

# Mathematics

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## 1 Algebra

- [1] Marco Castelli, Francesco Catino, Giuseppina Pinto. A new family of set-theoretic solutions of the Yang-Baxter equation, *COMMUNICATIONS IN ALGEBRA*, 46:1622–1629, 2018.
- [2] Rocco Chirivì and Mauro Spreafico. Space Forms and Group Resolutions: the tetrahedral family, *JOURNAL OF ALGEBRA*, 510:52–97, 2018.
- [3] Rocco Chirivì. On some properties of LS algebras, *COMMUNICATIONS IN CONTEMPORARY MATHEMATICS*.
- [4] Maria Maddalena Miccoli. Almost semi-braces and the Yang-Baxter equation, *NOTE DI MATEMATICA*, 38:83–88, 2018.

## 2 Analysis

- [1] Davide Addona, Luciana Angiuli, and Luca Lorenzi. Invariant measures for systems of Kolmogorov equations, *JOURNAL OF APPLIED ANALYSIS AND COMPUTATION*, 3:764–804, 2018.
- [2] A. A. Albanese, J. Bonet, and W. J. Ricker. The Cesàro operator on Korenblum type spaces of analytic functions, *COLLECTANEA MATHEMATICA*, 69:263–281, 2018.
- [3] A. A. Albanese, J. Bonet, and W. J. Ricker. The Fréchet spaces  $ces(p+)$ ,  $1 < p < \infty$ , *JOURNAL OF MATHEMATICAL ANALYSIS AND APPLICATIONS*, 458:1314–1323, 2018.
- [4] A. A. Albanese, J. Bonet, and W. J. Ricker. The Cesàro operator on power series spaces, *STUDIA MATHEMATICA*, 240:47–68, 2018.
- [5] A. A. Albanese, J. Bonet, and W. J. Ricker. The Cesàro operator in weighted  $\ell_1$  spaces, *MATHEMATISCHE NACHRICHTEN*, 291:1015–1048, 2018.
- [6] A. A. Albanese, J. Bonet, and W. J. Ricker. The Cesàro operator on duals of power series spaces of infinite type, *JOURNAL OF OPERATOR THEORY*, 79:373–402, 2018.
- [7] Luciana Angiuli, Luca Lorenzi, and Elisabetta M. Mangino. On a perturbation of a class of Schroedinger systems in  $L^2$  spaces, *NOTE DI MATEMATICA*, 38:125–138, 2018.
- [8] Michele Campiti. Convergence of Iterated Boolean-type Sums and Their Iterates, *NUMERICAL FUNCTIONAL ANALYSIS AND OPTIMIZATION*, 39:1054–1063, 2018.
- [9] Michele Campiti. Korovkin-type approximation in spaces of vector-valued and set-valued functions, *APPLICABLE ANALYSIS*, 1–11, 2018.
- [10] M. Carriero, A. Leaci, and F. Tomarelli. Segmentation and Inpainting of Color Images, *JOURNAL OF CONVEX ANALYSIS*, 25:435–458, 2018.
- [11] Fausto Ferrari, Michele Miranda, Diego Pallara, Andrea Pinamonti, and Yannick Sire. Fractional laplacians, perimeters and heat semigroups in Carnot groups, *DISCRETE AND CONTINUOUS DYNAMICAL SYSTEMS. SERIES S*, 11:477–491, 2018.
- [12] Mikhail Kukurin, Sergey Piskarev and M. Spreafico. Finite difference methods for fractional differential equations of order  $1/2$ , *JOURNAL OF MATHEMATICAL SCIENCES*, 230:950–960, 2018.
- [13] Elisabetta Mangino and Javier Aroza. Stability for weighted composition  $C_0$ -semigroups on Lebesgue and Sobolev spaces, *REVISTA DE LA REAL ACADEMIA DE CIENCIAS EXACTAS, FISICAS Y NATURALES. SERIE A, MATEMATICAS*, 112(4):1059–1073, 2018.
- [14] Giorgio Metafune, Luigi Negro, and Chiara Spina. Sharp kernel estimates for elliptic operators with second-order discontinuous coefficients, *JOURNAL OF EVOLUTION EQUATIONS*, 18:467–514, 2018.
- [15] Matteo Novaga, Diego Pallara, and Yannick Sire. A fractional isoperimetric problem in the wiener space, *JOURNAL D'ANALYSE MATHEMATIQUE*, 134:787–800, 2018.

- [16] Nguyen T.T.Lan and Eduardo Pascali. A Two-point Boundary Value Problem for a Differential Equation with Self-Reference, *JOURNAL OF MATHEMATICAL ANALYSIS AND APPLICATIONS*, 6:25–30.
- [17] Mauro Spreafico Asymptotics of the determinant of the discrete Laplacian on the circle, *REVISTA MATEMATICA COMPLUTENSE*, 31:237–245, 2018.

### 3 Computer Science

- [1] Vittorio Bilò, Angelo Fanelli, Michele Flammini, Gianpiero Monaco, Luca Moscardelli. Nash Stable Outcomes in Fractional Hedonic Games: Existence, Efficiency and Computation, *JOURNAL OF ARTIFICIAL INTELLIGENCE RESEARCH*, 62:315–371, 2018.
- [2] Vittorio Bilò. A Unifying Tool for Bounding the Quality of Non-Cooperative Solutions in Weighted Congestion Games, *THEORY OF COMPUTING SYSTEMS*, 62:1288–1317, 2018.
- [3] Vittorio Bilò, Angelo Fanelli, Luca Moscardelli. Opinion formation games with dynamic social influences, *THEORETICAL COMPUTER SCIENCE*, 746:73–87, 2018.
- [4] Vittorio Bilò, Michele Flammini, Gianpiero Monaco, Luca Moscardelli. On the Impact of Buyers Preselection in Pricing Problems, 17th International Conference on Autonomous Agents and MultiAgent Systems (AAMAS), Stockholm (July 10-15). ACM, Richland, (2018).
- [5] Vittorio Bilò, Francesco Cellinese, Giovanna Melideo, Gianpiero Monaco. On Colorful Bin Packing Games, 24th International Conference on Computing and Combinatorics (COCOON), Qing Dao (July 2-4). Springer, Berlin, (2018).
- [6] Vittorio Bilò, Luca Moscardelli, Cosimo Vinci. Uniform Mixed Equilibria in Network Congestion Games with Link Failures, 45th International Colloquium on Automata, Languages, and Programming (ICALP), Prague (July 9-13). Schloss Dagstuhl - Leibniz-Zentrum fuer Informatik, Wadern, (2018).
- [7] Vittorio Bilò, Cosimo Vinci. The Price of Anarchy of Affine Congestion Games with Similar Strategies, 19th Italian Conference on Theoretical Computer Science (ICTCS), Urbino (September 18-20). CEUR-WS.org, Aachen, (2018).
- [8] Vittorio Bilò, Michele Flammini, Gianpiero Monaco, Luca Moscardelli. Pricing Problems with Buyer Preselection., 43rd International Symposium on Mathematical Foundations of Computer Science (MFCS), Liverpool (August 27-31). Schloss Dagstuhl - Leibniz-Zentrum fuer Informatik, Wadern, (2018).
- [9] Antonio Caruso, Stefano Chessa, Soledad Escolar, Xavier del Toro, and Juan Carlos López. A Dynamic Programming Algorithm for High-Level Task Scheduling in Energy Harvesting IoT, *IEEE Internet of Things Journal*, 5:2234–2248, 2018.
- [10] Stefano Bistarelli and Antonio Caruso. Preliminary Results on the Modeling of System Level Diagnosis Problems with Abstract Argumentation, *Proceedings of the 19th Italian Conference on Theoretical Computer Science*, 2243(1):179–190, 2018.
- [11] Soledad Escolar, Antonio Caruso, Stefano Chessa, Xavier Del Toro, Félix J. Villanueva, and Juan C. López. Statistical Energy Neutrality in IoT Hybrid Energy-Harvesting Networks, *2018 IEEE Symposium on Computers and Communications (ISCC)*, 00444–00449, 2018.

### 4 Numerical Analysis

- [1] Bozzini Benedetto, Amati Matteo, Dobrovolska Tsvetina, Gregoratti Luca, Krastev Ivan, Sgura Ivonne, Taurino Antonietta, Kiskinova Maya. Depth-Dependent Scanning Photoelectron Microspectroscopy Unravels the Mechanism of Dynamic Pattern Formation in Alloy Electrodeposition, *JOURNAL OF PHYSICAL CHEMISTRY. C*, 122:15996–16007, 2018.

- [2] Massimo Frittelli, Anotida Madzvamuse, Ivonne Sgura, and Chandrasekhar Venkataraman. Numerical Preservation of Velocity Induced Invariant Regions for ReactionDiffusion Systems on Evolving Surfaces, *JOURNAL OF SCIENTIFIC COMPUTING*, 77:971–1000, 2018.
- [3] Ivonne Sgura, Amos S. Lawless, and Benedetto Bozzini. Parameter estimation for a morphochemical reaction-diffusion model of electrochemical pattern formation, *INVERSE PROBLEMS IN SCIENCE & ENGINEERING*, 1:1–30, 2018.
- [4] Deborah Lacitignola, Benedetto Bozzini, Ralf Peipmann, and Ivonne Sgura. Cross-diffusion effects on a morphochemical model for electrodeposition, *APPLIED MATHEMATICAL MODELLING*, 57:492–513, 2018.
- [5] Massimo Frittelli and Ivonne Sgura. Virtual element method for the Laplace-Beltrami equation on surfaces, *MODÉLISATION MATHÉMATIQUE ET ANALYSE NUMÉRIQUE*, 52:965–993, 2018.

## 5 Geometry

- [1] Calvaruso Giovanni, and Munteanu Marian Ioan. Hopf magnetic curves in the anti-de Sitter space  $\mathbb{H}_1^3$ , *JOURNAL OF NONLINEAR MATHEMATICAL PHYSICS*, 25:462–484, 2018.
- [2] M.T.K. Abbassi, N. Amri, and G. Calvaruso. KaluzaKlein type Ricci solitons on unit tangent sphere bundles, *DIFFERENTIAL GEOMETRY AND ITS APPLICATIONS*, 59:184–203, 2018.
- [3] Giovanni Calvaruso, and Amirhesam Zaeim. Four-dimensional pseudo-Riemannian g.o. spaces and manifolds, *JOURNAL OF GEOMETRY AND PHYSICS*, 130:63–80, 2018.
- [4] Giovanni Calvaruso and Gabriela Ovando. From almost (para)-complex structures to affine structures on Lie groups, *MANUSCRIPTA MATHEMATICA*, 155:89–113, 2018.
- [5] Giovanni Calvaruso. The Ricci soliton equation and the structure of homogeneous Goedel-type spacetimes, *JOURNAL OF MATHEMATICAL ANALYSIS AND APPLICATIONS*, 465:1112–1133, 2018.
- [6] Domenico Perrone. Classification of homogeneous almost  $\alpha$ -coKaehler three-manifolds, *DIFFERENTIAL GEOMETRY AND ITS APPLICATIONS*, 59:66–90, 2018.
- [7] Mauro Spreafico. Euler isomorphism, Euler basis, and Reidemeister torsion, *MOSKOW MATHEMATICAL JOURNAL*, 18:517–555, 2018.

## 6 Mathematical, Non-linear, and Statistical Physics

- [1] Adriano Barra, Matteo Beccaria, and Alberto Fachechi. A new mechanical approach to handle generalized Hopfield neural networks, *NEURAL NETWORKS*, 106:205–222, 2018.
- [2] Elena Agliari, Adriano Barra, Pierluigi Contucci, Andrea Pizzoferrato, Cecilia Vernia. Interactions and fluctuations: a case study from Social Sciences, *NATURE PALGRAVE COMMUNICATIONS*, 4:55, 2018.
- [3] Eleonora Alfinito, Adriano Barra, Matteo Beccaria, Alberto Fachechi, and Guido Macorini. Global awareness and risk-aversion, an evolutionary game model for behavioral gambit of loyalist, *EUROPHYSICS LETTERS*, 121:38001, 2018.
- [4] Elena Agliari, Adriano Barra, Giulio Landolfi, Sara Murciano, and Sarah Perrone. Complex reaction kinetics in chemistry, *COMPLEXITY*, 7423297, 2018.
- [5] Adriano Barra, Giuseppe Genovese. Peter Sollich, and Daniele Tantari. Phase Diagram of Restricted Boltzmann Machines & Generalized Hopfield Models, *PHYSICAL REVIEW E*, 97:022310, 2018.
- [6] G. De Matteis, L. Martina, and V. Turco. Skyrmion states in chiral liquid crystals. *THEORETICAL AND MATHEMATICAL PHYSICS*, 196(2):1150–1163, Aug 2018.

- [7] G. De Matteis, D. Delle Side, L. Martina, and V. Turco. Light scattering by cholesteric skyrmions. *PHYS. REV. E*, 98:042702, Oct 2018.
- [8] Riccardo De Pascalis, Julien Dervaux, Ioan Ionescu, and Laurent Limat. Numerical multiscale modelling of nonlinear elastowetting, *European Journal of Mechanics - A/Solids*, 71:151–164, 2018.
- [9] Riccardo De Pascalis, William J. Parnell, I. David Abrahams, Tom Shearer, Donna M. Daly, and David Grundy. The inflation of viscoelastic balloons and hollow viscera, *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, 474:20180102, 2018.
- [10] Ferapontov Evgeny V., Pavlov Maxim V., and Vitolo Raffaele. Systems of conservation laws with third-order hamiltonian structures. *LETTERS IN MATHEMATICAL PHYSICS*, 1:1–25, 2018.
- [11] D. Levi, L. Martina, and P. Winternitz. Conformally invariant elliptic liouville equation and its symmetry-preserving discretization. *THEORETICAL AND MATHEMATICAL PHYSICS*, 196(3):1307–1319, Sep 2018.
- [12] F. Lombardo F., A. Goriely, and G. Napoli. Asymmetric equilibria of two nested elastic rings, *MECHANICS RESEARCH COMMUNICATIONS*, 94:91-94, 2018.
- [13] Paolo Lorenzoni, Andrea Savoldi, and Raffaele Vitolo. Bi-hamiltonian structures of kdv type. *JOURNAL OF PHYSICS. A, MATHEMATICAL AND THEORETICAL*, 51:045202–045217, 2018.
- [14] Gaetano Napoli, and Luigi Vergori. Corrigendum: Equilibrium of nematic vesicles (Journal of Physics A: Mathematical and Theoretical (2010) 43 (445207)), *JOURNAL OF PHYSICS. A, MATHEMATICAL AND THEORETICAL*, 51:359501-1-359501-3, 2018.
- [15] Gaetano Napoli, and Luigi Vergori. Influence of the extrinsic curvature on two-dimensional nematic films, *PHYSICAL REVIEW. E*, 97:052705-1-052705-9, 2018.

## 7 Probability and Statistics

- [1] R. Pappadà, F. Durante, G. Salvadori, and C. De Michele. Clustering of concurrent flood risks via Hazard Scenarios, *SPATIAL STATISTICS*, 23:124–142, 2018.
- [2] Gianfausto Salvadori, Fabrizio Durante, Carlo De Michele, and Mauro Bernardi. Hazard assessment under multivariate distributional change-points: Guidelines and a flood case study, *WATER*, 10:751–765, 2018.
- [3] Mauro Bernardi, Fabrizio Durante, Piotr Jaworski, Lea Petrella, and Gianfausto Salvadori. Conditional risk based on multivariate hazard scenarios, *STOCHASTIC ENVIRONMENTAL RESEARCH AND RISK ASSESSMENT*, 32:203–211, 2018.