the linear instability of the Ellis-Bronnikov-Morris-Thorne wormhole*, General Relativity and Gravitation (2019) 51:19 (15 pp). ARTICLE, E-PRINT

[52] D. Fermi, M. Gengo, L. Pizzocchero, *On the necessity of phantom fields for solving the horizon problem in scalar cosmologies*, Universe 2019 **5**(3), 76 (20 pages); doi:10.3390/universe5030076 (invited feature paper). ARTICLE (OPEN ACCESS)

[53] L. Pizzocchero, E. Tassi, *On approximate solutions of the equations of incompressible magnetohydrodynamics*, Nonlinear Analysis **195** (2020), 111726 (36 pp). ARTICLE, E-PRINT

[54] F. Cremona, L. Pizzocchero, O. Sarbach, *Gauge-invariant spherical linear perturbations of wormholes in Einstein gravity minimally coupled to a self-interacting phantom scalar field*, Physical Review D **101** (2020), 104061 (2020) (26 pp). ARTICLE, E-PRINT

[55] D. Fermi, M. Gengo, L. Pizzocchero, *Integrable scalar cosmologies with matter and curvature*, Nuclear Physics B **957**, (2020) 115095 (102 pp). ARTICLE (OPEN ACCESS)

A small selection of papers citing the scientific works of Livio Pizzocchero

Hereafter, the expression: "cit.: [X]" means that a paper cites the work [X] in the list of L. Pizzocchero's publications. Here are the papers:

D.C. Brodie (Blackett Laboratory, Imperial College, London), L.P. Hughston (King's College, London),
Geometric models for quantum statistical inference, in *The Geometric Universe* (Symposium in honour of Sir Roger Penrose, St. John's College, Oxford), Oxford Univ. Press (1998).
Cit. : [2][3]

D. C. Brody (Blackett Laboratory, Imperial College, London), L. P. Hughston (Dept. of Mathematics, King's College, London),
Geometric quantum mechanics, J. Geom. Phys. **38**, 16-53 (2001).
Cit. : [2][3] + my PhD thesis [4]

A. Ashtekar, T.A. Schilling (Center for Gravit. Phys. and Geometry, Penn State Univ.),
Geometrical formulation of Quantum Mechanics, in *On Einstein's path*, Essays in honour of Engelbert Schucking, Springer (1999).
Cit. : [2][3]

N.P. Landsman (Korteweg-de Vries Institute for Mathematics, Univ. of Amsterdam),
Mathematical topics between classical and quantum mechanics, Springer Monographs in Mathematics (1998).
Cit. : [2][3][7]

V.I. Manko (Lebedev Physical Institute, Moscow) G. Marmo, F.Zaccaria (Dip. di Fisica, Univ. di Napoli), E.C.G. Sudarshan, (Dept. of Physics, Center for Particle Physics, Univ. of Texas),
Differential geometry of density states, Reports on Math. Phys. **55**(3), 405-422 (2005).
Cit. : [2] [3]

P. Bertozzini. R. Conti (School of Mathematical and Physical Sciences, University of Newcastle, Callaghan, Australia), W. Lewkeeratiyutkul (Department of Mathematics, Chulalongkorn University, Bangkok),
A Horizontal Categorification of Gelfand Duality, Advances in Mathematics **226**, 584-607 (2011).
Cit. : [7]

H. Aratyn, C. Rasinariu (Dept. of Phys., Univ. of Illinois, Chicago),
Manifestly supersymmetric Lax integrable hierarchies, Phys. Lett. B **391**, 99–106 (1997).
Cit. : [6][9][11]

J. Lenells (Department of Applied Mathematics and Theoretical Physics, University of Cambridge, Cambridge),
A Bi-Hamiltonian Supersymmetric Geodesic Equation, Lett. Math. Phys **85**, 5563 (2008).
Cit. : [8]

Israel M. Gelfand (Dept. of Mathematics, Rutgers Univ.), I. Zakharevich, (Dept. of Mathematics, Ohio State Univ.),
Webs, Lenard schemes, and the local geometry of biHamiltonian Toda and Lax structures, Selecta Math. **6**, 131-183 (2000).
Cit. : [12]

I. Zakharevich (Dept. of Mathematics, Ohio State Univ.)
Kronecker webs, biHamiltonian structures, and the method of argument translation, Transform. Groups **6**, 267-300 (2001).
Also available as arXiv:math.SG/9908034.
Cit. : [12]

T. S. Ratiu (Section de Mathématiques and Bernoulli Center, Ecole Polytechnique Fédérale de Lausanne, Switzerland),
Integrable flows on the symplectic group, talk given at Luminy, Centre International de Rencontres Mathématiques, Rencontre "Intégrabilité dynamique" (November 27-December 1, 2006).
(Program of the meeting and text of the talk available at
http://www.cirm.univ-mrs.fr/videos/2006/programmes/conf32 _Ortega.html).
Cit. : [12]

A. Bloch (Dept of Mathematics, Univ. of Michigan, Ann Arbor), V. Brinzanescu (Dept. of Mathematics and Informatics, Univ. of Pitesti, Romania) A. Iserles (Dept. of Applied Mathematics and Theoretical Physics, University of Cambridge, UK), J.E. Marsden (Control Theory and Dynamical Systems, California Institute of Technology, Pasadena), T.S. Ratiu (Section de Mathématique, Ecole Polytechnique Fédéral de Lausanne),
A class of integrable flows on the space of symmetric matrices, Commun. Math. Phys. **290**, 399-435 (2009).
Cit. : [12]

A. Tsiganov (St.Petersburg State University),
Integrable Euler top and nonholonomic Chaplygin ball, Journal of Geometric Mechanics **3**(3)(2011), pp. 337-362.
Cit. : [12]

P. Birtea, I.Casu (Departamentul de Matematica, Universitatea de Vest din Timisoara, Romania) T.S. Ratiu, M. Turhan, (Section de Mathématiques, École Polytechnique Fédérale de Lausanne, Switzerland),
Stability of Equilibria for the so(4) Free Rigid Body, Journal of Nonlinear Science, doi 10.1007/s00332-011-9113-2 (2012).
Cit. : [12]

A. Bolsinov (Dept. of Mathematical Sciences, Loughborough University), A. Izosimov (Department of Mechanics and Mathematics, Moscow State University),
Singularities of Bi-Hamiltonian Systems, Commun. Math. Phys. 331, 507-543 (2014).
Cit. : [12]

Y.B. Suris, (Fach. Mathematik, Technische Universität, Berlin), O. Ragnisco (Dip. Fisica, Univ. Roma III),
What is the relativistic Volterra lattice?, Commun. Math. Phys. **200**, 445-485 (1999).
Cit. : [13]

Y. Kosmann-Schwarzbach (Centre Math. CNRS, Ecole Polytechnique, Palaiseau), F. Magri (Dip. di Mat., Univ. di Milano),
Lax-Nijenhuis operators for integrable systems, J. Math. Phys. **37**, 6173–6197 (1996).
Cit. : [10][12]

Wei Fu (Dept. of Mathematics, Shanghai Univ.), Lin Huang (School of Mathematical Sciences, Fudan Univ., Shanghai), K.M. Tamizhmani (Dept. of Mathematics, Pondicherry Univ., Puducherry), Da-jun Zhang (Dept. of Mathematics, Shanghai Univ.),
Integrable properties of the differential-difference Kadomtsev-Petviashvili hierarchy and continuum limits, Nonlinearity **26**, 3197-3229 (2013).
Cit.: [14] [15] [16]

A. Guerraggio,
Pastori Maria, in: Dizionario Biografico degli Italiani, Vol. **81** (2014), Istituto dell'Enciclopedia Treccani.
Cit.: [17]

Kohtaro Watanabe, Takeo Yamada (Dept. of Computer Science, National Defense Academy, Japan), Wataru Takahashi (Dept. of Mathematical and Computing Science, Tokyo Institute of Technology),
Reproducing kernels of $H^m(a,b)$ $m = 1, 2, 3$ and least constant in Sobolev's inequalities, Appl. Anal **82**(8), 809-820 (2003).
Cit. : [18]

Yoshinori Kametaka (Graduate school of Mathematical Sciences, Faculty of Engineering Sciences, Osaka University), Kohtaro Watanabe (Dept. of Computer Science, National Defense Academy, Japan), Atsushi Nagai (College of Industrial Technology, Nihon University),
The best constant of Sobolev inequality in an n-dimensional Euclidean space, Proc. Japan Acad. **81** (Ser. A), 57-60 (2005).

F. Treves (Mathematics Department, Rutgers University, NJ),
Bäcklund algebra and the KdV hierarchy (Leonardo da Vinci Lecture, April 26, 2004), Milan Journal of Mathematics **73**, 75-102 (2005).
Cit. : [24] [25]

V.A. Fateev (Laboratoire de Physique Theorique, Montpellier, and Laundau Institute for Theoretical Physics, Chernogolovka), S.L. Lukyanov (Rutgers University, NJ and Laundau Institute),
Boundary RG flow associated with the AKNS soliton hierarchy, J. Phys. A: Math. Gen. **39**, 12889-12925 (2006).
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