

## PhD – Assistant Professor and Researcher (tenure track)



## 1. Personal Data

1. Address: via Canova 32, 98121 Messina (Sicily, Italy)
2. Phone numbers: +39 348 89 36 166; +1 (714) 732 8557
3. E-mail: [davidcarfi@gmail.com](mailto:davidcarfi@gmail.com)
4. Web page ideas: <http://ideas.repec.org/f/pca735.html>
5. Web page Google: <http://scholar.google.com/citations?user=0OgCyBYAAAAJ&hl=en>
6. Web page Researchgate: [http://www.researchgate.net/profile/David\\_Carfi/publications](http://www.researchgate.net/profile/David_Carfi/publications)
7. Web page Academia: <http://ucriverside.academia.edu/DavidCarfi>

### 1.1 Languages (5)

1. **Italian** Native
2. **English** Conversational
3. **French** Good understanding.
4. **Spanish** Good understanding.
5. **Classic Scientific Latin** Good understanding (Newton, Galileo, ...).

## 2. Education (5)

1. '07, June, **Italian superior qualification for teaching Mathematics, Informatics, Theoretical and Experimental Physics and Applied Mathematics to Economics**, in High schools. Grade: **98/100**.
2. '00, **PhD in Applied Differential Geometry (Economics and Physics) and Applied Functional Analysis (Economics and Physics)**, University Consortium of Catania-Messina-Palermo. Supervisors: **Radu Rosca, Academy Royale Belgique**, student of **Elie Cartan**; Prof. V. Ciancio, University of Messina
3. '95, July **Piano Master Degree (ten-years)** (pianistic school of **Arturo Benedetti Michelangeli**), National Music Conservatory "Arcangelo Corelli", Messina. Grade: **9,50/10**.
4. '94, Oct 5<sup>th</sup>, **Master Degree in Mathematics**, University of Messina, Thesis in **Applied Functional Analysis (Calculus of variations in Economics and Physics)**. Grade: **110/110 cum laude**.
5. '89, July, **Scientific high-school degree**, thesis on **Mathematical Analysis and Linear Algebra applied to Special Relativity and Quantum Mechanics**. Grade: **60/60**.

### 3. Areas of Expertise and knowledge (7)

1. **Game Theory** and applications to **Economics, Industrial Organization, Business Administration, Government Regulations and Finance.**
2. **Laurent Schwartz Distribution Theory** and its applications to **Theoretical Physics, Quantum Mechanics, Engineers, Economics, Finance, Game Theory and Probability.**
3. **Industrial Organization, Decision Theory and Applications, Risk Theory, Portfolio Theory, Competition.**
4. **Mathematical Methods of Economics, Finance, Econophysics, Physics, Quantum Mechanics, Engineering.**
5. **Applied Differential Geometry** (applications to **Economics, Finance, Physics and Quantum Mechanics**).
6. **Applied Functional Analysis** (applications to **Economics, Finance, Physics and Quantum Mechanics**).
7. **Mathematics and Music** (Mathematical Analysis of music compositions).

### 4. Employment History (20)

1. Fall '15, **Part-time Lecturer of Mathematics (Linear Algebra and Differential Equations)** at CSU Fullerton, California, USA
2. Fall '15, **Part-time Lecturer of Economics (MBA, Game Theory, Industrial Organization and Applications)** at CSU Fullerton, California, USA
3. Fall '14, **Part-time Lecturer of Mathematics (Linear Algebra and Differential Equations)** at CSU Fullerton, California, USA
4. Fall '14, **Part-time Lecturer of Economics (MBA, Game Theory, Industrial Organization and Applications)** at CSU Fullerton, California, USA
5. From May 15<sup>t</sup> 2013, **Assistant Professor of Mathematical Methods of Physics, Economics and Finance (full time, tenure track)**, Department of Mathematics and Informatics, University of Messina.
6. Fall '13, **Part-time Lecturer of Mathematics (Linear Algebra and Differential Equations)** at CSU Fullerton, California, USA
7. Fall '14, **Part-time Lecturer of Economics (MBA, Game Theory, Industrial Organization and Applications)** at CSU Fullerton, California, USA
8. From January 01, 2010 to July 27, 2016, **Research Scholar (Mathematical Methods of Economics, Finance, Econophysics, Physics and Quantum Mechanics, Dynamical Systems)**, Math Dept., University of California Riverside, Riverside, California, USA
9. From Apr 2012, **Visiting Researcher (Mathematical Methods of Economics, Econophysics, Physics and Quantum Mechanics)**, IAMIS, *Institute for the Applications of Mathematics & Integrated Sciences*, Riverside, California, USA
10. From Dec 01-2009 to Dec 31-2010, **Adjunct Professor (part-time) of Operational Research** at E-campus (private European University), **Department of Engineering.**
11. From March 01, 2008 to May 15<sup>th</sup> 2013, **Assistant Professor and Senior Lecturer (full time, tenure track)**, Department of Economics, University of Messina.
12. From Nov 01 - 2004 to Feb 2008, **Lecturer (fixed term) of Decision Theory and Game Theory, (with Mathematical Methods of Econophysics and Quantum Mechanics)**, applied to Economics, Industrial Organization, Business Administration and Finance. Department of Economics, University of Messina.
13. From 2003, **Adjunct Professor of Mathematics for Economics (with Econophysics and Finance)** - University of Messina
14. From '02 to '06, **Assistant Professor and Researcher (full time, fixed term) of Economics, Econophysics and Finance**, Faculty of Economics, University of Messina.
15. From '99 to '01, **Professor (part-time, fixed term) of Mathematics, informatics and Mathematics applied to Physics and Economics** in high-schools for **special, experimental and innovative Scientific courses, project of MIUR, Italian Ministry of Education and University.**
16. July 2000, **Visiting Scholar (Econophysics and Quantum Mechanics) with grant**, Department of Mathematics of the Technische Universität of Munich, Germany
17. From Dec '95 to Feb '00, **PhD candidate (Applied Mathematics to Physics and Economics)**, University Consortium of Messina-Catania-Palermo, Italy.
18. 1995, **Researcher (Applied Mathematics to Economics, Finance) (fixed term)**, University of Naples "Federico II", Italy.

19. From '94 to '99, **volunteer lecturer of Advanced Calculus and applications**, Mathematical Analysis and applications, **Functional Analysis and Applications (to Physics and Mechanics)**, Numerical Methods and applications (**to Physics, Engineering, Mechanics**), Advanced Linear Algebra, **Theory of Distributions and Applications to Engineering**, Theory of Fourier transformation and applications, **Faculty of Engineering**, University of Messina.
20. From '93 to '95, **CNR (Italy Research National Council), Researcher (fixed term)** of Applied Functional Analysis (**to Physics, Mechanics, Quantum Mechanics**).

## 5. Teaching Experience (62)

### 5.1 Teaching activity at the Departments of Economics and Mathematics of CalState University Fullerton (6)

1. Fall '15, **Part-time Lecturer of Mathematics (Linear Algebra and Differential Equations)** at CSU Fullerton, California, USA
2. Fall '15, **Part-time Lecturer of Economics (Game Theory, Industrial Organization and Applications)** at CSU Fullerton, California, USA
3. Fall '14, **Part-time Lecturer of Mathematics (Linear Algebra and Differential Equations)** at CSU Fullerton, California, USA
4. Fall '14, **Part-time Lecturer of Economics (Game Theory, Industrial Organization and Applications)** at CSU Fullerton, California, USA
5. Fall '13, **Part-time Lecturer of Mathematics (Linear Algebra and Differential Equations)** at CSU Fullerton, California, USA
6. Fall '13, **Part-time Lecturer of Economics (Game Theory, Decision Theory and Applications)** at CSU Fullerton, California, USA

### 5.2 Ordinary teaching activity at the Faculty of Economics of the University of Messina (26)

1. '12/'13, Theory of Financial Risk (with Econophysics) (80 hours).
2. '12/'13, Game Theory (1 course, 80 hours).
3. '12/'13, Game Theory (1 course, 80 hours).
4. '11/'12, Mathematical Methods and Models of Financial Markets (with Econophysics) (48 hours).
5. '11/'12, Theory of Financial Risk (with Econophysics) (80 hours).
6. '11/'12, Game Theory (2 courses, 160 hours).
7. '11/'12, Game Theory (2 courses, 160 hours).
8. '10/'11, Mathematical Methods and Models of Financial Markets (with Econophysics) (48 hours).
9. '10/'11, Game Theory (2 courses, 160 hours).
10. '09/'10, Game Theory (80 hours).
11. '10/'11, Game Theory (2 courses, 160 hours).
12. '09/'10, Game Theory (80 hours).
13. '09/'10, Mathematics for Financial Decision (with Econophysics) (64 hours).
14. '08/'09, Mathematics for Financial Decision (with Econophysics) (64 hours).
15. '08/'09, Mathematics for Economics (with Econophysics) (64 hours).
16. '08/'09, Mathematics for the Enterprises (96 hours).
17. '08/'09, Decision Theory in Economics and Finance (96 hours).
18. '08/'09, Financial Mathematics (with Econophysics) (48 hours).
19. '08/'09, Mathematics in Economics (with Econophysics) and Finance with Informatics (64 hours).
20. '07/'08, Mathematics for Financial Decision (64 hours).
21. '07/'08, Mathematics for Economics (with Econophysics) (64 hours).
22. '07/'08, Mathematics for the Enterprises (96 hours).

23. '07/'08, Decision Theory in Economics and Finance (96 hours).
24. '07/'08, Financial Mathematics (with Econophysics) (32 hours).
25. '07/'08, Mathematics for Financial and BA Decisions (32 hours).
26. '07/'08, Mathematics for Financial and BA Decisions (32 hours).

### 5.3 PhD teaching activity (7)

1. '05, from March to June (4 hours per week), **Functional Analysis and Differential Geometry applied to Economics, Econophysics, Finance and BA**, PhD in Math for Economics and Finance, Institute of Mathematics, Faculty of Economics, University of Messina, University Consortium of Messina-Catania-Palermo.
2. '04, from March to June (4 hours per week), **Functional Analysis and Differential Geometry applied to Economics, Econophysics, Finance and BA**, PhD in Math for Economics and Finance, Institute of Mathematics, Faculty of Economics, University of Messina, University Consortium of Messina-Catania-Palermo.
3. '03, from March to June (4 hours per week), **Functional Analysis and Differential Geometry applied to Economics, Econophysics, Finance and BA**, PhD in Math for Economics and Finance, Institute of Mathematics, Faculty of Economics, University of Messina, University Consortium of Messina-Catania-Palermo.
4. '03, from October to December (4 hours per week), **Functional Analysis and Differential Geometry applied to Economics, Econophysics, Finance and BA**, PhD in Math for Economics and Finance, Institute of Mathematics, Faculty of Economics, University of Messina, University Consortium of Messina-Catania-Palermo.
5. '02, from March to June (4 hours per week), **Functional Analysis and Differential Geometry for Economics, Econophysics, Finance and BA**, PhD in Math for Economics and Finance, Institute of Mathematics, Faculty of Economics, University of Messina, University Consortium of Messina-Catania-Palermo.
6. '02, from October to December (4 hours per week), **Functional Analysis and Differential Geometry applied to Economics, Econophysics, Finance and BA**, PhD in Math for Economics and Finance, Institute of Mathematics, Faculty of Economics, University of Messina, University Consortium of Messina-Catania-Palermo.
7. '01, from October to December (4 hours per week), **Functional Analysis and Differential Geometry applied to Economics, Econophysics, Finance and BA**, PhD in Math for Economics and Finance, Institute of Mathematics, Faculty of Economics, University of Messina, University Consortium of Messina-Catania-Palermo.

### 5.4 Theses

1. **From '04 to '13** supervisor of more than 200 students for final theses, at the undergraduate level, in **final theses** connected to his own research.

### 5.5 Contracts of Part-time Assistant and Adjunct Professor (5)

1. '06/'07, **Mathematics for Financial Decision** (64 hours), at the Faculty of Economics of the University of Messina.
2. '06/'07, one semester course of **Math "literacy" (pre-Calculus) in Economics and Finance** (32 hours), at the Faculty of Economics of the **University of Bergamo**.
3. '05/'06, **Mathematics for Financial Decision** (64 hours), at the Faculty of Economics of the University of Messina.
4. '04/'05, **Mathematics for Financial Decision** (64 hours), at the Faculty of Economics of the University of Messina.
5. '04/'05, part time lecturer of **Mathematics for Economics** (180 hours), University of Messina.

### 5.6 Contracts of Part-time Lecturer in Italy (3)

1. '06/'07, part time lecturer of **Mathematical methods for Economics and Finance and Financial Mathematics** (180 hours), University of **Bergamo**.
2. '05/'06, part time lecturer of **Mathematical methods for Economics and Finance and Financial Mathematics** (180 hours), University of **Bergamo**.
3. '04/'05, part time lecturer of **Mathematical methods for Economics and Finance and Financial Mathematics** (180 hours), University of **Bergamo**.

### 5.7 Volunteer teaching at the Faculty of Economics, University of Messina (9)

1. '04/'05, from Dec to June (4 hours per week), 3 cycles of seminars, **Mathematics for Economics** (with Econophysics) **and Finance**.
2. 2004, Nov (4 hours per week), 1 cycle of seminars, **Measure spaces and abstract integration in Economics** (with Econophysics) **and business Decisions**.
3. 2004, Oct (6 hours per week), 3 cycles of seminars, **Metric spaces, Vector spaces, Topological structures and Riesz spaces in Economics**.
4. 2004, from Feb to June (4 hours per week), **1 cycle of seminars, Functional Analysis in Economics and Finance**.
5. '03/'04, from Dec to Jan (4 hours per week), **2 cycles of seminars of Mathematics for Economics and Finance**.
6. 2003, from Oct to Dec (4 hours per week), **2 cycles of seminars titled Convex Analysis and Algebraic structures in Economics and Finance**.
7. 2003, Sept, **Calculus and Mathematics for Economics and Finance**, (40 hours).
8. 2002/2003, from Dec to Jan (4 hours per week), 2 cycles of seminars of **Mathematics for Economics, Econophysics and Finance**.
9. 2002, from Oct to Dec (4 hours per week), 2 cycles of seminars, **Advanced Linear Algebra in Economics, Econophysics and differential Calculus for business decisions**.

### 5.8 Volunteer teaching at the Faculty of Engineering, University of Messina (6)

1. '98/'99, from Oct to June (8 hours per week) **Theory of Schwartz Distributions and applications to Physics, Quantum Mechanics and Engineering**.
2. '98/'99, from Oct to June (8 hours per week), 2 cycles of seminars of **Advanced Calculus and Functional Analysis for the applications to Quantum Mechanics and Engineering**.
3. '97/'98, from Oct to June (8 hours per week), 2 cycles of seminars of **Advanced Calculus and Functional Analysis for the applications to Quantum Mechanics and Engineering**.
4. '96/'97, from Oct to June (8 hours per week), 3 cycles of seminars of **Advanced Calculus and Functional Analysis for the applications to Quantum Mechanics and Engineering**.
5. '95/'96, from Oct to June (8 hours per week), 3 cycles of seminars of **Advanced Calculus and Functional Analysis for the applications to Quantum Mechanics and Engineering**.
6. '94/'95, from Oct to June (8 hours per week), 2 cycles of seminars of **Advanced Calculus and Functional Analysis for the applications to Quantum Mechanics and Engineering**.

## 6. Research Activities

### 6.1 Leaderships of research groups (16)

1. 16-'present, research group on the **Applications of Game Theory and Decision Theory in oceans and environmental issues** (M Squillante, A. Donato, M.I. Fredella).
2. '16-present, research group on **Applications of Game Theory to Green Economy and Sustainability** (D. Carfi, D. Schilirò, A. Donato).
3. '14-'20, research group on **Applications of Game Theory and Phase Transitions to Industrial Organization, Microeconomics, Macroeconomics and Government Policies** (D. Carfi, M. Campbell, D. Schiliro, F. Musolino, E. Perrone, A. Trunfio, A. Donato).
4. '12-'15, research group on **Schwartz-Linear Algebra and Functional Analysis in Economics, Finance, Game Theory, Quantum Mechanics and Probability** (D. Carfi, F. Strati, D. Panuccio, G. Orlando).
5. '09-'15, research group on **Applications of Game Theory to Industrial Organization, Microeconomics, Macroeconomics and Government Policies** (D. Carfi, D. Schiliro, F. Musolino, E. Perrone, A. Trunfio).
6. '09-'15, research group on the **Applications of Coopetition and Coopetitive Games to Economics, Finance, Management, Financial and Economic Crisis** (D. Carfi, D. Baglieri, G. Dagnino, D. Schiliro, F. Musolino, M. Okura, F. Lanzafame).
7. '09-'15, research group on **Applications of Game Theory to Green Economy and Sustainability**, (D. Carfi, D. Shiliro et al).
8. '09-'14, research group on **Applications of Decision Theory to the Economics of Crimes** (D. Carfi, A. Pintaudi et al).
9. '09-'14, research group on **Applications of Game Theory to Project Financing**, (D. Carfi, G. Patane, S. Pellegrino et al).
10. '09-'14, research group on **Payoff spaces in normal form games, Geometric and Analytic representations and software implementation, with applications** (D. Carfi, G. Gambarelli, A. Uristani, A. Ricciardello, K. Oliveri).
11. '09-'14, research group on **Theory of Lotteries and its applications to Economics, Econophysics and Finance** (D. Carfi, M. Magaudda, A. Ricciardello, K. Oliveri et al).
12. '09-'14, research group on **Schwartz-Linear Algebra and Functional Analysis in Economics, Finance, Game Theory, Quantum Mechanics and Probability** (D. Carfi, T. Masi).
13. '08-'13, research group on **Decision-form game Theory and applications to Economics, Econophysics and Finance** (D. Carfi, A. Ricciardello, K. Oliveri).
14. '07-'14, research group on **Game Theory in Economics, Industrial Organization, BA and Finance** (D. Carfi, M. Magaudda, C. Fici, A. Salzano, F. Musolino, K. Oliveri).
15. '02-'13, research group on **Differential Geometry in Economics, Econophysics and Finance**, at the University of Messina (D. Carfi, A. Ricciardello, K. Cvetko Vah, R. Pincak, S. Federico, M. T. Calapso).
16. 1998 - 2014, research group on **S-linear Algebra and Functional Analysis in Economics, Finance, Game Theory, Quantum Mechanics and Probability** (D. Carfi, A. Ricciardello, M. Magaudda, C. Germana, T. Masi).

### 6.2 Main international research collaborations (17)

1. **Prof. dr. M. Campbell, Department of Mathematics, Cal State University of Fullerton (USA)**, about the *applications and developments of the Complete Analysis of a differentiable game in Financial Dynamical Systems with phase transitions, Finance, Econophysics.*
2. **Dr. Prof. Tiru Arthanari, Business school, University of Auckland, New Zealand.** About the *applications and developments of the Complete Analysis of a differentiable game to Economics, Management and IO.*
3. **Dr. Prof. Okura Mahito, University of Nagasaki, Japan.** About the *applications and developments of the Complete Analysis of a differentiable game to Economics, Management and IO.*
4. **Prof. dr. Zair Ibragimov, Department of Mathematics, Cal State University of Fullerton (USA)**, about the *applications of the Complete Analysis of a differentiable game and Schwartz Linear Algebra to Quantum Mechanics and Economics.*

5. **Dr. Mike Mouron, UCR, Department of Mathematics, University of California Riverside (USA)**, about the applications and developments of Superposition Theory in Physics. Quantum Mechanics and Economics.
6. **Prof. dr. Michel Lapidus, UCR, Department of Mathematics, University of California Riverside (USA)**, about the applications and developments of Superposition Theory in Physics, Quantum Mechanics and Economics.
7. **Prof. Dr. Richard Pincak, SORS Research, Kosice, Slovak Republic**, about the **applications and** developments of Differential Geometry, Riemannian Manifolds and Mathematical Methods of Physics and Quantum Mechanics to the Financial Dynamical Systems and Financial Markets.
8. **Prof. dr. Samvel Haroutunian, Armenian State Pedagogical University (Khandjan str. 5, 375010, Yerevan, Republic of Armenia)** about the algebraic-topological theories of Financial Mathematics and Econophysics.
9. **Prof. dr. Alexei Kushner, University of Astrakhan, Department of Mathematics, member of Russian Academy of Sciences** about the applications of geometric and topological structures to Financial Mathematics, Economics and Quantum Mechanics.
10. **Prof. dr. Aleksander Shelekov, Lomonosov University of Moscow, Department of Mathematics, University of Tver (Russia)**, about the applications of geometric and topological structures to Financial Mathematics, Economics and Physics.
11. **Prof. dr. Juan Martinez-Moreno, University of Jaén (Spain), Department of Mathematics I**, about the application of algebraic and topological structures to Financial Mathematics.
12. **Prof. dr. Constantine Udriste, University Politehnica of Bucharest, Department of Mathematics I**, about the interpretation of the evolutions of financial events as geodesics of certain differentiable manifolds, and about the application of  $S$ -linear Algebra to Economics<sup>[SEP]</sup>, Financial Mathematics and Physics.
13. **Prof. dr. Karin Cvetko-Vah, Assistant professor at Department of Mathematics, <sup>[SEP]</sup>Faculty of Mathematics and Physics, University of Ljubljana Jadranska 21<sup>[SEP]</sup>SI-1000 Ljubljana, Slovenia**, about the **applications to** Economics, Finance and Physics of non-commutative lattices generated by usual preorders on the financial events plane introduced by D. Carfi.
14. **Prof. dr. Vladimir Balan, University Politehnica of Bucharest, Department of Mathematics I**, about the applications of Finsler's Geometry to Microeconomic Theory<sup>[SEP]</sup>, Financial Mathematics and Physics.
15. **Distinguished Professor of Mathematics Vladislav Goldberg (until his death), of New Jersey Institute of Technology, Newark NJ 07102, USA**, on the **applications of Differential Geometry, and of  $S$ -differentiable manifolds (introduced by D. Carfi) to Quantum Mechanics, Economics and Theoretical Physics.**
16. **Prof. dr. Leopold Verstraelen, Bruxel Katholieke Universiteit**, on the applications of Differential Geometry and of  $S$ -differentiable manifolds to Economics, Riemannian Manifolds and **Theoretical Physics.**
17. **Prof. dr. M. Radu Rosca, Académie Royale de Belgique (until his death, 2007)**, about **Differential Geometry,  $S$ -linear Algebra and  $S$ -differentiable manifolds for the applications in Economics and Physics.**

## 7. Publications (201)

### 7.1 Papers submitted to International Journals

1. **D. Carfi, A. Donato, M.I. Fredella, M. Squillante**, Logistic cooperation in EIP by green food packaging. *Annals of Operations Research*. Special Issue: Computational Logistics in Food and Drink Industry

### 7.2 Papers in print in International Journals

1. **D. Carfi, A. Donato**. Environmental Management through cooperative urban waste recycling in eco-industrial parks. *Mathematics*, Special Issue: Recent Trend in Mathematical Economics and Games: Humanomics and Sustainability

### 7.3 Monographs in print to International Publishing Company

1. **D. Carfi**, *Differential Geometry and Relativity Theories, vol 2. – Vector fields, connections, metrics, tensors*, Il Gabbiano

### 7.4 Papers published in International Journals (105)

1. '21, **D. Carfi, A. Donato, M.I. Fredella, M. Squillante**. Cooperative games for environmental sustainability: Climate Change and decision global policies. *Socio-Economic Planning Sciences*. Special Issue: Decision-Making for Environmental Sustainability, vol. 75. ISSN: 0038-0121. IF: 2.196. DOI: <https://doi.org/10.1016/j.seps.2020.100807>  
URL <https://www.sciencedirect.com/science/article/abs/pii/S0038012119304781?via%3Dihub>
2. '20. **D. Carfi**. Lecture notes of Relativistic Mechanics: Worldlines, times and velocities of a particle. *Journal of Mathematical Economics and Finance*, vol. 6, issue 1(10), pp.57-73. ISSN: 2458-0813. ASERS Publishing. doi: [https://doi.org/10.14505/jmef.v6.1\(10\).04](https://doi.org/10.14505/jmef.v6.1(10).04) URL: <https://journals.aserspublishing.eu/jmef/article/view/5771>
3. '20. **D. Carfi, A. Donato**. Mathematical models for simulating Covid-19 contagion in Italy: first wave. *Journal of Mathematical Economics and Finance*, vol. 6, issue 1(10), pp.39-53. ISSN: 2458-0813. ASERS Publishing. doi: [https://doi.org/10.14505/jmef.v6.1\(10\).03](https://doi.org/10.14505/jmef.v6.1(10).03) URL: <https://journals.aserspublishing.eu/jmef/article/view/5770>
4. '20, **D. Carfi, A. Donato** Risk Management of food health hazard by meat consumption reduction. A cooperative game approach. *Soft Computing*. 24, 13705–13716. ISSN: 1432-7643. IF: 2.784. DOI: 10.1007/s00500-019-04474-6  
<https://doi.org/10.1007/s00500-019-04474-6>; <https://link.springer.com/article/10.1007%2Fs00500-019-04474-6>
5. '19. **D. Carfi**. An introduction to S-Bases in S-Linear Algebra. *Journal of Mathematical Economics and Finance*, vol. 5, issue 2(9), pp. 35-49. ISSN: 2458-0813. ASERS Publishing. doi: 10.14505/jmef.v5.2(9).03  
URL: <https://journals.aserspublishing.eu/jmef/article/view/4786>; [https://doi.org/10.14505/jmef.v5.2\(9\).03](https://doi.org/10.14505/jmef.v5.2(9).03)
6. '19. **D. Carfi**. Critical notes of Quantum Mechanics: Momentum Operators. *Journal of Mathematical Economics and Finance*, vol. 5, issue 1(8), pp. 27-45. ISSN: 2458-0813. ASERS Publishing. doi: 10.14505/jmef.v5.1(8).03  
URL <https://journals.aserspublishing.eu/jmef/article/view/3936>
7. '19. **D. Carfi, A. Donato, D. Schilirò**. Cooperative Solutions of Environmental Agreements for the Global Economy after COP21 in Paris. *Journal of Environmental Management*, vol. 249. ISSN: 0301-4797. IF: 4,865. URL <https://doi.org/10.1016/j.jenvman.2019.109331>  
<https://www.sciencedirect.com/science/article/pii/S0301479719310400?via%3Dihub>
8. '19. **D. Carfi, A. Donato**. Cournot-Bayesian General Equilibrium: A Radon Measure Approach. *Mathematics*, vol. 7, issue 1, pp. 10-29, 2019. ISSN: 2227-7390. Special Issue: *Recent Advances in Game and Decision Theory*:



- Structures, Models, Applications and Software Implementation*. **IF: 1,105**. URL <https://www.mdpi.com/2227-7390/7/1/10>; DOI <https://doi.org/10.3390/math7010010>
9. '18. **A. Donato, D. Carfi, B. Blandina**. Coepetitive Games for Management of Marine Transportation Activity: a Study Case. *Mathematics*, vol. 6, issue 12, pp. 322-338, 2018. ISSN: 2227-7390. Special Issue: *Recent Advances in Game and Decision Theory: Structures, Models, Applications and Software Implementation*. **IF: 1,105**. URL <https://www.mdpi.com/2227-7390/6/12/322> ; DOI <https://doi.org/10.3390/math6120322>
  10. '18. **D. Carfi**. Critical notes about Noether's theorem (Part I). *Journal of Mathematical Economics and Finance*, vol. 4, issue 2(7), pp. 69-78. ISSN: 2458-0813. ASERS Publishing. doi: 10.14505/jmef.v4.2(7).04  
URL: <https://journals.aserspublishing.eu/jmef/article/view/2734>
  11. '18. **D. Carfi, C. Campbell**. Speculative and hedging interaction model in oil and U.S. dollar markets - Nash equilibria for one or more banks, *AAPP | Physical, Mathematical, and Natural Sciences*, vol. 96, Suppl. 1 (Special Issue in memory of Prof. Gaetano Giaquinta), pp. 1-19, 2018. ISSN: 1825-1242. URL: <http://cab.unime.it/journals/index.php/AAPP/article/view/AAPP.96S1A1>  
DOI: <http://dx.doi.org/10.1478/AAPP.96S1A1>
  12. '18. **D. Carfi, A. Donato**. A New Composite Indicator of Household Risk Preparation, *Journal of Applied Economic Sciences*, vol. 13, issue 3(57), pp. 605-614. ISSN: 1843 - 6110. ASERS Publishing.  
URL: <https://journals.aserspublishing.eu/jaes>
  13. '18. **D. Carfi**. Position operator. *Journal of Mathematical Economics and Finance*, S.I., vol. 4, issue 1(6), pp. 79-87. ISSN: 2458-0813. ASERS Publishing. doi: 10.14505/jmef.v4.1(6).05  
URL: <https://journals.aserspublishing.eu/jmef/article/view/2404>
  14. '18. **D. Carfi, A. Donato, D. Schilirò**. A Multidimensional Coepetitive Duopoly model for a Sustainable Global Economy, *Journal of Mathematical Economics and Finance*, S.I., vol. 4, issue 1(6), pp. 99-115. ISSN: 2458-0813. ASERS Publishing. doi: 10.14505/jmef.v4.1(6).06  
URL: <https://journals.aserspublishing.eu/jmef/article/view/2406>
  15. '18. **D. Carfi, A. Donato**. Influence of celebrated movies and TV series on the US baby names: literature review and statistical developments, *Journal of Mathematical Economics and Finance*, S.I., vol. 4, issue 1(6), pp. 53-67. ISSN: 2458-0813. ASERS Publishing. doi: 10.14505/jmef.v4.1(6).03  
URL: <https://journals.aserspublishing.eu/jmef/article/view/2402>
  16. '18. **D. Carfi, A. Donato**. Coepetitive Games for Sustainability of Global Feeding and Climate Change: Recent Developments, *Journal of Environmental Management and Tourism*, S.I., vol. 9, issue 1(25), pp. 200-215. ISSN: 2068-7729. ASERS Publishing. doi: 10.14505/jjemt.v9.1(25).25  
URL: <https://journals.aserspublishing.eu/jemt/article/view/2083>
  17. '18. **M. Campbell, D. Carfi**. Speculative and hedging interaction model in oil and U.S. dollar markets – Phase Transition, *Journal of Statistical Physics*, vol. 170, issue 1, pp. 165-205, 2018. ISSN: 0022-4715. *Springer*. <https://doi.org/10.1007/s10955-017-1915-7>
  18. '17. **D. Carfi**. Filters and limits in filtered spaces. *Journal of Mathematical Economics and Finance*, vol. 3, issue 2(5), pp. 33-81, 2017. ISSN: 2458-0813. ASERS Publishing. URL: <https://journals.aserspublishing.eu/jmef/article/view/1736>
  19. '17. **D. Carfi**. A game Pareto complete analysis in n-dimensions: a general applicative study case. *Journal of Mathematical Economics and Finance*, vol. 3, issue 1(4), pp. 23-46, 2017. ISSN: 2458-0813. ASERS Publishing. URL: <http://journals.aserspublishing.eu/jmef/article/view/1354>
  20. '16. **D. Carfi**. Motivations and origins of Schwartz Linear Algebra in Quantum Mechanics. *Journal of Mathematical Economics and Finance*, vol. 2, issue 2(3), pp. 67-76, 2016. ISSN: 2458-0813. ASERS Publishing. URL: <http://journals.aserspublishing.eu/jmef/article/view/923> DOI: [https://doi.org/10.14505/jmef.v2.2\(3\).04](https://doi.org/10.14505/jmef.v2.2(3).04)
  21. '16. **D. Carfi, A. Donato**. Complete study of a coepetitive R&D Alliance. *Journal of Mathematical Economics and Finance*, vol. 2, issue 2(3), pp. 35-66, 2016. ISSN: 2458-0813. ASERS Publishing. URL: <http://journals.aserspublishing.eu/jmef/article/view/922> DOI: [https://doi.org/10.14505/jmef.v2.2\(3\).03](https://doi.org/10.14505/jmef.v2.2(3).03)
  22. '16. **D. Baglieri, D. Carfi, G. Dagnino**. Asymmetric R&D Alliances in the Biopharmaceutical Industry. *International Studies of Management and Organization*, vol. 46, issue 2(3), pp. 179-201, 2016. ISSN: 0020-8825. <https://dx.doi.org/10.1080/00208825.2016.1112154>.
  23. '16. **D. Carfi**. Differential Geometry and Relativity Theories: tangent vectors, derivatives, paths, 1-forms. *Journal of Mathematical Economics and Finance*, vol. 2, issue 1(2), pp. 85-127, 2016. ISSN: 2458-0813. ASERS Publishing. URL: <http://journals.aserspublishing.eu/jmef/article/view/590> DOI: [https://doi.org/10.14505/jmef.v2.1\(2\).05](https://doi.org/10.14505/jmef.v2.1(2).05)

24. '16. **D. Carfi, A. Donato**. A critical analytic survey of an Asymmetric R&D Alliance in Pharmaceutical industry: bi-parametric study case. *Journal of Mathematical Economics and Finance*, vol. 2, issue 1(2), pp. 21-57, 2016. ISSN: 2458-0813. ASERS Publishing. URL: <http://journals.aserspublishing.eu/jmef/article/view/587>  
DOI: [https://doi.org/10.14505/jmef.v2.1\(2\).02](https://doi.org/10.14505/jmef.v2.1(2).02)
25. '15. **T. Arthanari, D. Carfi, F. Musolino**. Game Theoretic Modeling of Horizontal Supply Chain Coopetition among Growers. *International Game Theory Review*, vol. 17, issue 2, 2015. ISSN: 0219-1989. World Scientific. DOI: <https://dx.doi.org/10.1142/S0219198915400137>. Also available as Researchgate Paper at [https://www.researchgate.net/publication/276113395\\_Game\\_Theoretic\\_Modeling\\_of\\_Horizontal\\_Supply\\_Chain\\_Coopetition\\_among\\_Growers](https://www.researchgate.net/publication/276113395_Game_Theoretic_Modeling_of_Horizontal_Supply_Chain_Coopetition_among_Growers).
26. '15. **D. Carfi**. A model for coopetitive games. *Journal of Mathematical Economics and Finance*, vol. 1, issue 1(1), pp. 46-75, 2015. ISSN: 2458-0813. ASERS Publishing. URL: <http://journals.aserspublishing.eu/jmef/article/view/585> DOI: [https://doi.org/10.14505/jmef.v1.1\(1\).04](https://doi.org/10.14505/jmef.v1.1(1).04)
27. '15. **D. Carfi, M. Campbell**. Bounded Rational Speculative and Hedging Interaction Model in Oil and U.S. Dollar Markets. *Journal of Mathematical Economics and Finance*, vol. 1, issue 1(1), pp. 4-28, 2015. ISSN: 2458-0813. ASERS Publishing. URL: <http://journals.aserspublishing.eu/jmef/article/view/582>  
DOI: [https://doi.org/10.14505/jmef.v1.1\(1\).01](https://doi.org/10.14505/jmef.v1.1(1).01)
28. '15. **D. Carfi, G. Gambarelli**. Balancing Bilinearly Interfering Elements. *Decision Making in Manufacturing and Services*, vol. 9, issue 1, pp. 27-49, 2015. ISSN: 2300-7087(electronic); ISSN: 1896-8325 (print). DOI: <http://dx.doi.org/10.7494/dmms.2015.9.1.27>  
URL: <https://journals.agh.edu.pl/dmms/article/view/1676/1410>.
29. '15. **D. Carfi, F. Musolino**. A coopetitive-dynamical game model for currency markets stabilization. *AAPP | Physical, Mathematical, and Natural Sciences*, vol. 93, issue 1, pp. 1-29, 2015. ISSN: 1825-1242. DOI: <https://dx.doi.org/10.1478/AAPP.931C1>.
30. '15. **D. Carfi, F. Musolino**. Tax Evasion: A Game Countermeasure. *AAPP | Physical, Mathematical, and Natural Sciences*, vol. 93, issue 1, pp. 1-17, 2015. ISSN: 1825-1242. DOI: <https://dx.doi.org/10.1478/AAPP.931C2>.
31. '15. **D. Carfi, A. Romeo**. Improving Welfare in Congo: Italian National Hydrocarbons Authority Strategies and its Possible Coopetitive Alliances with Green Energy Producers. *Journal of Applied Economic Sciences*, vol. 10, issue 4 (34), pp. 571-592, 2015. ISSN: 1843-6110 .URL: [http://cesmaa.eu/journals/jaes/jaes\\_issues.php](http://cesmaa.eu/journals/jaes/jaes_issues.php);  
[http://cesmaa.eu/journals/jaes/files/JAES\\_summer%204\(34\)\\_online.pdf](http://cesmaa.eu/journals/jaes/files/JAES_summer%204(34)_online.pdf).
32. '14. **D. Carfi, F. Musolino**. Dynamical Stabilization of Currency Market with Fractal-like Trajectories. *Scientific Bulletin of the Politehnica University of Bucharest*, vol. 76, issue 4, pp. 115-126, 2014. ISSN: 1223-7027. URL: [http://www.scientificbulletin.upb.ro/rev\\_docs\\_arhiva/rezc3a\\_239636.pdf](http://www.scientificbulletin.upb.ro/rev_docs_arhiva/rezc3a_239636.pdf).
33. '14. **D. Carfi, F. Musolino**. Speculative and hedging interaction model in oil and U.S. dollar markets with financial transaction taxes. *Economic Modelling*, vol.37, pp. 306-319, 2014. Elsevier. ISSN: 0264-9993. DOI: <https://dx.doi.org/10.1016/j.econmod.2013.11.003>. Also available as Researchgate Paper at [https://www.researchgate.net/publication/259512278\\_Speculative\\_and\\_hedging\\_interaction\\_model\\_in\\_oil\\_and\\_U.S.\\_dollar\\_markets\\_with\\_financial\\_transaction\\_taxes](https://www.researchgate.net/publication/259512278_Speculative_and_hedging_interaction_model_in_oil_and_U.S._dollar_markets_with_financial_transaction_taxes).
34. '14. **D. Carfi, M. Okura**. Coopetition and Game Theory. *Journal of Applied Economic Sciences*, vol. 9, issue 3(29), pp. 458-469, 2014. Spiru Haret University. ISSN: 1843-6110. URL: [http://cesmaa.eu/journals/jaes/files/JAES\\_2014\\_Fall.pdf#page=123](http://cesmaa.eu/journals/jaes/files/JAES_2014_Fall.pdf#page=123).
35. '14. **D. Carfi, D. Schilirò**. Improving Competitiveness and Trade Balance of Greek Economy: A Coopetitive Strategy Model. *Journal of Applied Economic Sciences*, vol. 9, issue 2(28), pp. 211-220, 2014. Reprograph Publisher. ISSN: 1843-6110. URL: <https://www.ceeol.com/search/article-detail?id=67810>
36. '13. **D. Carfi, G. Gambarelli, A. Uristani**. Balancing pairs of interfering elements. *Zeszyty Naukowe Uniwersytetu Szczecińskiego - Finanse, Rynki Finansowe, Ubezpieczenia*, vol. 760, issue 59, pp. 435-442, 2013. ISSN: 1640-6818. Available as Researchgate Paper at URL: [http://www.researchgate.net/publication/259323035\\_Balancing\\_pairs\\_of\\_interfering\\_elements](http://www.researchgate.net/publication/259323035_Balancing_pairs_of_interfering_elements).
37. '13. **D. Carfi, F. Musolino**. Game theory application of Monti's proposal for European government bonds stabilization. *Applied Sciences*, vol. 15, pp. 43-70, 2013. Balkan Society of Geometers. ISSN: 1454-5101. URL: <http://www.mathem.pub.ro/apps/v15/A15-ca.pdf>.
38. '13. **D. Carfi, F. Musolino**. Model of Possible Cooperation in Financial Markets in presence of tax on Speculative Transactions. *AAPP | Physical, Mathematical, and Natural Sciences*, vol. 91, issue 1, pp. 1-26, 2013. ISSN: 1825-1242. DOI: <https://dx.doi.org/10.1478/AAPP.911A3>.
39. '13. **D. Carfi, F. Musolino, D. Schilirò, F. Strati**. Preface: Introducing PISRS (Part II). *AAPP | Physical, Mathematical, and Natural Sciences*, vol. 91(S2), 2013. ISSN: 1825-1242. DOI: <https://dx.doi.org/10.1478/AAPP.91S2E1>.

40. '13. **D. Carfi, E. Perrone.** Asymmetric Cournot Duopoly: A Game Complete Analysis. *Journal of Reviews on Global Economics*, vol. 2, pp. 194-202, 2013. Lifescience Global. ISSN: 1929-7092. DOI: <https://dx.doi.org/10.6000/1929-7092.2013.02.16>.
41. '13. **D. Carfi, A. Ricciardello.** Computational representation of payoff scenarios in  $C^1$ -families of normal-form games. *Uzbek Mathematical Journal*, vol.1, pp. 38-52, 2013. ISSN: 2010-7269. Only printed version. Available as Researchgate Paper at [https://www.researchgate.net/publication/259105575 Computational representation of payoff scenarios in C1-families of normal-form games](https://www.researchgate.net/publication/259105575_Computational_representation_of_payoff_scenarios_in_C1-families_of_normal-form_games).
42. '12. **S. Agreste, D. Carfi, A. Ricciardello.** An algorithm for payoff space in  $C^1$  parametric games. *Applied Sciences*, vol.14, pp.1-14, 2012. Balkan Society of Geometers. ISSN: 1454-5101. URL: <http://www.mathem.pub.ro/apps/v14/A14-ag.pdf>.
43. '12. **D. Carfi, C. Fici.** The government-taxpayer game. *Theoretical and Practical Research in Economic Fields*, vol. 3, issue 1(5), pp. 13-25, 2012. ASERS Publishing House. ISSN: 2068-7710. URL: <http://journals.aserspublishing.eu/tpref/article/view/1166>. Also available as Researchgate Paper at [https://www.researchgate.net/publication/239809951 The government-taxpayer game](https://www.researchgate.net/publication/239809951_The_government-taxpayer_game).
44. '12. **D. Carfi, F. Musolino.** Game theory and speculation on government bonds. *Economic Modelling*, vol. 29, issue 6, pp. 2417-2426, 2012. Elsevier. ISSN: 0264-9993 (B I-S). DOI: <https://dx.doi.org/10.1016/j.econmod.2012.06.037>. Also available as Researchgate Paper at [https://www.researchgate.net/publication/257098708 Game theory and speculation on government bonds](https://www.researchgate.net/publication/257098708_Game_theory_and_speculation_on_government_bonds)
45. '12. **D. Carfi, F. Musolino, A. Ricciardello, D. Schilirò.** Preface: Introducing PISRS. *AAPP | Physical, Mathematical, and Natural Sciences*, vol. 90(S1), pp. 1-4, 2012. ISSN: 1825-1242. DOI: <https://dx.doi.org/10.1478/AAPP.90S1E1>.
46. '12. **D. Carfi, A. Pintaudi.** Optimal Participation in Illegitimate Market Activities: Complete Analysis of 2-Dimensional Cases. *Journal of Advanced Research in Law and Economics*, vol. 3, issue 1(5), pp. 10-25, 2012. ASERS Publishing House. ISSN: 2068-696X. URL: <http://journals.aserspublishing.eu/jarle/article/view/855>. Also available as MPRA Paper at <https://mpra.ub.uni-muenchen.de/37822/>.
47. '12. **D. Carfi, A. Ricciardello.** An algorithm for Payoff Space in  $C^1$ -Games. *APPS | Applied Sciences, Monographs, 9 "Topics in Game Theory"*, pp. 104-129, 2012. Balkan Society of Geometers. ISSN: 1454-5101. URL: <http://www.mathem.pub.ro/apps/mono/A-09-Car.pdf>.
48. '12. **D. Carfi, A. Ricciardello.** Decision-form Games. *APPS | Applied Sciences, Monographs, 9 "Topics in Game Theory"*, pp. 6-22, 2012. Balkan Society of Geometers. ISSN: 1454-5101. URL: <http://www.mathem.pub.ro/apps/mono/A-09-Car.pdf>.
49. '12. **D. Carfi, A. Ricciardello.** Mixed Extensions of Decision-form Games. *APPS | Applied Sciences, Monographs, 9 "Topics in Game Theory"*, pp. 61-72, 2012. Balkan Society of Geometers. ISSN: 1454-5101. URL: <http://www.mathem.pub.ro/apps/mono/A-09-Car.pdf>.
50. '12. **D. Carfi, A. Ricciardello.** Non-Reactivity in Decision-form Games. *APPS | Applied Sciences, Monographs, 9 "Topics in Game Theory"*, pp. 23-39, 2012. Balkan Society of Geometers. ISSN: 1454-5101. URL: <http://www.mathem.pub.ro/apps/mono/A-09-Car.pdf>.
51. '12. **D. Carfi, A. Ricciardello.** Payoff space for  $C^1$  games. *APPS | Applied Sciences, Monographs, 9 "Topics in Game Theory"*, pp. 74-89, 2012. Balkan Society of Geometers. ISSN: 1454-5101. URL: <http://www.mathem.pub.ro/apps/mono/A-09-Car.pdf>.
52. '12. **D. Carfi, A. Ricciardello.** Reactivity in Decision-form Games. *APPS | Applied Sciences, Monographs, 9 "Topics in Game Theory"*, pp. 40-60, 2012. Balkan Society of Geometers. ISSN: 1454-5101. URL: <http://www.mathem.pub.ro/apps/mono/A-09-Car.pdf>.
53. '12. **D. Carfi, A. Ricciardello.** Study of a game with concave utility space. *APPS | Applied Sciences, Monographs, 9 "Topics in Game Theory"*, pp. 90-102, 2012. Balkan Society of Geometers. ISSN: 1454-5101. URL: <http://www.mathem.pub.ro/apps/mono/A-09-Car.pdf>.
54. '12. **D. Carfi, A. Ricciardello.** The payoff trajectories in  $C^1$  parametric games. *APPS | Applied Sciences, Monographs, 9 "Topics in Game Theory"*, pp. 130-145, 2012. Balkan Society of Geometers. ISSN: 1454-5101. URL: <http://www.mathem.pub.ro/apps/mono/A-09-Car.pdf>.
55. '12. **D. Carfi, D. Schilirò.** A Framework of cooperative games: Applications to the Greek crisis. *AAPP | Physical, Mathematical, and Natural Sciences*, vol. 90, issue 1, pp. 1-32, 2012. ISSN: 1825-1242. DOI: <https://dx.doi.org/10.1478/AAPP.901A1>.
56. '12. **D. Carfi, D. Schilirò.** A Model of Cooperative Game for the Environmental Sustainability of a Global Green Economy. *Journal of Environmental Management and Tourism*, vol. 3, issue 1(5), pp. 5-17, 2012. ASERS Publishing House. ISSN: 2068-7729.

- URL: <http://journals.aserspublishing.eu/jemt/article/view/378>. Also available as MPRA Paper at <https://mpra.ub.uni-muenchen.de/38508/>.
57. '12. **D. Carfi, D. Schilirò**. A cooperative model for the green economy. *Economic Modelling*, vol. 29, issue 4, pp. 1215-1219, 2012. Elsevier. ISSN: 0264-9993. DOI: <https://dx.doi.org/10.1016/j.econmod.2012.04.005>. Also available as MPRA Paper at <https://mpra.ub.uni-muenchen.de/35245/>.
  58. '11. **D. Carfi, K. Cvetko-Vah**. Skew lattice structures on the financial events plane. *Applied Sciences*, vol. 13, pp. 9-20, 2011. Balkan Society of Geometers. ISSN: 1454-5101. URL: <http://www.mathem.pub.ro/apps/v13/A13-ca.pdf>.
  59. '11. **D. Carfi, F. Musolino**. Fair Redistribution in Financial Markets: a Game Theory Complete Analysis. *Journal of Advanced Studies in Finance*, vol. 2, issue 2(4), pp. 74-100, 2011. ASERS Publishing House. ISSN: 2068-8393. URL: <http://journals.aserspublishing.eu/jasf/article/view/47>. Also available as Researchgate Paper at [https://www.researchgate.net/publication/227599658\\_FAIR\\_REDISTRIBUTION\\_IN\\_FINANCIAL\\_MARKETS\\_A\\_GAME\\_THEORY\\_COMPLETE\\_ANALYSIS](https://www.researchgate.net/publication/227599658_FAIR_REDISTRIBUTION_IN_FINANCIAL_MARKETS_A_GAME_THEORY_COMPLETE_ANALYSIS).
  60. '11. **D. Carfi, E. Perrone**. Game Complete Analysis of Bertrand Duopoly. *Theoretical and Practical Research in Economic Fields*, vol. 2, issue 1(3), pp. 5-22, 2011. ASERS Publishing House. ISSN: 2068-7710. URL: <http://journals.aserspublishing.eu/tpref/article/view/1108>. Also available as MPRA Paper at <http://mpra.ub.uni-muenchen.de/31302/>.
  61. '11. **D. Carfi, D. Schilirò**. Crisis in the Euro Area. Cooperative Game Solutions as New Policy Tools. *Theoretical and Practical Research in Economic Fields*, vol. 2, issue 1(3), pp. 23-36, 2011. ASERS Publishing House. ISSN: 2068-7710. URL: <http://journals.aserspublishing.eu/tpref/article/view/1109>. Also available as MPRA Paper at <http://mpra.ub.uni-muenchen.de/27138/>.
  62. '10. **D. Carfi**. The pointwise Hellmann-Feynman theorem. *AAPP | Physical, Mathematical, and Natural Sciences*, vol. 88, issue 1, pp. 1-14, 2010. ISSN: 1825-1242. DOI: <https://dx.doi.org/10.1478/C1A1001004>.
  63. '10. **D. Carfi, A. Ricciardello**. An algorithm for payoff space in  $C^1$ -Games. *AAPP | Physical, Mathematical, and Natural Sciences*, vol. 88, issue 1, pp. 1-19, 2010. ISSN: 1825-1242. DOI: <https://dx.doi.org/10.1478/C1A1001003>.
  64. '09. **D. Carfi**. Decision-form games. *Communications to SIMAI Congress - Proceedings of the 9th Congress of SIMAI, the Italian Society of Industrial and Applied Mathematics, Roma (Italy), September 15-19, 2008*, vol. 3, issue 307, pp. 1-12, 2009. Ed. by E. De Bernardis, G. Fotia, and L. Puccio. ISSN: 1827-9015. DOI: <https://dx.doi.org/10.1685/CSC09307>.
  65. '09. **D. Carfi**. Fibrations of financial events. In *Proceedings of the International Geometry Center - International Conference "Geometry in Odessa 2009", 25-30 May 2009, Odessa, Ukraine*, volume 2, issue 3, pp. 7-18, 2009. ISSN: 2072-9812. Available as Researchgate Paper at [https://www.researchgate.net/publication/283086222\\_Fibrations\\_of\\_financial\\_events](https://www.researchgate.net/publication/283086222_Fibrations_of_financial_events).
  66. '09. **D. Carfi**. Payoff space in  $C^1$  Games. *Applied Sciences (APPS)*, vol. 11, pp. 35-47, 2009. Balkan Society of Geometers. ISSN: 1454-5101. URL: <http://www.mathem.pub.ro/apps/v11/A11-ca.pdf>.
  67. '09. **D. Carfi, M. Magaudo**. Complete study of linear infinite games. In *Proceedings of the International Geometry Center - International Conference "Geometry in Odessa 2009", 25-30 May 2009, Odessa, Ukraine*, vol. 2, issue 3, pp. 19-30, 2009. ISSN: 2072-9812. Available as Researchgate Paper at [https://www.researchgate.net/publication/283048363\\_Complete\\_study\\_of\\_linear\\_infinite\\_games](https://www.researchgate.net/publication/283048363_Complete_study_of_linear_infinite_games)
  68. '09. **D. Carfi, A. Ricciardello**. Non-reactive strategies in decision-form games. *AAPP | Physical, Mathematical, and Natural Sciences*, vol 87, issue 2, pp. 1-12, 2009. ISSN: 1825-1242. DOI: <https://dx.doi.org/10.1478/C1A0902002>.
  69. '08. **D. Carfi**. Optimal boundaries for decisions. *AAPP | Physical, Mathematical, and Natural Sciences*, vol. 86, issue 1, pp. 1-11, 2008. ISSN: 1825-1242. DOI: <https://dx.doi.org/10.1478/C1A0801002>.
  70. '08. **D. Carfi**. Structures on the space of financial events. *AAPP | Physical, Mathematical, and Natural Sciences*, vol. 86, issue 2, pp. 1-13, 2008. ISSN: 1825-1242. DOI: <https://dx.doi.org/10.1478/C1A0802007>.
  71. '08. **D. Carfi**. Superpositions in Prigogine's approach to irreversibility for physical and financial applications. *AAPP | Physical, Mathematical, and Natural Sciences*, vol. 86 (S1), pp. 1-13, 2008. ISSN: 1825-1242. DOI: <https://dx.doi.org/10.1478/C1S0801005>.
  72. '08. **D. Carfi, G. Caristi**. Financial dynamical systems. *Differential Geometry - Dynamical Systems*, vol. 10, pp. 71-85, 2008. ISSN:1454-511X. URL: <http://www.mathem.pub.ro/dgds/v10/D10-CA.pdf>.
  73. '07. **D. Carfi**. Dyson formulas for Financial and Physical evolutions in  $S'_n$ . *Communications to SIMAI Congress*, vol. 2, pp. 1-10, 2007. ISSN: 1827-9015. DOI: <https://dx.doi.org/10.1685/CSC06156>.



74. '07. **D. Carfi**. Feynman's transition amplitudes in the space  $S'_n$ . *AAPP | Physical, Mathematical, and Natural Sciences*, vol. 85, issue 1, pp.1-10, 2007. ISSN: 1825-1242.  
DOI: <https://dx.doi.org/10.1478/C1A0701007>.
75. '07. **D. Carfi**. S-Linear Algebra in Economics and Physics. *Applied Sciences (APPS)*, vol. 9, pp. 48-66, 2007. ISSN: 1454-5101. URL: <http://www.mathem.pub.ro/apps/v09/A09-CA.pdf>.
76. '07. **D. Carfi**. Topological characterizations of S-linearity. *AAPP | Physical, Mathematical, and Natural Sciences*, vol. 85, issue 2, pp. 1-16, 2007. ISSN: 1825-1242.  
DOI: <https://dx.doi.org/10.1478/C1A0702005>.
77. '07. **D. Carfi, M. Magaudda**. Superpositions in Distributions spaces. *AAPP | Physical, Mathematical, and Natural Sciences*, vol. 85, issue 2, pp. 1-14, 2007. ISSN: 1825-1242.  
DOI: <https://dx.doi.org/10.1478/C1A0702006>.
78. '06. **D. Carfi**. An S-Linear State Preference Model. In *Communications to SIMAI Congress*, vol. 1, pp. 1-4, 2006. ISSN: 1827-9015. DOI: <https://dx.doi.org/10.1685/CSC06037>. Also available, in extended version, as Researchgate Paper at <https://dx.doi.org/10.13140/RG.2.1.1006.2800>.
79. '06. **D. Carfi**. S-convexity in the space of Schwartz distributions and applications. *Rendiconti del Circolo Matematico di Palermo*, vol. 77(series II), pp. 107-122, 2006. ISSN: 0009-725X. Available as Researchgate Paper at [https://www.researchgate.net/publication/210189098\\_S-convexity\\_in\\_the\\_space\\_of\\_Schwartz\\_distributions\\_and\\_applications](https://www.researchgate.net/publication/210189098_S-convexity_in_the_space_of_Schwartz_distributions_and_applications).
80. '05. **D. Carfi**. S-diagonalizable operators in Quantum Mechanics. *Glasnik Matematički*, vol.40, issue 2, pp. 261-301, 2005. ISSN: 0017-095X. DOI: <https://dx.doi.org/10.3336/gm.40.2.08>.
81. '04. **D. Carfi**. Geometric aspects of a financial evolution. *Atti della Reale Accademia delle Scienze di Torino*, vol. 138, pp. 143-151, 2004. ISSN: 0001-4419. Available as Researchgate Paper at [https://www.researchgate.net/publication/210189109\\_Geometric\\_aspects\\_of\\_a\\_financial\\_evolution](https://www.researchgate.net/publication/210189109_Geometric_aspects_of_a_financial_evolution).
82. '04. **D. Carfi**. S-bases and applications to Physics and Economics. *Annals of Economic Faculty, University of Messina*, pages 165-190, 2004. ISSN: 1724-398X. Available as Researchgate Paper at [https://www.researchgate.net/publication/210189106\\_S-bases\\_and\\_applications\\_to\\_physics\\_and\\_economics](https://www.researchgate.net/publication/210189106_S-bases_and_applications_to_physics_and_economics).
83. '04. **D. Carfi**. S-linear operators in quantum Mechanics and in Economics. *Applied Sciences (APPS)*, vol.6, issue 1, pp. 7-20, 2004. ISSN: 1454-5101. URL: <http://www.mathem.pub.ro/apps/v06/A06.htm>.
84. '04. **D. Carfi**. Tangent spaces on S-manifolds. *Differential Geometry Dynamical Systems*, vol.6, pp. 1-13, 2004. ISSN: 1454-511X. URL: <http://www.mathem.pub.ro/dgds/v06/D06-CAR3.pdf>.
85. '04. **D. Carfi**. The family of operators associated with a capitalization law. *AAPP | Physical, Mathematical, and Natural Sciences*, vol. 81-82, pp. 1-10, 2004. ISSN: 1825-1242. DOI: <https://dx.doi.org/10.1478/C1A0401002>.
86. '03. **D. Carfi**. Dirac-orthogonality in the space of tempered distributions. *Journal of Computational and Applied Mathematics*, vol.153, issue 1-2, pp. 99-107, 2003. 6<sup>th</sup> International Symposium on Orthogonal Polynomials, Special Functions and Applications. Elsevier. ISSN: 0377-0427. DOI: [http://dx.doi.org/10.1016/S0377-0427\(02\)00634-9](http://dx.doi.org/10.1016/S0377-0427(02)00634-9).
87. '03. **D. Carfi, C. Germanà**. Some properties of a new product in  $S'_n$ . *Journal of Computational and Applied Mathematics*, vol. 153 issue 1-2, pp.109-118, 2003. 6<sup>th</sup> International Symposium on Orthogonal Polynomials, Special Functions and Applications. Elsevier. ISSN: 0377-0427. DOI: [http://dx.doi.org/10.1016/S0377-0427\(02\)00635-0](http://dx.doi.org/10.1016/S0377-0427(02)00635-0).
88. '02. **D. Carfi**. S-families, S-bases and the Fourier expansion theorem. *Annals of Economic Faculty, University of Messina*, vol.40, pp.117-131, 2002. ISSN 1724-398X. Available as Researchgate Paper at [https://www.researchgate.net/publication/210189117\\_S-families\\_S-bases\\_and\\_the\\_Fourier\\_expansion\\_theorem](https://www.researchgate.net/publication/210189117_S-families_S-bases_and_the_Fourier_expansion_theorem).
89. '02. **D. Carfi**. On the Schrödinger's equation associated with an operator admitting a continuous eigenbasis. *Rendiconti del Seminario Matematico di Messina*, vol. 8(series II), pp. 221-232, 2002. Available as Researchgate Paper at [https://www.researchgate.net/publication/210189120\\_On\\_the\\_Schredingers\\_equation\\_associated\\_with\\_an\\_operator\\_admitting\\_a\\_continouos\\_eigenbasis](https://www.researchgate.net/publication/210189120_On_the_Schredingers_equation_associated_with_an_operator_admitting_a_continouos_eigenbasis).
90. '02. **D. Carfi**. On some Types of Vector Fields on Manifolds with Levi-Civita structure. *AAPP | Physical, Mathematical, and Natural Sciences*, vol.80, issue 1, pp.67-73, 2002. ISSN: 0365-0359. URL: <http://cab.unime.it/mus/628/>.
91. '01. **D. Carfi**. S-Ultralinear Algebra in the space of tempered distributions. *AAPP | Physical, Mathematical, and Natural Sciences*, vol.78-79, issue 1, pp.105-130, 2001. ISSN: 0365-0359. URL: <http://cab.unime.it/mus/664/>.

92. '01. **D. Carfi**. On some second order properties of torse forming vector fields. *Differential Geometry - Dynamical Systems*, vol. 3, issue 2, pp. 7-12, 2001. ISSN: 1454-511X. URL: <http://www.mathem.pub.ro/dgds/v03n2/D03-2-CARF.pdf>.
93. '01. **D. Carfi**. SL-ultradifferentiable Manifolds. *Analele Universitatii Bucuresti - Seria Informatica*, vol.50, pp. 21-31, 2001. Proceedings of the Centellian of Vranceanu. ISSN: 1224-7170. Available as Researchgate Paper at [https://www.researchgate.net/publication/210189123\\_SL-ultradifferentiable\\_Manifolds](https://www.researchgate.net/publication/210189123_SL-ultradifferentiable_Manifolds).
94. '00. **D. Carfi**. SL-ultralinear operators. *Annals of Economic Faculty, University of Messina*, vol. 38, pp. 195-214, 2000. ISSN 1724-398X. Available as Researchgate Paper at [https://www.researchgate.net/publication/210189128\\_SL-ultralinear\\_operators](https://www.researchgate.net/publication/210189128_SL-ultralinear_operators).
95. '00. **D. Carfi**. Skew Symmetric Killing Vector Fields on a parakahelerian Manifold. *Rendiconti del Seminario Matematico di Messina*, vol. 7(series II), pp. 117-124, 2000. Available as Researchgate Paper at [https://www.researchgate.net/publication/210189129\\_Skew\\_Symmetric\\_Killing\\_Vector\\_Fields\\_on\\_a\\_parakahelerian\\_Manifold](https://www.researchgate.net/publication/210189129_Skew_Symmetric_Killing_Vector_Fields_on_a_parakahelerian_Manifold).
96. '00. **D. Carfi, C. Germanà**. On the coordinates in an ultra-linearly independent family. *Booklets of the Mathematics Institute of the Faculty of Economics, University of Messina*, vol. 1, pp. 1-15, 2000. Available as Researchgate Paper at [https://www.researchgate.net/publication/210189127\\_On\\_the\\_coordinates\\_in\\_an\\_ultralinearly\\_independent\\_family](https://www.researchgate.net/publication/210189127_On_the_coordinates_in_an_ultralinearly_independent_family).
97. '00. **D. Carfi, C. Germanà**. S'-operators and generated families. *Booklets of the Mathematics Institute of the Faculty of Economics, University of Messina*, vol. 2, pp. 1-16, 2000. Available as Researchgate Paper at [https://www.researchgate.net/publication/210189126\\_S%27-operators\\_and\\_generated\\_families](https://www.researchgate.net/publication/210189126_S%27-operators_and_generated_families).
98. '00. **D. Carfi, C. Germanà**. The coordinate operator in SL-ultralinear algebra. *Booklets of the Mathematics Institute of the Faculty of Economics, University of Messina*, vol. 4, pp. 1-13, 2000. Available as Researchgate Paper at [https://www.researchgate.net/publication/210189125\\_The\\_coordinate\\_operator\\_in\\_SL-ultralinear\\_algebra](https://www.researchgate.net/publication/210189125_The_coordinate_operator_in_SL-ultralinear_algebra).
99. '00. **D. Carfi, E. Musso**. T-transformations of Willmore isothermic surfaces . *Rendiconti del Seminario Matematico di Messina*, pp. 69-86, 2000. Atti del Congresso Internazionale di Geometria Differenziale in onore di Pasquale Calapso. ISSN: 0390-6167. Available as Researchgate Paper at [https://www.researchgate.net/publication/266991245\\_T-transformations\\_of\\_Willmore\\_isothermic\\_surfaces](https://www.researchgate.net/publication/266991245_T-transformations_of_Willmore_isothermic_surfaces).
- 100.'99. **D. Carfi, C. Germanà**. S-nets in the space of tempered distributions and generated operators. *Rendiconti del Seminario Matematico di Messina*, vol. 6(series II), pp. 113-124, 1999. ISSN: 0390-6167. Available as Researchgate Paper at [https://www.researchgate.net/publication/267462823\\_S-nets\\_in\\_the\\_space\\_of\\_tempered\\_distributions\\_and\\_generated\\_operators](https://www.researchgate.net/publication/267462823_S-nets_in_the_space_of_tempered_distributions_and_generated_operators).
- 101.'99. **D. Carfi, C. Germanà**. The space of multipliers of S' and the S-families of tempered distributions. *Booklets of the Mathematics Institute of the Faculty of Economics, University of Messina*, vol. 5, pp. 1-15, 1999. Available as Researchgate Paper at [https://www.researchgate.net/publication/210189132\\_The\\_space\\_of\\_multipliers\\_of\\_S%27\\_and\\_the\\_S-families\\_of\\_tempered\\_distributions](https://www.researchgate.net/publication/210189132_The_space_of_multipliers_of_S%27_and_the_S-families_of_tempered_distributions).
- 102.'98. **D. Carfi**. SL-ultralinear operators and some their applications. *Booklets of the Mathematics Institute of the Faculty of Economics, University of Messina*, pp. 1-13, 1998. Available as Researchgate Paper at [https://www.researchgate.net/publication/210189135\\_SL-ultralinear\\_operators\\_and\\_some\\_their\\_applications](https://www.researchgate.net/publication/210189135_SL-ultralinear_operators_and_some_their_applications).
- 103.'98. **D. Carfi**. On Pseudo-Riemannian manifolds with Minkowski index carrying skew symmetric Killing vectors Field. *Rendiconti del Seminario Matematico di Messina*, vol. 5(series II), pp. 91-98,1998. ISSN: 0390-6167. Available as Researchgate Paper at [https://www.researchgate.net/publication/210189136\\_On\\_Pseudo-Riemannian\\_manifolds\\_with\\_Minkowski\\_index\\_carrying\\_skew\\_symmetric\\_Killing\\_vectors\\_Field](https://www.researchgate.net/publication/210189136_On_Pseudo-Riemannian_manifolds_with_Minkowski_index_carrying_skew_symmetric_Killing_vectors_Field).
- 104.'97. **D. Carfi**. Principles of a generalization of the linear algebra in the spaces of tempered distributions. *Booklets of the Mathematics Institute of the Faculty of Economics, University of Messina*, vol. 4, pp. 1-14, 1997. Available as Researchgate Paper at [https://www.researchgate.net/publication/210189138\\_Principles\\_of\\_a\\_generalization\\_of\\_the\\_linear\\_algebra\\_in\\_the\\_spaces\\_of\\_tempered\\_distributions](https://www.researchgate.net/publication/210189138_Principles_of_a_generalization_of_the_linear_algebra_in_the_spaces_of_tempered_distributions).
- 105.'96. **D. Carfi**. Quantum operators and their action on tempered distributions. *Booklets of the Mathematics Institute of the Faculty of Economics, University of Messina*, vol. 10, pp. 1-20, 1996. Available as Researchgate Paper at [https://www.researchgate.net/publication/210189140\\_Quantum\\_operators\\_and\\_their\\_action\\_on\\_tempered\\_distributions](https://www.researchgate.net/publication/210189140_Quantum_operators_and_their_action_on_tempered_distributions).

## 7.5 Papers in volumes of series with ISSN (9)

1. '17. **D. Carfi, A. Donato, D. Panuccio**, A Game Theory Coopetitive Perspective for Sustainability of Global Feeding: Agreements Among Vegan and Non-Vegan Food Firms. In A. J. Vasile and D. Nicolò editors, *Sustainable Entrepreneurship and Investments in the Green Economy*, volume of *Book Series on Advances in Business Strategy and Competitive Advantage (ABSCA)*, pp. 100-143, IGI Global. ISSN: 2327-3429. ISBN: 9781522520757. DOI: <https://dx.doi.org/10.4018/978-1-5225-2075-7.ch004>.
2. '13. **D. Carfi, F. Musolino**. Credit Crunch in the Euro Area: A Coopetitive Multi-agent Solution. In A. G. S. Ventre, A. Maturo, Š. Hořková-Mayerová, and J. Kacprzyk, editors, *Multicriteria and Multiagent Decision Making with Applications to Economics and Social Sciences*, volume 305 of *Studies in Fuzziness and Soft Computing*, pages 27-48. Springer Berlin Heidelberg, 2013. ISSN: 1434-9922. ISBN: 978-3-642-35634-6 (print). ISBN: 978-3-642-35635-3 (online). DOI: [https://dx.doi.org/10.1007/978-3-642-35635-3\\_3](https://dx.doi.org/10.1007/978-3-642-35635-3_3). Also available as Researchgate Paper at [https://www.researchgate.net/publication/282763897\\_Credit\\_Crunch\\_in\\_the\\_Euro\\_Area\\_A\\_Coopetitive\\_Multi-agent\\_Solution](https://www.researchgate.net/publication/282763897_Credit_Crunch_in_the_Euro_Area_A_Coopetitive_Multi-agent_Solution).
3. '13. **D. Carfi, A. Ricciardello**. An Algorithm for Dynamical Games with Fractal-Like Trajectories. In D. Carfi, M. Lapidus, E. Pearse, and M. Van Frankenhuijsen, editors, *Fractal Geometry and Dynamical Systems in Pure and Applied Mathematics II: Fractals in Applied Mathematics. (PISRS 2011 International Conference on Analysis, Fractal Geometry, Dynamical Systems and Economics, Messina, Italy, November 8-12, 2011 - AMS Special Session on Fractal Geometry in Pure and Applied Mathematics: in memory of Benoît Mandelbrot, Boston, Massachusetts, January 4-7, 2012 - AMS Special Session on Geometry and Analysis on Fractal Spaces, Honolulu, Hawaii, March 3-4, 2012)*, volume 601 of *Contemporary Mathematics*, pages 95-112, American Mathematical Society, 2013. ISSN: 1098-3627 (online), ISSN: 0271-4132 (print), ISBN: 978-0-8218-9148-3 (print), ISBN: 978-1-4704-1083-4 (online). DOI: <https://dx.doi.org/10.1090/conm/601/11961>. Also available as Researchgate Paper at [https://www.researchgate.net/publication/283150152\\_An\\_Algorithm\\_for\\_Dynamical\\_Games\\_with\\_Fractal-Like\\_Trajectories](https://www.researchgate.net/publication/283150152_An_Algorithm_for_Dynamical_Games_with_Fractal-Like_Trajectories).
4. '13. **D. Carfi, D. Schilirò**. A Model of Coopetitive Games and the Greek Crisis. *Contributions to Game Theory and Management*, vol. 6, pp. 35-62, 2013. Collected papers presented on the Sixth International Conference Game Theory and Management, St. Petersburg, Russia, June 27-29, 2012. Saint Petersburg State University. ISSN: 2310-2608. ISBN: 978-5-9924-0080-9. URL: [http://www.gsom.spbu.ru/files/upload/gtm/sbornik2012\\_27\\_05\\_2013.pdf](http://www.gsom.spbu.ru/files/upload/gtm/sbornik2012_27_05_2013.pdf).
5. '12. **D. Baglieri, D. Carfi, G. Dagnino**. Asymmetric R&D Alliances and Coopetitive Games. In S. Greco, B. Bouchon-Meunier, G. Coletti, M. Fedrizzi, B. Matarazzo, and R.R. Yager, editors, *Advances in Computational Intelligence, Part IV (14th International Conference on Information Processing and Management of Uncertainty in Knowledge-Based Systems, IPMU 2012, Catania, Italy, July 9-13, 2012, Proceedings, Part IV)*, volume 300 of *Communications in Computer and Information Science*, pages 607-621. Springer Berlin Heidelberg, 2012. ISSN: 1865-0929. ISBN: 978-3-642-31723-1 (print). ISBN: 978-3-642-31724-8 (online). DOI: [https://dx.doi.org/10.1007/978-3-642-31724-8\\_64](https://dx.doi.org/10.1007/978-3-642-31724-8_64). Also available as Researchgate Paper at [https://www.researchgate.net/publication/224951759\\_Asymmetric\\_RD\\_Alliances\\_and\\_Coopetitive\\_Games](https://www.researchgate.net/publication/224951759_Asymmetric_RD_Alliances_and_Coopetitive_Games).
6. '12. **D. Carfi, F. Musolino**. A Coopetitive Approach to Financial Markets Stabilization and Risk Management. In S. Greco, B. Bouchon-Meunier, G. Coletti, M. Fedrizzi, B. Matarazzo, and R.R. Yager, editors, *Advances in Computational Intelligence, Part IV (14th International Conference on Information Processing and Management of Uncertainty in Knowledge-Based Systems, IPMU 2012, Catania, Italy, July 9-13, 2012, Proceedings, Part IV)*, volume 300 of *Communications in Computer and Information Science*, pages 578-592. Springer Berlin Heidelberg, 2012. ISSN: 1865-0929. ISBN: 978-3-642-31723-1 (print). ISBN: 978-3-642-31724-8 (online). DOI: [https://dx.doi.org/10.1007/978-3-642-31724-8\\_62](https://dx.doi.org/10.1007/978-3-642-31724-8_62). Also available as Researchgate Paper at [https://www.researchgate.net/publication/241765804\\_A\\_Coopetitive\\_Approach\\_to\\_Financial\\_Markets\\_Stabilization\\_and\\_Risk\\_Management](https://www.researchgate.net/publication/241765804_A_Coopetitive_Approach_to_Financial_Markets_Stabilization_and_Risk_Management).
7. '12. **D. Carfi, A. Ricciardello**. Algorithms for Payoff Trajectories in  $C^1$  Parametric Games. In S. Greco, B. Bouchon-Meunier, G. Coletti, M. Fedrizzi, B. Matarazzo, and R. R. Yager, editors, *Advances in Computational Intelligence (14th International Conference on Information Processing and Management of Uncertainty in Knowledge-Based Systems, IPMU 2012, Catania, Italy, July 9-13, 2012, Proceedings, Part IV)*, volume 300 of *Communications in Computer and Information Science*, pages 642-654. Springer Berlin Heidelberg, 2012. ISSN: 1865-0929. ISBN: 978-3-642-31723-1 (print). ISBN: 978-3-642-31724-8 (online). DOI: [https://dx.doi.org/10.1007/978-3-642-31724-8\\_67](https://dx.doi.org/10.1007/978-3-642-31724-8_67). Also available as Researchgate Paper at [https://www.researchgate.net/publication/267676436\\_Algorithms\\_for\\_Payoff\\_Trajectories\\_in\\_C\\_1\\_Parametric\\_Games](https://www.researchgate.net/publication/267676436_Algorithms_for_Payoff_Trajectories_in_C_1_Parametric_Games).

8. '12. **D. Carfi, D. Schilirò**. Global Green Economy and Environmental Sustainability: A Coopetitive Model. In S. Greco, B. Bouchon-Meunier, G. Coletti, M. Fedrizzi, B. Matarazzo, and R.R. Yager, editors, *Advances in Computational Intelligence (14th International Conference on Information Processing and Management of Uncertainty in Knowledge-Based Systems, IPMU 2012, Catania, Italy, July 9-13, 2012, Proceedings, Part IV)*, volume 300 of *Communications in Computer and Information Science*, pages 593-606. Springer Berlin Heidelberg, 2012. ISSN: 1865-0929. ISBN: 978-3-642-31723-1 (print). ISBN: 978-3-642-31724-8 (online). DOI: [https://dx.doi.org/10.1007/978-3-642-31724-8\\_63](https://dx.doi.org/10.1007/978-3-642-31724-8_63). Also available as ArXiv Paper at <http://arxiv.org/abs/1205.2872>.
9. '05. **D. Carfi**. Quantum statistical systems with a continuous range of states. In M. Primicerio, R. Spigler and V. Valente editors, *Applied and Industrial Mathematics in Italy (Proceedings of the 7th Conference, Venice, Italy, 20 – 24 September 2004)*, volume 69 of *Series on Advances in Mathematics for Applied Sciences*, pages 189-200, World Scientific, 2005. ISSN: 1793-0901. ISBN 978-981-256-368-2 (e-book ISBN: 978-981-270-181-7). DOI: [https://dx.doi.org/10.1142/9789812701817\\_0018](https://dx.doi.org/10.1142/9789812701817_0018). Also available as Researchgate Paper at [https://www.researchgate.net/publication/210189113\\_Quantum\\_statistical\\_systems\\_with\\_a\\_continuous\\_range\\_of\\_states](https://www.researchgate.net/publication/210189113_Quantum_statistical_systems_with_a_continuous_range_of_states).

## 7.6 Papers or chapters published in volumes (19)

1. '20. **A. Donato, D. Carfi**. Probabilistic partial selling in pharmaceutical industry. In R. Guarneri, editor, *Economia, territorio e azienda. Lineamenti e prospettive di analisi*, pp.135-154. Aracne editrice, 2020. ISBN: 978-88-255-3723-9. DOI: 10.4399/97888255372397.
2. '19. **D. Carfi, A. Donato**. Critical strategies and Nash equilibria in a coopetitive scenario within COP21: analytical study and algorithm. In R. Guarneri, editor, *Economia, territorio e azienda. Lineamenti e prospettive di analisi*, pp.55-69. Aracne editrice, 2019. ISBN: 978-88-255-3038-4. DOI: 10.4399/97888255303845.
3. '18. **D. Carfi, A. Donato, D. Schilirò**. Environmental Sustainability. A coopetitive framework for a Global Economy. In R. Guarneri, editor, *Economia, territorio e azienda. Lineamenti e prospettive di analisi.*, pp. 73-92. Aracne editrice, 2018. ISBN: 978-88-255-2501-4. DOI: 10.4399/97888255250145. URL: <http://www.aracneeditrice.it/index.php/estratto.html?item=10.4399/97888255250145&isbn=9788825525014>
4. '18. **M. Okura, D. Carfi**, Coopetition and game theory. In A.S. Fernandez, P. Chiambretto, F. Le Roy and W. Czakon (Eds.), *The Routledge Companion to Coopetition Strategies, (Series: Routledge Companions in Business, Management and Accounting)*, chapter 12, pp. 139-146, Routledge Taylor & Francis Group 2018. ISBN: 9781138736894 (Hardbook). <https://www.routledge.com/The-Routledge-Companion-to-Coopetition-Strategies/Fernandez-Chiambretto-Roy-Czakon/p/book/9781138736894>
5. '18. **M. Okura, D. Carfi**, Coopetition and game theory. In A.S. Fernandez, P. Chiambretto, F. Le Roy and W. Czakon (Eds.), *The Routledge Companion to Coopetition Strategies*, chapter 12, pp. 139-146, Routledge Taylor & Francis Group 2018. ISBN: 9781315185644. DOI 10.4324/9781315185644-13 (eBook). <https://www.routledgehandbooks.com/doi/10.4324/9781315185644-13>
6. '17. **D. Carfi, A. Donato**. Coopetitive global Green Economy by sustainable food production. A game theory approach. In G. Centorrino, editor, *Economia, territorio e azienda. Lineamenti e prospettive di analisi*, pp. 97-117. Aracne editrice, 2017. ISBN: 978-88-255-1798-9. DOI: 10.4399/97888255179896. URL <http://www.aracneeditrice.it/index.php/estratto.html?item=10.4399/97888255179896&isbn=9788825517989>
7. '17, **D. Carfi, A. Donato, G. Gambarelli**, Kalai-Smorodinsky Balance for N-tuples of Interfering Elements. In N.T. Nguyen et al. (Eds.), *Transactions on Computational Collective Intelligence XXVII, LNCS 10480*, pp. 1–27, Springer International Publishing AG 2017. ISBN: 978-3-319-70647-4. DOI: [https://doi.org/10.1007/978-3-319-70647-4\\_1](https://doi.org/10.1007/978-3-319-70647-4_1)
8. '17. **D. Carfi, A. Donato, D. Panuccio**, A Game Theory Coopetitive Perspective for Sustainability of Global Feeding: Agreements Among Vegan and Non-Vegan Food Firms. In Resources Management Association editor, *Game Theory: Breakthroughs in Research and Practice*, pp. 71-104, IGI Global, 2017. ISBN: 9781522525943. DOI: <https://dx.doi.org/10.4018/978-1-5225-2594-3.ch004>; <https://www.igi-global.com/chapter/a-game-theory-coopetitive-perspective-for-sustainability-of-global-feeding/183106>
9. '16. **D. Carfi, M. Campbell, A. Donato**. Partial selling in a coopetitive Alliance within Pharmaceutical industry: a complete study case. In G. Centorrino, editor, *Economia e Territorio: prospettive di analisi*, pp.73-113. Aracne editrice, 2016. ISBN: 978-88-255-0444-6. DOI: <https://doi.org/10.4399/97888255044466>



10. '15. **D. Baglieri, D. Carfi, G. Dagnino.** A Coopetitive Game Model for Asymmetric R&D Alliances within a generalized "Reverse Deal". In G. Centorrino, editor, *Economia e Territorio*, pp.15-47. Aracne editrice, 2015. ISBN: 978-88-548-9106-7. DOI: <https://dx.doi.org/10.4399/97888548910672>  
URL:<http://www.aracneeditrice.it/aracneweb/index.php/pubblicazione.html?item=9788854891067&tab=indice>
11. '14. **D. Carfi, D. Schilirò.** Coopetitive Game Solutions for the Greek Crisis. In D. Schilirò, editor, *Design a Pattern of Sustainable Growth. Innovation, Education, Energy and Environment*, chapter 11, pp.227-235. ASERS Publishing House, 2014. ISBN: 978-606-93490-5-2. URL: <http://books.aserspublishing.eu/economica/catalog/book/2>. Also available as MPRA Paper at <http://mpra.ub.uni-muenchen.de/54765/>.
12. '13. **D. Carfi, F. Lanzafame.** A Quantitative Model of Speculative Attack: Game Complete Analysis and Possible Normative Defenses. In M. Bahmani-Oskooee and S. Bahmani editors, *Financial Markets: Recent Developments, Emerging Practices and Future Prospects*, chapter 9, pp.173-194. Nova Science, 2013. ISBN: 978-1-62948-434-1. URL: [https://www.novapublishers.com/catalog/product\\_info.php?products\\_id=46483](https://www.novapublishers.com/catalog/product_info.php?products_id=46483). Also available as Researchgate Paper at [https://www.researchgate.net/publication/283010498\\_A\\_Quantitative\\_Model\\_of\\_Speculative\\_Attack\\_Game\\_Complete\\_Analysis\\_and\\_Possible\\_Normative\\_Defenses](https://www.researchgate.net/publication/283010498_A_Quantitative_Model_of_Speculative_Attack_Game_Complete_Analysis_and_Possible_Normative_Defenses).
13. '12. **D. Carfi.** Coopetitive games and applications. In R.K. Mishra, S. Deman, M. Salunkhe, S.B. Rao, and J. Raveendran, editors, *Advances and Application in Game Theory - International Conference in honor of prof. Rao*, pages 128-147. J. Macmillan, India, 2012. ISBN: 978-935-059-053-9. Only printed version. Available as Researchgate Paper at <https://dx.doi.org/10.13140/RG.2.1.3526.6005>.
14. '11. **D. Carfi, G. Patanè, S. Pellegrino.** Coopetitive games and sustainability in Project Financing. In *Moving from the crisis to sustainability. Emerging issues in the international context*, pages 175-182. Franco Angeli, 2011. ISBN: 9788856847055. URL: [http://www.francoangeli.it/Ricerca/Scheda\\_libro.aspx?CodiceLibro=365.906](http://www.francoangeli.it/Ricerca/Scheda_libro.aspx?CodiceLibro=365.906). Also available as Researchgate Paper at [https://www.researchgate.net/publication/254444035\\_Coopetitive\\_games\\_and\\_sustainability\\_in\\_project\\_finance](https://www.researchgate.net/publication/254444035_Coopetitive_games_and_sustainability_in_project_finance).
15. '11. **D. Carfi, E. Perrone.** Asymmetric Bertrand Duopoly: Game Complete Analysis by Algebra System Maxima. In Laura Ungureanu editor, *Mathematical Models in Economics*, chapter 3, pp. 44-66. ASERS Publishing House, 2011. ISBN: 978-606-92386-6-0. URL: <http://www.asers.eu/asers-publishing/collections.html>. Also available as Researchgate Paper at [https://www.researchgate.net/publication/283345871\\_Asymmetric\\_Bertrand\\_duopoly\\_game\\_complete\\_analysis\\_by\\_algebra\\_system\\_Maxima](https://www.researchgate.net/publication/283345871_Asymmetric_Bertrand_duopoly_game_complete_analysis_by_algebra_system_Maxima).
16. '11. **D. Carfi, E. Perrone.** Game Complete Analysis of Bertrand Duopoly. In Laura Ungureanu editor, *Mathematical Models in Economics*, chapter 2, pp. 22-43. ASERS Publishing House, 2011. ISBN: 978-606-92386-6-0. URL: <http://www.asers.eu/estore/books/mathematical-models-in-economics-chapter-1-915.html>. Also available as MPRA Paper at <http://mpra.ub.uni-muenchen.de/31302/>.
17. '11. **D. Carfi, D. Schilirò.** Crisis in the Euro Area: Co-opetitive Game Solutions as New Policy Tools. In Laura Ungureanu editor, *Mathematical Models in Economics*, chapter 4, pp. 67-86. ASERS Publishing House, 2011. ISBN: 978-606-92386-6-0. URL: <http://www.asers.eu/asers-publishing/collections.html>. Also available as Researchgate chapter at [https://www.researchgate.net/publication/283091763\\_Crisis\\_in\\_the\\_Euro\\_Area\\_Coopetitive\\_Game\\_Solutions\\_as\\_New\\_Policy\\_Tools](https://www.researchgate.net/publication/283091763_Crisis_in_the_Euro_Area_Coopetitive_Game_Solutions_as_New_Policy_Tools).
18. '11. **D. Carfi, D. Schilirò.** Coopetitive games and global Green Economy. In *Moving from the Crisis to Sustainability. Emerging Issues in the International Context*, pages 357-366. Franco Angeli, 2011. ISBN: 9788856847055. URL: [http://www.francoangeli.it/Ricerca/Scheda\\_libro.aspx?CodiceLibro=365.906](http://www.francoangeli.it/Ricerca/Scheda_libro.aspx?CodiceLibro=365.906). Also available as MPRA Paper at <http://mpra.ub.uni-muenchen.de/32035/>.
19. '11. **D. Carfi, A. Trunfio.** A non-linear coopetitive game for global Green Economy. In *Moving from the Crisis to Sustainability - Emerging Issues in the International Context*, pages 421-428. Franco Angeli, 2011. ISBN: 9788856847055. URL: [http://www.francoangeli.it/Ricerca/Scheda\\_libro.aspx?CodiceLibro=365.906](http://www.francoangeli.it/Ricerca/Scheda_libro.aspx?CodiceLibro=365.906). Also available as MPRA Paper at <http://mpra.ub.uni-muenchen.de/32036/>.

## 7.7 Papers published in the proceedings of international conferences (8)

1. '18. **D. Carfi, A. Donato, D. Schilirò.** An Environmentally Sustainable Global Economy. A coopetitive model. In *Book of Papers of 24<sup>th</sup> International Sustainable Development Research Society Conference, Messina Italy June 13/15 2018, "Action for a Sustainable World: from Theory to Practice"*, pages 592-605. ISBN: 978-88-943228-6-6.

2. '18. **D. Carfi, A. Donato, D. Schilirò**. Sustainability of Global Feeding. Coopetitive interaction among Vegan and Non-Vegan Food Firms. In *Book of Papers of 24<sup>th</sup> International Sustainable Development Research Society Conference, Messina Italy June 13/15 2018, "Action for a Sustainable World: from Theory to Practice"*, pages 655-669. ISBN: 978-88-943228-6-6.
3. '16. **D. Carfi, A. Caterino, R. Ceppitelli**. State preference models and jointly continuous utilities. In *15<sup>th</sup> Conference on Applied Mathematics APLIMAT 2016*, vol. 1, pages 163-176, 2016. Slovak University of Technology in Bratislava, ISBN: 978-151082096-8. URL: <http://www.proceedings.com/29878.html>  
Other source: <http://en.ustc.findplus.cn/?h=articles&db=edselc&an=edselc.2-52.0-84968615915>. (ISBN: 978-802274531-4).
4. '11. **D. Carfi**. Financial Lie groups. In *Riemannian Geometry and Applications. Proceedings RIGA 2011*. Bucharest University, Bucharest, 2011. ISBN: 978-606-16-0053-3. URL: <http://editura-unibuc.ro/magazin/stiinte-exacte/riemannian-geometry-applications-proceedings-riga-2011/>  
Also available as MPRA Paper at <http://mpra.ub.uni-muenchen.de/31303/>.
5. '11. **D. Carfi, F. Musolino**. Game complete analysis for financial markets stabilization. In R. Mirdala, editor, *Proceedings of the first international on-line conference on "Global Trends in Finance"*, pages 14-42. ASERS Publishing House, 2011. ISBN: 978-606-92386-8-4. URL: [http://www.asers.eu/asers\\_files/conferences/GTF/GTF\\_eProceedings\\_last.pdf](http://www.asers.eu/asers_files/conferences/GTF/GTF_eProceedings_last.pdf).
6. '09. **D. Carfi**. Differentiable game complete analysis for tourism firm decisions. In *Proceedings of the 2009 International Conference on Tourism and Workshop on Sustainable tourism within High Risk areas of environmental crisis, Messina, Italy, April 22-25, 2009*, pages 1-10. University of Messina, SGB, 2009. ISBN: 978-88-96116-20-3. Available as Researchgate paper at [https://www.researchgate.net/publication/283211598\\_Differentiable\\_game\\_complete\\_analysis\\_for\\_tourism\\_firm\\_decisions](https://www.researchgate.net/publication/283211598_Differentiable_game_complete_analysis_for_tourism_firm_decisions).
7. '09. **D. Carfi**. Globalization and Differentiable General Sum Games. In *Proceedings of the 3rd International Symposium "Globalization and convergence in economic thought", Bucharest, December 11-12, 2009*. Bucuresti: Editura ASE, 2009. ISBN: 9786065052932. Available as Researchgate Paper at <https://dx.doi.org/10.13140/RG.2.1.2215.8801>.
8. '03. **D. Carfi**. S-ultralinear operators in Quantum Mechanics. In M. Moreau, E. Hideg, K. Martinàs, and D. Meyer, editors, *Complex systems in natural and social sciences. (Proceedings of the 7th Workshop on Complex Systems in Natural and Social Sciences, Mâtrafüred, Hungary, September 26-29, 2002)*, pages 33-46. ELFT, Budapest, 2003. ISBN: 963-210-959-7. URL: <http://www.oszk.hu/mnbwww/K/0723/S.HTML#010>. Available as Researchgate Paper at <https://dx.doi.org/10.13140/RG.2.1.2609.0965>.

## 7.8 Monographs (27)

1. '17. **M. Campbell, D. Carfi**, *Phase Transition in a Bounded Rational Speculative and Hedging Model*. Lambert Academic Publishing, pp. 1-128, 2017. ISBN: 978-620-2-004671. URL: <https://www.lap-publishing.com/catalog/details/store/gb/book/978-620-2-00467-1/phase-transition-in-a-bounded-rational-speculative-and-hedging-model>
2. '17. **D. Carfi**, *Differential Geometry and Relativity Theories vol 1. – Tangent vectors, derivatives, paths, 1-forms, vector fields*. Lambert Academic Publishing, pp. 1-163, 2017. ISBN: 978-3-330-02885-2. URL: <https://www.lap-publishing.com/catalog/details/store/tr/book/978-3-330-02885-2/differential-geometry-and-relativity-theories-vol-1?search=978-3-330-02885-2>
3. '16. **D. Carfi**. *Differential Geometry and Relativity Theories. Vol.1. Tangent vectors, tangent maps, paths, 1-forms*. Il Gabbiano, pp. 1-110, 2016. ISBN: 978-88-96293-22-5. URL: [https://www.researchgate.net/publication/307210420\\_Differential\\_Geometry\\_and\\_Relativity\\_Theories\\_Vol\\_1\\_Tangent\\_vectors\\_tangent\\_maps\\_paths\\_1-forms](https://www.researchgate.net/publication/307210420_Differential_Geometry_and_Relativity_Theories_Vol_1_Tangent_vectors_tangent_maps_paths_1-forms)
4. '14. **D. Carfi**. *Quantum Mechanics and Dirac Calculus in Schwartz Distribution Spaces vol. 1 Superpositions in Distribution Spaces, Postulates of Quantum Mechanics in S'n, Schwartz Linear Algebra, SRepresentation in Quantum Mechanics, Dirac Orthogonality, S-Linear Quantum Statistics*. Il Gabbiano, pp. 1-267, 2014. ISBN: 978-88-96293-19-5. URL: <https://dx.doi.org/10.13140/2.1.1158.0480> ; <https://dx.doi.org/10.13140/2.1.4959.1360>.
5. '12. **D. Carfi**. *Fondamenti di Teoria delle Decisioni, vol. 1-Teoria dei preordini e applicazioni*. Antipodes, pp. 1-207, 2012. ISBN 978-88-96926-10-9. URL: <http://www.antipodes.it/prodotti/scheda-prodotto.asp?id=23>.
6. '12. **D. Carfi, F. Musolino**. *Game Theory Models for Derivative Contracts: Financial Markets Stabilization and Credit Crunch, Complete Analysis and Coopetitive Solution*. Lambert Academic Publishing, pp. 1-172, 2012. ISBN:

- 978-3-659-13050-2. URL: <https://www.lap-publishing.com/catalog/details//store/gb/book/978-3-659-13050-2/game-theory-models-for-derivative-contracts>.
7. '12. **D. Carfi, E. Perrone.** *Game Complete Analysis of Classic Economic Duopolies*. Lambert Academic Publishing, pp. 1-160, 2012. ISBN: 978-3-8484-2099-5. URL: <https://www.lap-publishing.com/catalog/details//store/ru/book/978-3-8484-2099-5/game-complete-analysis-of-classic-economic-duopolies>.
  8. '12. **D. Carfi, A. Ricciardello.** *Topics in Game Theory*. Applied Sciences – Monographs 9. Balkan Society of Geometers, pp. 1-148, 2012. ISSN: 1454-5101. URL: <http://www.mathem.pub.ro/apps/mono/A-09-Car.pdf>.
  9. '11. **D. Carfi, A. Ricciardello.** *Topics in Game Theory*. Il Gabbiano, pp. 1-158, 2011. ISBN: 978-88-96293-16-4. <https://dx.doi.org/10.13140/RG.2.1.2368.9685>.
  10. '10. **D. Carfi.** *Topics in game theory*. Il Gabbiano, pp. 1-84, 2010. ISBN: 978-88-96293-13-3. <https://dx.doi.org/10.13140/RG.2.1.4203.9766>.
  11. '10. **D. Carfi.** *Decision -form games*. Il Gabbiano, pp. 1-77, 2010. ISBN: 978-88-96293-12-6. <https://dx.doi.org/10.13140/RG.2.1.1320.3927>.
  12. '10. **D. Carfi.** *Foundations of superposition theory. Vol. 1*. Il Gabbiano, pp. 1-314, 2010. ISBN: 978-88-96293-11-9. <https://dx.doi.org/10.13140/RG.2.1.3352.2642>.
  13. '10. **D. Carfi, M. Magaudda, D. Schilirò.** Coepetitive game solutions for the eurozone economy. In *Quaderni di Economia ed Analisi del Territorio*, Quaderno n. 55/2010, pages 1-21. Il Gabbiano, 2010. Dipartimento DESMaS "V. Pareto" Università degli Studi di Messina. ISBN: 978-88-96293-10-2. <https://dx.doi.org/10.13140/RG.2.1.4501.9602>.
  14. '09. **D. Carfi.** *Fondamenti di teoria delle decisioni. Vol. 1. (Foundations of Decision Theory, vol. 1 - Theory of preorders and applications)*. Il Gabbiano, pp. 1-205, 2009. ISBN 978-88-96293-09-6.
  15. '08. **D. Carfi.** *Fondamenti di teoria delle decisioni. Vol. 1 : Teoria dei preordini e applicazioni. (Foundations of Decision Theory, vol. 1 - Theory of preorders and applications)*. Il Gabbiano, pp. 1-127, 2008. ISBN 978-88-96293-00-3.
  16. '08. **D. Carfi.** *Fondamenti di teoria delle decisioni. Vol. 2 : Teoria lotterie e applicazioni. (Foundations of Decision Theory, vol. 2 - Theory of Lotteries and applications)*. Il Gabbiano, pp. 1-73, 2008. ISBN 978-88-96293-01-0.
  17. '08. **D. Carfi.** *Fondamenti di teoria delle decisioni. Vol. 3: Teoria dei giochi in forma decisionale (Foundations of Decision Theory, vol. 3 - Decision-form games)*. Il Gabbiano, pp. 1-81, 2008. ISBN 978-88-96293-02-7.
  18. '08. **D. Carfi.** *Fondamenti di teoria delle decisioni. Vol. 4 : Teoria dei giochi in forma normale e applicazioni (Foundations of Decision Theory, vol. 4 - Normal-form games)*. Il Gabbiano, pp. 1-109, 2008. ISBN 978-88-96293-03-4.
  19. '08. **D. Carfi.** *Elementi di matematica applicata. Vol. 1 : Teoria dei preordini e applicazioni. (Elements of Applied mathematics: Theory of preorders and applications)*. Il Gabbiano, pp. 1-111, 2008. ISBN 978-88-96293-04-1.
  20. '06. **D. Carfi.** *Elementi di teoria dei giochi (Elements of Game Theory)*. Il Gabbiano, pp. 1-123, 2006. ISBN: 978-88-96293-05-8.
  21. '06. **D. Carfi.** *Teoria delle decisioni. Spazi preordinati e lotterie finite (Decision Theory. Preordered Spaces and Finite Lotteries)*. Il Gabbiano, pp. 1-111, 2006. ISBN: 978-88-96293-07-2.
  22. '05. **D. Carfi.** *Elementi di teoria delle distribuzioni. Vol. 1 : Fondamenti e applicazioni. (Elements of Distribution Theory, vol. 1 – Foundations and applications)*. Il Gabbiano, pp. 1-89, 2005. ISBN: 978-88-96293-06-5.
  23. '05. **D. Carfi.** *Matematica per l'Economia e applicazioni. (Mathematics for Economics and applications)*. Il Gabbiano, pp. 1-90, 2005. ISBN: 978-88-96293-14-0.
  24. '05. **D. Carfi.** *Teoria delle decisioni: Teoria dei preordini, teoria dei giochi, teoria delle lotterie. (Decision Theory: Theory of preorders, Game Theory, Theory of Lotteries)*. Il Gabbiano, pp. 1-117, 2005. ISBN: 978-88-96293-08-9.
  25. '03. **D. Carfi.** *Topics in Möbius, Riemannian and pseudo-Riemannian Geometry*. Il Gabbiano, pp. 1-130, 2003. ISBN: 978-88-96293-21-8.
  26. '02. **D. Carfi, C. Germanà.** *Principles of Ultralinear Algebra: an article collection*. Il Gabbiano, pp. 1-158, 2002. ISBN: 978-88-96293-20-1. <https://dx.doi.org/10.13140/RG.2.1.2832.3603>
  27. '99. **D. Carfi.** *Metodi matematici della Fisica, dell'Ingegneria e dell'Economia. Azzeramento. (Mathematical methods of Physics, engineering, economics)*. Armando Siciliano Editore, pp. 1-69, 1999. ISBN: 978-88-74422-28-9.

## 7.9 Thesis (1)

1. '00. **D. Carfi**. *Some aspects of Riemannian and pseudo-Riemannian manifolds*. URL: [https://www.researchgate.net/publication/304748011\\_Some\\_aspects\\_of\\_Riemannian\\_and\\_pseudo-Riemannian\\_manifolds](https://www.researchgate.net/publication/304748011_Some_aspects_of_Riemannian_and_pseudo-Riemannian_manifolds)

## 7.10 Books in co-authorship (4)

1. '14. **D. Carfi, D. Schilirò, et al.** *Design a Pattern of Sustainable Growth. Innovation, Education, Energy and Environment*, ASERS Publishing House, 2014. ISBN: 978-606-93490-5-2. URL: <http://books.aserspublishing.eu/economica/catalog/book/2>.
2. '13. **D. Carfi, M. Lapidus, E. Pearse, M. Van Frankenhuijsen.** *Fractal Geometry and Dynamical Systems in Pure and Applied Mathematics I: Fractals in Pure Mathematics*, volume 600 of *Contemporary Mathematics*, American Mathematical Society, 2013. ISBNs: 978-0-8218-9147-6 (print); 978-1-4704-1082-7 (online). DOI: <https://dx.doi.org/10.1090/conm/600>.
3. '13. **D. Carfi, M. Lapidus, E. Pearse, M. Van Frankenhuijsen.** *Fractal Geometry and Dynamical Systems in Pure and Applied Mathematics II: Fractals in Applied Mathematics. (PISRS 2011 International Conference on Analysis, Fractal Geometry, Dynamical Systems and Economics, Messina, Italy, November 8-12, 2011 - AMS Special Session on Fractal Geometry in Pure and Applied Mathematics: in memory of Benoît Mandelbrot, Boston, Massachusetts, January 4-7, 2012 - AMS Special Session on Geometry and Analysis on Fractal Spaces, Honolulu, Hawaii, March 3-4, 2012)*, volume 601 of *Contemporary Mathematics*, American Mathematical Society, 2013. ISBNs: 978-0-8218-9148-3 (print); 978-1-4704-1083-4 (online). DOI: <https://dx.doi.org/10.1090/conm/601>.
4. '11. **D. Carfi, M. Lapidus, A. Ricciardello, D. Schilirò et al.** *First International meeting PISRS - PISRS 2011 - Analysis, Fractal Geometry, Dynamical Systems and Economics, Messina, November 8th/13th - 2011 - Program and Book of Abstracts*. Il Gabbiano, pp. 1-54, 2011. ISBN: 978-88-96293-15-7. <https://dx.doi.org/10.13140/RG.2.1.1618.3765>.

## 7.11 Reviews-Preface-Postface (1)

- 8 '13. **D. Carfi**, Last Word on "Financial Aspects of Recent Trends in the Global Economy" (FINART), ASERS, ISI, Editor: Rajmund MIRDALA Publisher: ASERS Publishing, ISBN-L: 978-606-93129-5-7, Print ISBN: 978-606-93129-6-4. Online ISBN: 978-606-93129-9-5.

## 7.12 Curatorships and editorships with international relevance (28)

1. '21. Collections on Game Theory and Decision Theory. Elgar Publishing (in print)
2. '21. *Mathematics*, Special Issue: Recent Trend in Mathematical Economics and Games: Humanomics and Sustainability. ISSN: 2227-7390. Published by MDPI AG, Basel, Switzerland. URL: [https://www.mdpi.com/journal/mathematics/special\\_issues/Recent\\_Trends\\_Mathematical\\_Economics\\_Games\\_Humanomics\\_Sustainability](https://www.mdpi.com/journal/mathematics/special_issues/Recent_Trends_Mathematical_Economics_Games_Humanomics_Sustainability)
3. '20. *Journal of Mathematical Economics and Finance*, vol. 6, issue 1(10), ASERS Publishing, pp. 1-107, 2020. ISSN: 2458-0813. URL: <https://journals.aserspublishing.eu/jmef/issue/view/208>
4. '20. Special Issue "Advances and challenges of green economy: a quantitative and strategic view". *AIMS Environmental Science*, ISSN: 2372-0352. URL: <https://www.aimspress.com/newsinfo/1448.html>
5. '20. Special Issue "Foundations of Quantum Mechanics: Principles, Axiomatizations, Formalisms, Interpretations" *Applied Sciences*, ISSN: 2076-3417 URL: [https://www.mdpi.com/journal/applsci/special\\_issues/quantum\\_mech](https://www.mdpi.com/journal/applsci/special_issues/quantum_mech)
6. '19. *Journal of Mathematical Economics and Finance*, vol. 5, issue 2(9), ASERS Publishing, pp. 1-60, 2019. ISSN: 2458-0813. URL: <https://journals.aserspublishing.eu/jmef/issue/view/191>
7. '19. *Journal of Mathematical Economics and Finance*, vol. 5, issue 1(8), ASERS Publishing, pp. 1-65, 2019. ISSN: 2458-0813. URL: <https://journals.aserspublishing.eu/jmef/issue/view/172>



8. '19. *Advances in Mathematical Physics*, Special Issue on Mathematical Foundations of Quantum Mechanics and Quantum Field Theories. ISSN: 1687-9120 (Print), ISSN: 1687-9139 (Online). Published by Hindawi. URL: <https://www.hindawi.com/journals/amp/si/370136/cfp/>
9. '19. *Mathematics*, Special Issue: Recent Advances in Game and Decision Theory: Structures, Models, Applications and Software Implementation 2019. ISSN: 2227-7390. Published by MDPI AG, Basel, Switzerland. URL [https://www.mdpi.com/journal/mathematics/special\\_issues/game\\_decision\\_theory](https://www.mdpi.com/journal/mathematics/special_issues/game_decision_theory)
10. '18. *Mathematics*, Special Issue: Recent Advances in Game and Decision Theory: Structures, Models, Applications and Software Implementation. ISSN: 2227-7390. Published by MDPI AG, Basel, Switzerland. URL [https://www.mdpi.com/journal/mathematics/special\\_issues/Recent\\_advances\\_Game\\_Decision\\_theory](https://www.mdpi.com/journal/mathematics/special_issues/Recent_advances_Game_Decision_theory)
11. '18. *Journal of Mathematical Economics and Finance*, vol. 4, issue 2(7), ASERS Publishing, pp. 1-89, 2018. ISSN: 2458-0813. URL: <https://journals.aserspublishing.eu/jmef/issue/view/157>
12. '18. *Journal of Mathematical Economics and Finance*, vol. 4, issue 1(6), ASERS Publishing, pp. 1-108, 2018. ISSN: 2458-0813. URL: <https://journals.aserspublishing.eu/jmef/issue/view/148>
13. '17. *Journal of Mathematical Economics and Finance*, vol. 3, issue 2(5), ASERS Publishing, pp. 1-114, 2017. ISSN: 2458-0813. URL: <https://journals.aserspublishing.eu/jmef/issue/view/130>
14. '17. *Journal of Mathematical Economics and Finance*, vol. 3, issue 1(4), ASERS Publishing, pp. 1-107, 2017. ISSN: 2458-0813. URL: <http://journals.aserspublishing.eu/jmef>.
15. '16. *Journal of Mathematical Economics and Finance*, vol. 2, issue 2(3), ASERS Publishing, pp. 1-99, 2016. ISSN: 2458-0813. URL: <http://journals.aserspublishing.eu/jmef>.
16. '16. *Journal of Mathematical Economics and Finance*, vol. 2, issue 1(2), ASERS Publishing, pp. 1-139, 2016. ISSN: 2458-0813. URL: <http://journals.aserspublishing.eu/jmef>.
17. '15, Special Session on Mathematical Techniques in Quantum Theories and Quantum Finance, with Applications – AMS Fall Western Sectional Meeting, Meeting #1114, California State University Fullerton, Fullerton California – Program. **AMS Publishing**. [http://www.ams.org/meetings/sectional/2221\\_program\\_ss11.html#title](http://www.ams.org/meetings/sectional/2221_program_ss11.html#title)
18. '15. *Journal of Mathematical Economics and Finance*, vol. 1, issue 1(1), ASERS Publishing, pp. 1-86, 2015. ISSN: 2458-0813. URL: <http://journals.aserspublishing.eu/jmef>.
19. '14, Proceedings of the Permanent International Session of Research Seminars, **PISRS**, part III - **AAPP 92(S1)** . ISSN 1825-1242. [http://cab.unime.it/journals/index.php/AAPP/issue/view/Vol92\\_Supplement1/showToc](http://cab.unime.it/journals/index.php/AAPP/issue/view/Vol92_Supplement1/showToc)
20. '13, Fractal Geometry and Dynamical Systems in Pure and Applied Mathematics I: Fractals in Pure Mathematics, **Contemporary Mathematics 600**, **AMS**, **American Mathematical Society** ISBN 978-0-8218-9147-6. <https://dx.doi.org/10.1090/conm/600>
21. '13, Fractal Geometry and Dynamical Systems in Pure and Applied Mathematics II: Fractals in Applied Mathematics, **Contemporary Mathematics 601**, **AMS**, **American Mathematical Society** ISBN 978-0-8218-9148-3. <https://dx.doi.org/10.1090/conm/601>
22. '13, Proceedings of the Permanent International Session of Research Seminars, **PISRS**, part II - **AAPP 91(S2)** . ISSN 1825-1242. [http://cab.unime.it/journals/index.php/AAPP/issue/view/Vol91\\_Supplement2/showToc](http://cab.unime.it/journals/index.php/AAPP/issue/view/Vol91_Supplement2/showToc)
23. '12, "Special Session 35 - Coepetition strategy, cooperative games and the management of uncertainty", associated with the book "*Advances in Computational Intelligence (14th International Conference on Information Processing and Management of Uncertainty in Knowledge-Based Systems, IPMU 2012, Catania, Italy, July 9-13, 2012, Proceedings, Part IV)*", volume 300 of *Communications in Computer and Information Science*. **Springer Berlin Heidelberg, 2012**. ISSN: 1865-0929. ISBN: 978-3-642-31723-1 (print). ISBN: 978-3-642-31724-8 (online). <http://www.ipmu2012.unict.it/ipmu/specialsessions.html>.
24. '12, MSP21-23: Mathematics in Decisions, Economics, Finance and Games, **SIMAI 2012** – 11<sup>th</sup> Congress of SIMAI, Torino, Italy, June 25-28, 2012 - **ABSTRACTS**. pp.141-148. <http://2012.simai.eu/>.
25. '12, Proceedings of the Permanent International Session of Research Seminars, **PISRS**, part I - **AAPP 90(S1)** . ISSN 1825-1242.. [http://cab.unime.it/journals/index.php/AAPP/issue/view/Vol90\\_Supplement1/showToc](http://cab.unime.it/journals/index.php/AAPP/issue/view/Vol90_Supplement1/showToc)
26. '11, First International meeting PISRS - PISRS 2011 - Analysis, Fractal Geometry, Dynamical Systems and Economics, Messina, November 8th/13th - 2011 - Program and Book of Abstracts. **Il Gabbiano**, pp. 1-54, 2011. ISBN 978-88-96293-15-7. <https://dx.doi.org/10.13140/RG.2.1.1618.3765>
27. '10, MSP26: Mathematics in Decisions, Economics, Finance and Games, **SIMAI 2010** - 10<sup>th</sup> Congress of SIMAI in cooperation with SEMA, Cagliari, Italy, June 21-25, 2010 – **ABSTRACTS**. pp.219-228. <http://openconference.simai.eu/index.php/sc/2010>.
28. '08, M30: Mathematical Methods of Economic Theories, Game Theory and applications, **SIMAI 2008** - 9<sup>th</sup> Congress of SIMAI, Rome, Italy, September 15 – 19, 2008 associated with "Applied and Industrial Mathematics in Italy III", vol. 82 of *Series on Advances in Mathematics for Applied Sciences*. ISBN: 978-981-4467-28-5. <http://www.simai.eu/it/congressi/archivio/simai-2008-2.html>.

### 7.13 Working papers

1. **D. Carfi, A. Donato**, Sustainability of Emissions: Coopetitive interaction among Tesla and Fiat.
2. **D. Carfi, E. Perrone**, Game complete analysis of symmetric Cournot duopoly.
3. **D. Carfi, M. Moroun**, S-linear Algebra in **Quantum Mechanics**
4. **D. Carfi**, Incomplete information in Duopolies and Oligopolies: infinite dimensional cases
5. **D. Carfi, F. Musolino**, Speculations on Government bonds: incomplete information and possible policies
6. **D. Carfi**, A cooperative model of advertising strategies: incomplete information in infinite dimension
7. **D. Carfi, F. Musolino**, Economic impact of government regulation: a cooperative game approach
8. **D. Carfi, E. Perrone**, Asymmetric Economic Duopolies with non-linear costs
9. **D. Carfi, M. Campbell**, Phase Transitions in cooperative Markets
10. **D. Carfi, M. Moroun**, S-linear Algebra in Quantum Field Theory and Financial Markets
11. **D. Carfi**, Financial Lie Groups and some their applications

### 7.14 Working Monographs

1. **D. Carfi**, *Quantum Mechanics in Schwartz distribution spaces*, vol. 1, vol. 2, vol. 3, **Springer Verlag**, in *Physics monographs (submitted)*
2. **D. Carfi**, *Decision Theory, Game Theory and the Industrial Organization: an integrated approach*. ASERS
3. **D. Carfi, F. Musolino**, *Economic impact of government regulation in Financial Markets: a Game Theory approach*. ASERS
4. **D. Carfi, D. Schilirò**, *Financial and Economic Crisis: a Game Theory Keynesian approach*. ASERS
5. **D. Carfi, R. Pincak**, *Differential Geometry and Financial Markets: a Dynamical approach*, ASERS

## 8. Other Publications

### ArXiv Papers (14)

1. '19. **D. Carfi**. Relativistic Shrodinger equation. *ArXiv Paper*, pp. 1-9, 2019. Cornell University Library. URL: XXX NO
2. '12. **D. Baglieri, D. Carfi, G. Dagnino**. Asymmetric R&D Alliances and Cooperative Games. *ArXiv Paper*, pp. 1-10, 2012. Cornell University Library. URL: <http://arxiv.org/abs/1205.2878>.
3. '12. **D. Carfi, D. Schilirò**. Global Green Economy and Environmental Sustainability: A Cooperative Model. *ArXiv Paper*, pp. 1-10, 2012. Cornell University Library. URL: <http://arxiv.org/abs/1205.2872>.
4. '11. **D. Carfi**. Financial Lie groups. *ArXiv Paper*, pp. 1-12, 2011. Cornell University Library. URL: <http://arxiv.org/abs/1106.0562>.
5. '11. **D. Carfi**. S-Bases in S-Linear Algebra. *ArXiv Paper*, pp. 1-11, 2011. Cornell University Library. URL: <http://arxiv.org/abs/1104.3324>.
6. '11. **D. Carfi**. Schwartz Linear operators in distribution spaces. *ArXiv Paper*, pp. 1-14, 2011. Cornell University Library. URL: <http://arxiv.org/abs/1104.3380>.
7. '11. **D. Carfi**. Spectral expansion of Schwartz linear operators. *ArXiv Paper*, pp. 1-23, 2011. Cornell University Library. URL: <http://arxiv.org/abs/1104.3647>.
8. '11. **D. Carfi**. Multiplicative operators in the spaces of Schwartz families. *ArXiv Paper*, pp. 1-15, 2011. Cornell University Library. URL: <http://arxiv.org/abs/1104.3908>.
9. '11. **D. Carfi**. Schwartz families in tempered distribution spaces. *ArXiv Paper*, pp. 1-15, 2011. Cornell University Library. URL: <http://arxiv.org/abs/1104.4651>.
10. '11. **D. Carfi**. Summable families in tempered distribution spaces. *ArXiv Paper*, pp. 1-7, 2011. Cornell University Library. URL: <http://arxiv.org/abs/1104.4660>.
11. '11. **D. Carfi**. Reactivity in Decision-form Games. *ArXiv Paper*, pp. 1-20, 2011. Cornell University Library. URL: <http://arxiv.org/abs/1103.0841>.

12. '11. **D. Carfi**. Fibrations of financial events. *ArXiv Paper*, pp. 1-10, 2011. Cornell University Library. URL: <http://arxiv.org/abs/1106.1774>.
13. '11. **D. Carfi, A. Ricciardello**. Mixed extensions of decision-form games. *ArXiv Paper*, pp. 1-12, 2011. Cornell University Library. URL: <http://arxiv.org/abs/1103.0568>.
14. '11. **D. Carfi, D. Schilirò**. A model of cooperative games and the Greek crisis. *ArXiv Paper*, pp. 1-31, 2011. Cornell University Library. URL: <http://arxiv.org/abs/1106.3543>.

#### MPRA Papers (36)

1. '18, **D. Carfi, A. Donato, D. Schilirò**, Sustainability of Global Feeding. Cooperative interaction among Vegan and Non-Vegan Food Firms. *MPRA Paper 88400*, pp. 1-15, 2018. <https://mpra.ub.uni-muenchen.de/88400/>
2. '14. **D. Carfi, D. Schilirò**. Improving competitiveness and trade balance of Greek economy: a cooperative strategy model. *MPRA Paper 55124*, pp. 1-12, 2014. University Library of Munich, Germany. URL: <http://mpra.ub.uni-muenchen.de/55124/>.
3. '13, **D. Carfi, F. Lanzafame**. A Cooperative Game Theory Approach to Asymmetric R&D Alliances. *Researchgate Paper*, pp. 1-14, 2013. URL: <https://dx.doi.org/10.13140/RG.2.1.2279.2726>
4. '13. **D. Carfi, D. Schilirò**. Cooperative game solutions for the Greek crisis. *MPRA Paper 54765*, pp. 1-7, 2013. University Library of Munich, Germany. URL: <http://mpra.ub.uni-muenchen.de/54765/>.
5. '12. **D. Baglieri, D. Carfi, G. Dagnino**. Asymmetric R&D Alliances and Cooperative Games. *MPRA Paper 37095*, pp. 1-13, 2012. University Library of Munich, Germany. URL: <http://mpra.ub.uni-muenchen.de/37095/>.
6. '12. **D. Carfi, C. Fici**. The government-taxpayer game. *MPRA Paper 38506*, pp. 1-13, 2012. University Library of Munich, Germany. URL: <http://mpra.ub.uni-muenchen.de/38506/>.
7. '12. **D. Carfi, F. Musolino**. A game theory model for currency markets stabilization. *MPRA Paper 39240*, pp. 1-39, 2012. University Library of Munich, Germany. URL: <https://mpra.ub.uni-muenchen.de/39240/>.
8. '12. **D. Carfi, F. Musolino**. Game theory model for European government bonds market stabilization: a saving-State proposal. *MPRA Paper 39742*, pp. 1-28, 2012. University Library of Munich, Germany. URL: <https://mpra.ub.uni-muenchen.de/39742/>.
9. '12. **D. Carfi, F. Musolino**. A cooperative approach to financial markets stabilization and risk management. *MPRA Paper 37098*, pp. 1-14, 2012. University Library of Munich, Germany. URL: <https://mpra.ub.uni-muenchen.de/37098/>.
10. '12. **D. Carfi, A. Pintaudi**. Optimal participation in illegitimate market activities: complete analysis of 2-dimensional cases. *MPRA Paper 37822*, pp. 1-20, 2012. University Library of Munich, Germany. URL: <https://mpra.ub.uni-muenchen.de/37822/>.
11. '12. **D. Carfi, E. Perrone**. Asymmetric Cournot duopoly: game complete analysis. *MPRA Paper 37811*, pp. 1-14, 2012. University Library of Munich, Germany. URL: <https://mpra.ub.uni-muenchen.de/37811/>.
12. '12. **D. Carfi, E. Perrone**. Game complete analysis of symmetric Cournot duopoly. *MPRA Paper 35930*, pp. 1-16, 2012. University Library of Munich, Germany. URL: <https://mpra.ub.uni-muenchen.de/35930/>.
13. '12. **D. Carfi, D. Schilirò**. Global green economy and environmental sustainability: a cooperative model. *MPRA Paper 37018*, pp. 1-15, 2012. University Library of Munich, Germany. URL: <https://mpra.ub.uni-muenchen.de/37018/>.
14. '12. **D. Carfi, D. Schilirò**. A framework of cooperative games: an application to the Greek crisis. *MPRA Paper 61283*, pp. 1-33, 2012. University Library of Munich, Germany. URL: <https://mpra.ub.uni-muenchen.de/61283/>.
15. '12. **D. Carfi, D. Schilirò**. A model of cooperative game for the environmental sustainability of a global green economy. *MPRA Paper 38508*, pp. 1-16, 2012. University Library of Munich, Germany. URL: <https://mpra.ub.uni-muenchen.de/38508/>.
16. '11. **S. Agreste, D. Carfi, A. Ricciardello**. An Algorithm for payoff space in C1 parametric games. *MPRA Paper 32099*, pp. 1-18, 2011. University Library of Munich, Germany. URL: <http://mpra.ub.uni-muenchen.de/32099/>.
17. '11. **D. Carfi**. Financial Lie groups. *MPRA Paper 31303*, pp. 1-12, 2011. University Library of Munich, Germany. URL: <http://mpra.ub.uni-muenchen.de/31303/>.
18. '11. **D. Carfi, G. Gambarelli, A. Uristani**. Balancing pairs of interfering elements. *MPRA Paper 35335*, pp. 1-33, 2011. University Library of Munich, Germany. URL: <http://mpra.ub.uni-muenchen.de/35335/>.
19. '11. **D. Carfi, F. Musolino**. Game complete analysis for financial markets stabilization. *MPRA Paper 34901*, pp. 1-24, 2011. University Library of Munich, Germany. URL: <http://mpra.ub.uni-muenchen.de/34901/>.
20. '11. **D. Carfi, G. Patané, S. Pellegrino**. Cooperative games and sustainability in project financing. *MPRA Paper 32039*, pp. 1-9, 2011. University Library of Munich, Germany. URL: <http://mpra.ub.uni-muenchen.de/32039/>.

21. '11. **D. Carfi, E. Perrone**. Asymmetric Bertrand Duopoly: Game Complete Analysis by Algebra System Maxima. *MPRA Paper 35417*, pp. 1-30, 2011. University Library of Munich, Germany. URL: <http://mpra.ub.uni-muenchen.de/35417/>.
22. '11. **D. Carfi, E. Perrone**. Game Complete Analysis of Bertrand Duopoly. *MPRA Paper 31302*, pp. 1-30, 2011. University Library of Munich, Germany. URL: <http://mpra.ub.uni-muenchen.de/31302/>.
23. '11. **D. Carfi, A. Ricciardello**. Mixed extensions of decision-form games. *MPRA Paper 28971*, pp. 1-13, 2011. University Library of Munich, Germany. URL: <http://mpra.ub.uni-muenchen.de/28971/>.
24. '11. **D. Carfi, D. Schilirò**. A cooperative model for the green economy. *MPRA Paper 35245*, pp. 1-12, 2011. University Library of Munich, Germany. URL: <https://mpra.ub.uni-muenchen.de/35245/>.
25. '11. **D. Carfi, D. Schilirò**. A model of cooperative games and the Greek crisis. *MPRA Paper 32098*, pp. 1-29, 2011. University Library of Munich, Germany. URL: <http://mpra.ub.uni-muenchen.de/32098/>.
26. '11. **D. Carfi, D. Schilirò**. Cooperative games and global green economy. *MPRA Paper 32035*, pp. 1-10, 2011. University Library of Munich, Germany. URL: <http://mpra.ub.uni-muenchen.de/32035/>.
27. '11. **D. Carfi, A. Trunfio**. A non-linear cooperative game for global green economy. *MPRA Paper 32036*, pp. 1-9, 2011. University Library of Munich, Germany. URL: <http://mpra.ub.uni-muenchen.de/32036/>.
28. '10. **D. Carfi**. A model for cooperative games. *MPRA Paper 59633*, pp. 1-25, 2010. University Library of Munich, Germany. URL: <http://mpra.ub.uni-muenchen.de/59633/>.
29. '10. **D. Carfi, M. Magaudda, D. Schilirò**. Cooperative game solutions for the eurozone economy. *MPRA Paper 26541*, pp. 1-21, 2010. University Library of Munich, Germany. URL: <http://mpra.ub.uni-muenchen.de/26541/>.
30. '10. **D. Carfi, D. Schilirò**. Crisis in the Euro area: cooperative game solutions as new policy tools. *MPRA Paper 27138*, pp. 1-16, 2010. University Library of Munich, Germany. URL: <http://mpra.ub.uni-muenchen.de/27138/>.
31. '09. **D. Carfi**. Decision-form games. *MPRA Paper 29009*, pp. 1-13, 2009. University Library of Munich, Germany. URL: <http://mpra.ub.uni-muenchen.de/29009/>.
32. '09. **D. Carfi**. Differentiable game complete analysis for tourism firm decisions. *MPRA Paper 29193*, pp. 1-11, 2009. University Library of Munich, Germany. URL: <http://mpra.ub.uni-muenchen.de/29193/>.
33. '09. **D. Carfi**. Fibrations of financial events. *MPRA Paper 31307*, pp. 1-11, 2009. University Library of Munich, Germany. URL: <http://mpra.ub.uni-muenchen.de/31307/>.
34. '09. **D. Carfi**. Reactivity in decision-form games. *MPRA Paper 29001*, pp. 1-21, 2009. University Library of Munich, Germany. URL: <http://mpra.ub.uni-muenchen.de/29001/>.
35. '09. **D. Carfi, A. Ricciardello**. Non-reactive strategies in decision-form games. *MPRA Paper 29262*, pp. 1-13, 2009. University Library of Munich, Germany. URL: <http://mpra.ub.uni-muenchen.de/29262/>.
36. '08. **D. Carfi**. Optimal boundaries for decisions. *MPRA Paper 29243*, pp. 1-12, 2008. University Library of Munich, Germany. URL: <http://mpra.ub.uni-muenchen.de/29243/>.

#### Researchgate Papers (52)

1. '19, **D. Carfi**. Probability currents in Minkowski spacetime  $M_2$  for the Relativistic Schrödinger equation. *Researchgate Paper*, pp. 1-34, 2019. URL: [https://www.researchgate.net/publication/338262018\\_Probability\\_currents\\_in\\_Minkowski\\_spacetime\\_M2\\_for\\_the\\_Relativistic\\_Schrodinger\\_equation](https://www.researchgate.net/publication/338262018_Probability_currents_in_Minkowski_spacetime_M2_for_the_Relativistic_Schrodinger_equation)
2. '19, **D. Carfi**. Relativistic free Schrödinger equation in Minkowski vector space: a Schwartz distribution approach. *Researchgate Paper*, pp. 1-27, 2019. URL: [https://www.researchgate.net/publication/337840635\\_Relativistic\\_free\\_Schrodinger\\_equation\\_in\\_Minkowski\\_vector\\_space\\_a\\_Schwartz\\_distribution\\_approach](https://www.researchgate.net/publication/337840635_Relativistic_free_Schrodinger_equation_in_Minkowski_vector_space_a_Schwartz_distribution_approach)
3. '19, **D. Carfi**. Relativistic Schrödinger equation and probability currents for free particles. *Researchgate Paper*, pp. 1-24, 2019. URL: [https://www.researchgate.net/publication/336967860\\_Relativistic\\_Schrodinger\\_equation\\_and\\_probability\\_currents\\_for\\_free\\_particles](https://www.researchgate.net/publication/336967860_Relativistic_Schrodinger_equation_and_probability_currents_for_free_particles)
4. '19, **D. Carfi, A. Donato** Risk Management of Climate Change. Cooperative scenarios of Paris Agreement. *Researchgate Paper*, pp. 1-6, 2019. DOI:10.13140/RG.2.2.12332.92806. URL: <https://dx.doi.org/10.13140/RG.2.2.12332.92806>
5. '19, **D. Carfi, A. Donato** Risk Management of food health hazard by meat consumption reduction. A cooperative game approach. *Researchgate Paper*, pp. 1-10, 2019. DOI: 10.13140/RG.2.2.22399.25761. URL: <https://dx.doi.org/10.13140/RG.2.2.22399.25761>



6. '16, **D. Carfi** Critical notes of Special Relativity: four-velocity. *Researchgate Paper*, pp. 1-9, 2016. URL: <http://dx.doi.org/10.13140/RG.2.1.2858.9203/1>
7. '16. **D. Carfi, A. Caterino, R. Ceppitelli**. State preference models and jointly continuous utilities. *Researchgate Paper*, pp. 1-12, 2016. URL: <https://dx.doi.org/10.13140/RG.2.1.3689.0966>.
8. '15. **D. Carfi**. Cournot-Bayesian general equilibrium: a radon measure approach. *Researchgate Paper*, pp. 1-14, 2015.
9. '15. **D. Carfi**. Force fields and relativistic kinetic energy. *Researchgate Paper*, pp. 1-23, 2015.
10. '15. **D. Carfi, D. Baglieri, G. B. Dagnino**. A Coepetitive Game Model for Asymmetric R&D Alliances within a generalized "Reverse Deal". *Researchgate Paper*, pp. 1-23, 2015. URL: <https://dx.doi.org/10.13140/RG.2.1.1129.8646>
11. '15. **D. Carfi, M. Campbell**. Bounded Rational Speculative and Hedging Interaction Model in Oil and U.S. Dollar Markets. *Researchgate Paper*, pp. 1-30, 2015. URL: <https://dx.doi.org/10.13140/RG.2.1.4818.6965>
12. '15. **D. Carfi**. A model for coepetitive games. *Researchgate Paper*, pp. 1-42, 2015. URL: <https://dx.doi.org/10.13140/RG.2.1.2929.0960>.
13. '15. **D. Carfi, A. Donato**. Dirac Calculus and Schwartz Linear Algebra: Dirac inner product and Dirac orthonormality. *Researchgate Paper*, pp. 1-26, 2015. URL: <https://dx.doi.org/10.13140/RG.2.1.3137.2885>
14. '15. **D. Carfi**. Spectral expansion of Schwartz linear operators. *Researchgate Paper*, pp. 1-23, 2015. URL: <https://dx.doi.org/10.13140/RG.2.1.3688.7762>.
15. '15. **D. Carfi, G. Orlando**. Transposable Schwartz families. *Researchgate Paper*, pp. 1-15, 2015. URL: <https://dx.doi.org/10.13140/RG.2.1.4561.8643/1>
16. '15. **D. Carfi, D. Panuccio**. Sustainability of global feeding: coepetitive agreements among vegan and non vegan food producers in southern Italy. *Researchgate Paper*, pp. 1-18, 2015. URL: <https://dx.doi.org/10.13140/RG.2.1.1038.6009>
17. '15. **D. Carfi, A. Romeo**. Improving Welfare in Congo: Italian National Hydrocarbons Authority Strategies and its Possible Coepetitive Alliances with Green Energy Producers. *Researchgate Paper*, pp. 1-25, 2015. URL: <https://dx.doi.org/10.13140/RG.2.1.4684.1365>
18. '14. **D. Carfi**. Motivations and origins of Schwartz Linear Algebra in Quantum Mechanics. *Researchgate Paper*, pp. 1-6, 2014. URL: <https://dx.doi.org/10.13140/2.1.1447.1361>.
19. '14. **D. Carfi**. A Coepetitive-dynamical game model for currency markets stabilization. *Researchgate Paper*, pp. 1-28, 2014. URL: <https://dx.doi.org/10.13140/RG.2.1.1294.2162>
20. '14. **D. Carfi, F. Musolino**. A Coepetitive-dynamical game model for currency markets stabilization. *Researchgate Paper*, pp. 1-28, 2014. URL: <https://dx.doi.org/10.13140/RG.2.1.3242.3445>
21. '14. **D. Carfi**. A model for coepetitive games. *Researchgate Paper*, pp. 1-24, 2014. URL: <https://dx.doi.org/10.13140/RG.2.1.4815.2089>
22. '13, **D. Carfi, A. Donato, F. Lanzafame**. A Coepetitive Game Theory Approach to Asymmetric R&D Alliances. *Researchgate Paper*, pp. 1-23, 2013. URL: <https://dx.doi.org/10.13140/RG.2.1.1248.1362>
23. '13, **D. Carfi, F. Lanzafame**. A Coepetitive Game Theory Approach to Asymmetric R&D Alliances. *Researchgate Paper*, pp. 1-14, 2013. URL: <https://dx.doi.org/10.13140/RG.2.1.2279.2726>
24. '11. **S. Agreste, D. Carfi, A. Ricciardello**. Algorithms for payoff space in parametric games. *Researchgate Paper*, pp. 1-18, 2011. URL: <https://dx.doi.org/10.13140/RG.2.1.3867.2722>.
25. '11. **D. Carfi**. Coepetitive Games and Greek crisis. *Researchgate Paper*, pp. 1-7, 2011. URL: <https://dx.doi.org/10.13140/RG.2.1.1406.5687>
26. '11. **D. Carfi**. Fibred spaces and financial structures. *Researchgate Paper*, pp. 1-31, 2011. URL: <https://dx.doi.org/10.13140/RG.2.1.2115.1764>
27. '11. **D. Carfi**. Financial Lie groups. *Researchgate Paper*, pp. 1-18, 2011. URL: <https://dx.doi.org/10.13140/RG.2.1.1086.0561>
28. '11. **D. Carfi**. Lie group structures for financial evolutions. *Researchgate Paper*, pp. 1-12, 2011. URL: <https://dx.doi.org/10.13140/RG.2.1.1376.9047>.
29. '11. **D. Carfi**. S-linear operators in quantum mechanics and in economy, *Researchgate Paper*, pp. 1-14, 2011. URL: <https://dx.doi.org/10.13140/RG.2.1.3679.8482>
30. '11. **D. Carfi, A. Ricciardello**. Mixed extensions of decision-form games. *Researchgate Paper*, pp. 1-12, 2011. URL: <https://dx.doi.org/10.13140/RG.2.1.5112.4563>.
31. '11. **D. Carfi, D. Schilirò**. Crisis in the Euro area: coepetitive game solutions as new policy tools. *Researchgate Paper*, pp. 1-30, 2011. URL: <https://dx.doi.org/10.13140/RG.2.1.3556.9685>
32. '10. **D. Baglieri, D. Carfi, G. Dagnino**. Profiting from Asymmetric R&D Alliances: Coepetitive Games and Firm's Strategies. *Researchgate Paper*, pp. 1-48, 2010. URL: <https://dx.doi.org/10.13140/RG.2.1.2072.9043>.

33. '09. **D. Carfi**. Fibrations on the financial events plane. *Researchgate Paper*, pp. 1-20, 2009. URL: <https://dx.doi.org/10.13140/RG.2.1.2901.6081>
34. '09. **D. Carfi**. Fibrations for financial dynamical systems. *Researchgate Paper*, pp. 1-23, 2009. URL: <https://dx.doi.org/10.13140/RG.2.1.3119.6241>
35. '09. **D. Carfi**. Reactivity in decision-form games. *Researchgate Paper*, pp. 1-27, 2009. URL: <https://dx.doi.org/10.13140/RG.2.1.4598.2801>
36. '09. **D. Carfi**. Non-reactive strategies in decision-form games. *Researchgate Paper*, pp. 1-24, 2009. URL: <https://dx.doi.org/10.13140/RG.2.1.1066.5045>
37. '09. **D. Carfi**. Differentiable game complete analysis for tourism firm decisions. *Researchgate Paper*, pp. 1-11, 2009. URL: <https://dx.doi.org/10.13140/RG.2.1.1445.8960>
38. '09. **D. Carfi, M. Magaudda**. Complete study of linear infinite games. *Researchgate Paper*, pp. 1-17, 2009. URL: <https://dx.doi.org/10.13140/RG.2.1.2885.1283>
39. '09. **D. Carfi**. Globalization and differentiable general sum game. *Researchgate Paper*, pp. 1-11, 2009. URL: <https://dx.doi.org/10.13140/RG.2.1.2560.0086/1>
40. '08. **D. Carfi, M. Magaudda**. Complete study of linear infinite games. *Researchgate Paper*, pp. 1-14, 2008. URL: <https://dx.doi.org/10.13140/RG.2.1.3365.1289>
41. '06. **D. Carfi**. An S-Linear State Preference Model. *Researchgate Paper*, pp. 1-10, 2006. URL: <https://dx.doi.org/10.13140/RG.2.1.1006.2800>
42. '03. **D. Carfi**. New frameworks for the one consumer model: exterior differential calculus. *Researchgate Paper*, pp. 1-11, 2003. URL: <https://dx.doi.org/10.13140/RG.2.1.4334.4720/1>
43. '03. **D. Carfi**. A property of spaces admitting a continuous bijection onto  $[0,1]$ . *Researchgate Paper*, pp. 1-8, 2003. URL: <https://dx.doi.org/10.13140/RG.2.1.4978.1206/1>
44. '03. **D. Carfi**. S-Differential Calculus for Microeconomics. *Researchgate Paper*, pp. 1-13, 2003. URL: <https://dx.doi.org/10.13140/RG.2.1.3942.9208>
45. '01. **D. Carfi**. Dirac-orthogonality in the space of tempered distributions. *Researchgate Paper*, pp. 1-11, 2001. URL: <https://dx.doi.org/10.13140/RG.2.1.1990.4086>
46. '01. **D. Carfi, C. Germanà**. Some properties of a generalized scalar product in the space  $S'n$ . *Researchgate Paper*, pp. 1-13, 2001. URL: <https://dx.doi.org/10.13140/RG.2.1.3542.5369>
47. '01. **D. Carfi**. Almost Hermitean Manifolds Structured by a Semi-Kahlerian connection. *Researchgate Paper*, pp. 1-9, 2001. URL: <https://dx.doi.org/10.13140/RG.2.1.4869.3205>
48. '00. **D. Carfi**. A new kind of infinite-dimensional differentiable manifolds . *Researchgate Paper*, pp. 1-15, 2000. URL: <https://dx.doi.org/10.13140/RG.2.1.3416.9680>
49. '99. **D. Carfi**. On framed  $(2m+3)$ -dimensional Riemannian manifolds endowed with a Kenmotsu almost contact structure. *Researchgate Paper*, pp. 1-8, 1999. URL: <https://dx.doi.org/10.13140/RG.2.1.1509.5124/1>
50. '99. **D. Carfi**. Conformal transformations on framed Riemann manifolds with Kenmotsu structures. *Researchgate Paper*, pp. 1-9, 1999. URL: <https://dx.doi.org/10.13140/RG.2.1.3405.5767>
51. '98. **D. Carfi**. A conformally invariant characterization of constant mean curvature surfaces in 3-dimensional space forms. *Researchgate Paper*, pp. 1-15, 1998. URL: <https://dx.doi.org/10.13140/RG.2.1.2023.7526>
52. '89. **D. Carfi**. Force fields and relativistic kinetic energy. *Researchgate Paper*, pp. 1-6, 1989. URL: <https://dx.doi.org/10.13140/RG.2.1.3415.9447>

## 9. Conferences and Seminars (150)

### 9.1 Invited international 1 hour talks and seminars (30)

1. 2021, *Square-integrable Hausdorff-based measures and their products: a Quantum perspective*, **MPDS seminar, UC Riverside**, USA, January 28<sup>th</sup> <https://math.ucr.edu/~frgmpds/seminars.html>
2. 2020, *Free Relativistic Schrodinger Equation in Distribution Spaces*, **FRG seminar, UC Riverside**, USA, November 12<sup>th</sup> <https://math.ucr.edu/~frgmpds/seminars.html>
3. 2015, *Cournot-Bayesian general equilibrium: a radon measure approach*, **Analysis seminar, California State University Fullerton** (California),USA.

4. 2015, *Force fields and relativistic kinetic energy*, **Analysis seminar, California State University Fullerton (California), USA.**
5. Spring 2015, *Quantum Mechanics, Schwartz Linear Algebra and Grothendieck Nuclear spaces*, **MPDS seminar, UC Riverside, USA**
6. Fall 2014, *Quantum Mechanics, Schwartz Linear Algebra and Grothendieck Nuclear spaces*, **MPDS seminar, UC Riverside, USA**
7. Fall 2014, *The Helmann Feynmann Theorem in Schwartz Linear Algebra*, **MPDS seminar, UC Riverside, USA** October 16<sup>th</sup>
8. Spring 2014, *Quantum Mechanics, Schwartz Linear Algebra and Grothendieck Nuclear spaces*, **MPDS seminar, UC Riverside, USA**
9. Spring 2014, *Renormalization in Quantum Mechanics: a Schwartz Linear Algebra approach II*, **FRG seminar, UC Riverside, USA**
10. Fall 2013 Friday, October 4, *Speculative and Hedging Interaction Model in Oil and U.S. Dollar Markets with Financial Transaction Taxes*, **Economics Department Seminars, CSU Fullerton**
11. 2013, Fall, *Coopetitive games and applications (5 talks)*, **Analysis seminars, Math Department, CSU Fullerton**
12. Spring 2013, *Model of possible cooperation in financial markets in presence of tax on speculative transactions*, **Analysis seminars, Math Department, CSU Fullerton, May 10**
13. 2013, *Game theory application of Monti's proposal for European government bonds stabilization*, **MPDS seminar, UC Riverside, May 9**
14. Spring 2013, *Renormalization in Quantum Mechanics: a Schwartz Linear Algebra approach I*, **FRG seminar, UC Riverside, USA**
15. 2012, *Moebius transformations in Beethoven's Tempest*, **Science Academy of Belgrade, Great Gallery Concert Hall, Belgrade (Serbia), May - 29<sup>th</sup>**
16. 2012, *Coopetitive dynamics in Game Theory*, **Department of Industrial Engineering, University of Catania, May 3<sup>rd</sup>, PhD in Physical Engineering, Italy.**
17. 2012, *Schwartz Linear Algebra in Quantum Finance*, **Department of Industrial Engineering, University of Catania, May 3<sup>rd</sup>, PhD in Physical Engineering, Italy.**
18. 2012, *Coopetitive dynamics in Game theory and applications*, **Mathematical Physics and Dynamical Systems seminar, UC Riverside, May 10**
19. 2012, *Coopetitive games and applications II*, **Analysis seminar, California State University at Fullerton, California, February 28<sup>th</sup>**
20. 2011, *S-linear operators in quantum mechanics and in economy*, **PISRS Seminars 2011, University of Messina, Messina, Italy, June 2011.** URL: <https://dx.doi.org/10.13140/RG.2.1.3679.8482>
21. 2011, *Complete study of  $C^1$  games and applications II*, **Analysis seminar, California State University at Fullerton, California, June 7<sup>th</sup>** Abstract: <https://dx.doi.org/10.13140/RG.2.1.2776.1680>
22. 2011, *Complete study of  $C^1$  games and applications I*, **Analysis seminar, California State University Fullerton (California), June 7<sup>th</sup>** Abstract: <https://dx.doi.org/10.13140/RG.2.1.2776.1680>
23. 2011, *S-diagonalizable operators and their spectrum*, **FRG (Fractal Research Group) seminar, University of California Riverside, May 26<sup>th</sup>** [http://events.ucr.edu/cgi-bin/display.cgi?comp\\_id=35234:20110526111000&unit=117](http://events.ucr.edu/cgi-bin/display.cgi?comp_id=35234:20110526111000&unit=117)  
Abstract: <https://dx.doi.org/10.13140/RG.2.1.2520.6804>
24. 2011, *Dirac Calculus in distribution spaces for Quantum Mechanics and Economics*, **Computational Seminar, Chapman University at Orange, California, May 24<sup>th</sup>**  
[http://mathcs.chapman.edu/mathcs/index.php/MathCS\\_Seminar\\_2011#Tuesday.2C\\_May\\_24\\_at\\_4:00\\_pm\\_in\\_VN\\_116](http://mathcs.chapman.edu/mathcs/index.php/MathCS_Seminar_2011#Tuesday.2C_May_24_at_4:00_pm_in_VN_116). Abstract: <https://dx.doi.org/10.13140/RG.2.1.4682.3446>
25. 2011, *Fibred spaces and financial structure*, **Analysis Seminar, California State University Fullerton, Fullerton (California), May 24<sup>th</sup>** Abstract: <https://dx.doi.org/10.13140/RG.2.1.4320.8721>
26. 2011, *A critical view of Dirac Calculus in Quantum Mechanics*, **Analysis seminar, California State University Fullerton (California), April 12<sup>th</sup>** Abstract: <https://dx.doi.org/10.13140/RG.2.1.3267.6887>
27. 2011, *Gelfand triples, Dirac product, Quantum Fields and superpositions*, **MPDS seminar, UCRiverside, April 7<sup>th</sup>**  
[http://events.ucr.edu/cgi-bin/display.cgi?comp\\_id=34893:20110407154000&unit=21](http://events.ucr.edu/cgi-bin/display.cgi?comp_id=34893:20110407154000&unit=21)  
Abstract: <https://dx.doi.org/10.13140/RG.2.1.1527.4008>
28. 2010, *Extended Linear Algebra in Distributions Spaces and Dirac Calculus*, **Mathematics Colloquia of UCRiverside, May 26<sup>th</sup>** [http://events.ucr.edu/cgi-bin/display.cgi?comp\\_id=32174:20100526154000](http://events.ucr.edu/cgi-bin/display.cgi?comp_id=32174:20100526154000)  
Abstract: <https://dx.doi.org/10.13140/RG.2.1.4493.8324>

29. 2010, *Applications of Superposition Theory*, **MPDS (Mathematical Physics and Dynamical Systems) seminar, UCRiverside**, May 20<sup>th</sup> [http://mathdept.ucr.edu/pdf/seminars/sc\\_archive/spring2010.pdf](http://mathdept.ucr.edu/pdf/seminars/sc_archive/spring2010.pdf)  
Abstract: <https://dx.doi.org/10.13140/RG.2.1.2462.2164>
30. 2010, *Quantum Mechanics in the space of tempered distributions*, **MPDS seminar, UCRiverside**, April 1<sup>st</sup> [http://mathdept.ucr.edu/pdf/seminars/sc\\_archive/spring2010.pdf](http://mathdept.ucr.edu/pdf/seminars/sc_archive/spring2010.pdf)  
Abstract: <https://dx.doi.org/10.13140/RG.2.1.1151.4960>
31. 1989, *Force fields and relativistic kinetic energy*, **Seminar given at Liceo Scientifico Seguenza, Messina, Italy**, June 30<sup>th</sup>.  
URL: <https://dx.doi.org/10.13140/RG.2.1.3415.9447>

## 9.2 Invited Series of seminars (4)

1. 2016, *Critical notes of Special Relativity: four-velocity*, **Series of Seminars on Einstein relativity and gravitational waves, Liceo Scientifico Seguenza, Messina, Italy**, February 18<sup>th</sup> - June 30<sup>th</sup>. URL: <http://dx.doi.org/10.13140/RG.2.1.2858.9203/1>
2. 2016, *Critical notes of Special Relativity: four-velocity*, **Series of Seminars on Einstein relativity and gravitational waves, Liceo Scientifico Archimede, Messina, Italy**, February 18<sup>th</sup> - June 30<sup>th</sup>.  
URL: <http://dx.doi.org/10.13140/RG.2.1.2858.9203/1>
3. 2016, *Critical notes of Special Relativity: four-velocity*, **Series of Seminars on Einstein relativity and gravitational waves, Liceo Classico La Farina, Messina, Italy**, February 18<sup>th</sup> - June 30<sup>th</sup>. URL: <http://dx.doi.org/10.13140/RG.2.1.2858.9203/1>
4. 2016, **Series of Seminars on Differential Geometry and relativity Theories, Liceo Classico La Farina, Messina, Italy**, September 20<sup>th</sup> - December 23<sup>th</sup>.

## 9.3 Invited plenary 1 hour talks at International Conferences (10)

1. '21, D. Carfi. Partial inversion of momentum and position operators. Relativistic phase velocity operator, *Joint Mathematics Meetings 2021 (AMS Special Session: Algebraic K-theory, Mathematical Physics, and Perfectoid Spaces, Western Sectional Meeting)*, May 1-2, 2021.
2. '21, D. Carfi. Relativistic Schrodinger equation and probability currents for quantum particles, *Joint Mathematics Meetings 2021 (AMS Special Session: Algebraic K-theory, Mathematical Physics, and Perfectoid Spaces, Western Sectional Meeting)*, May 1-2, 2021.
3. '20, **D. Carfi**. Coepetitive games and applications for the environment. *Futuro Remoto 2020 – MUSImatematica per IL PIANETA*. November 27, 2020, Fondazione Idis Città della Scienza, **Naples, Italy**.  
<https://www.unisannio.it/it/eventi/unisannio-futuroremoto-musimatematica-pianeta>
4. '15, **D. Carfi, A. Romeo**. Improving Welfare in Congo: Italian National Hydrocarbons Authority Strategies and its Possible Coepetitive Alliances with Green Energy Producers, *Conference "Decision making in socio-economic sciences"*, October 7/8, 2015, University of Sannio, **Benevento, Italy**.  
Abstract: <https://dx.doi.org/10.13140/RG.2.1.5193.1927>  
URL: <https://dx.doi.org/10.13140/RG.2.1.4684.1365>
5. '15, **D. Carfi**. Bargaining problems in normal-form games and coepetitive games: a decision-making perspective. *Conference "Decision three. Three approaches to decision making"*, June 24<sup>th</sup>, 2015, University of Sannio, **Benevento, Italy**. <http://www.unisannio.it/notizie/comunicati/viscom.php?id=1075>  
Abstract: <https://dx.doi.org/10.13140/RG.2.1.5062.0248>
6. '14, **D. Carfi**. A Coepetitive-dynamical game model for currency markets stabilization, *VII International Meeting in Dynamics of Socio-Economic System – DYSES*, September 16/19, 2014, Sevilla University, **Sevilla, Spain**.  
<http://congreso.us.es/dyses2014/miercoles-17-de-septiembre-de-2014/>  
Abstract: <https://dx.doi.org/10.13140/RG.2.1.1226.2167>  
URL: <https://dx.doi.org/10.13140/RG.2.1.3242.3445>
7. '12, **D. Carfi**. Coepetitive Games and Applications, *International Conference on Game Theory, Operations Research and their Applications*, January 5/7, 2012 and *Workshop on Game Theory*, January 3/4, 2012 - organized by the Indian Statistical Institute Chennai Centre - SETS Campus, MGR Knowledge City, CIT Campus, Taramani, **Chennai, India**.

Abstract: <https://dx.doi.org/10.13140/RG.2.1.1564.7761>

8. '11, **D. Carfi**. Coepetitive Games and Applications, *Session on Game Theory in Operations and Supply Chain Management - International Conference (In Honor of Prof C R Rao) on Applications of Game Theory in Policies and Decisions*, December 12/13, 2011, **Hyderabad, India**.  
Abstract: <https://dx.doi.org/10.13140/RG.2.1.3665.0007>
9. '11, **D. Carfi**. Dirac Calculus in distribution spaces for Quantum Mechanics and Quantum Field Theory, *Seventh International meeting: "Mathematical Methods for Ab Initio Quantum Chemistry"*, October, 20/21, 2011, Laboratoire J.A. Dieudonné, CNRS et Université de Nice, Sophia, Antipolis, **Nice, France**. <http://www-math.unice.fr/~cassam/Workshop11/speakers.html>  
Abstract: <https://dx.doi.org/10.13140/RG.2.1.2593.3843>
10. '11, **D. Carfi**. Coepetitive games: a new tool in Economic and Finance, *International Conference "New problems in Analysis"*, August 8/14, 2011, **Urgench, Uzbekistan**.  
Abstract: <https://dx.doi.org/10.13140/RG.2.1.4255.3369>

#### 9.4 Invited 30 minutes talks at international conferences (16)

1. '19, **D. Carfi**, Manifolds with operator-valued pseudo-Riemannian structures and Einstein quantum field equations, The 13th International Conference "Differential Geometry and Dynamical Systems - 2019" (DGDS - 2019), University Politehnica of Bucharest, October 10-13, 2019, **Bucharest, Romania**.  
<http://www.mathem.pub.ro/dept/dgds-19/dgds-19-2.htm>  
Abstract: <https://dx.doi.org/10.13140/RG.2.2.26935.88483>
2. '18, **D. Carfi, A. Donato**, Risk Management of Climate Change: Coepetitive scenarios of Paris Agreement, *DySES 2018: Systemic Risk - Paris 1*, Panthéon Sorbonne University, October 9-12, 2018, **Paris, France**.
3. '16, **D. Carfi, A. Donato**, Dynamical coepetitive games in pharmaceutical R & D alliances with fractal-like trajectories, *Summer School on Fractal Geometry and Complex Dimensions*, June 21-29, 2016, Cal Poly San Luis Obispo, **California, USA**. <http://www.calpoly.edu/~eeparse/Fractals2016/>
4. '11, **D. Carfi**. Manifolds and Games, *International Conference "Geometry, Optimal Control and Economics"*, August 15/26, 2011, **Astrakhan, Russia**. Abstract: <https://dx.doi.org/10.13140/RG.2.1.4404.8403>
5. '11, **D. Carfi, A. Ricciardello, S. Agreste**. An Algorithm for payoff space in C1 parametric games, *International Conference "Geometry, Optimal Control and Economics"*, August 15/26, 2011, **Astrakhan, Russia**.  
Abstract: <https://dx.doi.org/10.13140/RG.2.1.3660.9049>
6. '11, **D. Carfi**. Lie group structures for financial evolutions, *International Conference "Geometry, Optimal Control and Economics"*, August 15/26, 2011, **Astrakhan, Russia**.  
Abstract: <https://dx.doi.org/10.13140/RG.2.1.3618.4087>
7. '11, **D. Carfi, A. Ricciardello**. Mixed extension of decision-form games, *International Conference "Geometry, Optimal Control and Economics"*, August 15/26, 2011, **Astrakhan, Russia**.  
Abstract: <https://dx.doi.org/10.13140/RG.2.1.3405.4164>
8. '11, **D. Carfi**. Fibred spaces and financial structures, *International Conference RIGA 2011 - Riemannian Geometry and Applications*, May 10/14, 2011, Bucharest University, Faculty of Mathematics and Computer Science, **Bucharest, Romania**. <http://fmi.unibuc.ro/ro/pdf/2011/manifestari/PosterRIGA-2011.pdf>;  
[http://fmi.unibuc.ro/ro/pdf/2011/manifestari/Program\\_RIGA\\_2011.pdf](http://fmi.unibuc.ro/ro/pdf/2011/manifestari/Program_RIGA_2011.pdf).  
Abstract: <https://dx.doi.org/10.13140/RG.2.1.2561.5125>  
URL: <https://dx.doi.org/10.13140/RG.2.1.2115.1764>
9. '09, **D. Carfi**. Connections on financial fiber spaces: the connection induced by a term structure of interest rates, *International Conference "Geometry in Astrakhan 2009"*, September 10/15, 2009, University of Astrakhan, **Astrakhan, Russia**.  
Abstract: <https://dx.doi.org/10.13140/RG.2.1.1261.5769>
10. '09, **D. Carfi**. Fibrations for financial dynamical systems, *International scientific conference "Laptev seminar 2009" devoted to the 100-anniversary of G. F. Laptev*, August 25/28, 2009, Lomonosov State University (Moscow), University of Tver, (Russia), **Russia**.  
Abstract: <https://dx.doi.org/10.13140/RG.2.1.5051.8800>  
URL: <https://dx.doi.org/10.13140/RG.2.1.3119.6241>
11. '09, **D. Carfi**. Fibrations of financial events. *International Conference "Geometry in Odessa 2009"*, May 25/30, 2009, Odessa National Academy Of Food Technologies, **Odessa, Ukraine**. <http://d-omega.org/2009/05/19/timetable-odessa-2009/>.



- Abstract: <https://dx.doi.org/10.13140/RG.2.1.2952.7129>
12. '09, **D. Carfi, M. Magaudda**. Complete study of linear infinite games, *International Conference "Geometry in Odessa 2009"*, May 25/30, 2009, Odessa National Academy Of Food Technologies, **Odessa, Ukraine**. <http://d-omega.org/2009/05/19/timetable-odessa-2009/>.  
Abstract: <https://dx.doi.org/10.13140/RG.2.1.1197.5761>
  13. '01, **D. Carfi**. Dieudonné-Schwartz theorem and Ultralinear Algebra, *IV International Conference of Stochastic Geometry*, September 24, 2001, **Tropea, Italy**.  
Abstract: <https://dx.doi.org/10.13140/RG.2.1.4204.6803>
  14. '01, **D. Carfi**. Almost Hermitean Manifolds Structured by a Semi-Kahlerian connection. *International Session of the Geometric Seminar of the Moscow State University and Russian Academy of Sciences by the name of G. F. Laptev*, June 25/30, 2001, **Mosca, Russia**.  
Abstract: <https://dx.doi.org/10.13140/RG.2.1.5120.1684>  
URL: <https://dx.doi.org/10.13140/RG.2.1.4869.3205>.
  15. '00, **D. Carfi**. A new kind of infinite-dimensional differentiable manifolds. *The Centellian of Gheorghe Vranceanu*, June 30<sup>th</sup>/July 2<sup>nd</sup>, 2000, **Bucharest, Romania**.  
Abstract: <https://dx.doi.org/10.13140/RG.2.1.5072.3604>  
URL: <https://dx.doi.org/10.13140/RG.2.1.3416.9680>
  16. '99, **D. Carfi**. On Framed  $(2m+3)$ -dimensional Riemannian manifolds endowed with a Kenmotsu almost contact structure. *Conference on Mathematics in honor of professor Radu Rosca at the occasion of his ninetieth birthday*, December 11/16, 1999, **Bruxelles, Belgio**.  
Abstract: <https://dx.doi.org/10.13140/RG.2.1.1336.8088>  
URL: <https://dx.doi.org/10.13140/RG.2.1.1509.5124/1>

## 9.5 Research and seminars invitations (25)

1. **2016**, September, invited by **Dr. Professor Michel Lapidus, University of California Riverside UCR, Riverside CA, USA**, to conduct researches in Functional Analysis (pure and applied), Spectral Theory, Mathematical methods of **Quantum Mechanics** and recent applications of Game Theory to Economics and Finance, for 4 months, at the **UCR**.
2. **2015**, September, invited by **Dr. Professor Michel Lapidus, University of California Riverside UCR, Riverside CA, USA**, to conduct researches in Functional Analysis (pure and applied), Spectral Theory, Mathematical methods of **Quantum Mechanics** and recent applications of Game Theory to Economics and Finance, for 4 months, at the **UCR**.
3. **2014**, September, invited by **Dr. Professor Michel Lapidus, University of California Riverside UCR, Riverside CA, USA**, to conduct researches in Functional Analysis (pure and applied), Spectral Theory, Mathematical methods of **Quantum Mechanics** and recent applications of Game Theory to Economics and Finance, for 4 months, at the **UCR**.
4. **2013**, September, invited by **Dr. Professor Michel Lapidus, University of California Riverside UCR, Riverside CA, USA**, to conduct researches in Functional Analysis (pure and applied), Spectral Theory, Mathematical methods of **Quantum Mechanics** and recent applications of Game Theory to Economics and Finance, for 4 months, at the **UCR**.
5. **2013**, September, invited by **Dr. Professor Zair Ibragimov, California State University at Fullerton, Fullerton CA, USA**, to conduct researches in Game Theory, Mathematical methods of Economics and Finance and applications, for 5 seminars, at the **Cal-State University at Fullerton**.
6. **2013**, March invited by **Dr. Professor Zair Ibragimov, California State University at Fullerton, Fullerton CA, USA**, to conduct researches in Game Theory, Mathematical methods of Economics and Finance and recent applications, for 5 seminars, at the **Cal-State University at Fullerton**.
7. **2013**, January, invited by **Dr. Professor Michel Lapidus, University of California Riverside UCR, Riverside CA, USA**, to conduct researches in Functional Analysis (pure and applied), Spectral Theory, Mathematical methods of **Quantum Mechanics** and recent applications of Game Theory to Economics and Finance, for 6 months (from January to June 2012), at the **UCR**.

8. **2012**, February, invited by **Dr. Professor Zair Ibragimov, California State University at Fullerton, Fullerton CA, USA**, to conduct researches in Game Theory, Mathematical methods of Economics and Finance and recent applications, for 5 seminars, at the **Cal-State University at Fullerton**.
9. **2012**, January, invited by **Dr. Professor Michel Lapidus, University of California Riverside UCR, Riverside CA, USA**, to conduct researches in Functional Analysis (pure and applied), Spectral Theory, Mathematical methods of Quantum Mechanics and recent applications of Game Theory to Economics and Finance, for 6 months (from January to June 2012), at the **UCR**.
10. **2011**, invited by **prof. dr. Alexei Kushner**, Russian Academy of Sciences, **Moscow, Russia**, to conduct researches on the applications of **Differential Geometry to Economics, Finance and Physics**.
11. **2011**, February, invited by **Dr. Professor Zair Ibragimov, California State University at Fullerton, Fullerton CA, USA**, to conduct researches in Game Theory, Mathematical methods of Economics and Finance and recent applications, for 5 seminars, at the **Cal-State University at Fullerton**.
12. **2011**, January, invited by **Dr. Professor Michel Lapidus, of the University of California Riverside UCR, Riverside CA, USA**, to conduct researches in Functional Analysis (pure and applied), Spectral Theory, Mathematical methods of Quantum Mechanics and recent applications to Finance, for 6 months (from January to June 2011), at the **UCR**.
13. **2011**, invited by **prof. dr. Alexei Kushner**, Russian Academy of Sciences, **Moscow, Russia**, to conduct researches on the applications of **Differential Geometry to Economics, Finance and Physics**.
14. **2010**, February, invited by **Dr. Professor of Mathematics Michel Lapidus, University of California Riverside UCR, Riverside CA, USA**, to conduct researches in Functional Analysis (pure and applied), Spectral Theory, Mathematical methods of Quantum Mechanics and recent applications to Finance, for 6 months (from February to July 2010), at the **UCR**.
15. **2010**, invited by **prof. dr. Alexei Kushner**, Russian Academy of Sciences, **Moscow, Russia**, to conduct researches on the applications of **Differential Geometry to Economics, Finance and Physics**.
16. **2009**, invited by **prof. dr. Alexei Kushner**, Russian Academy of Sciences, **Moscow, Russia**, to conduct researches on the applications of **Differential Geometry to Economics, Finance and Physics**.
17. **2008**, invited by **prof. dr. Alexei Kushner**, Russian Academy of Sciences, **Moscow, Russia**, to conduct researches on the applications of **Differential Geometry to Economics, Finance and Physics**.
18. **2007**, invited by **prof. dr. Vladimir Balan**, University of Bucharest, **Bucharest, Romania**, to conduct researches on the applications of **Differential Geometry to Economics, Finance and Physics**.
19. **2006**, December, invited - for 1 year - by **Distinguished Professor Vladislav Goldberg, of New Jersey Institute of Technology, Newark NJ 07102, USA**, to conduct researches in Differential Geometry (pure and applied), at the **New Jersey Institute of Technology (USA)**.
20. **2004**, invited by **prof. dr. Vladimir Balan**, University of Bucharest, **Bucharest, Romania**, to conduct researches on the applications of **Differential Geometry to Economics, Finance and Physics**.
21. **2002**, September, invited by **prof. dr. Katalin Martinas**, collaborates with her, at **Department of Atomic Physics of Faculty of Science of Eotvos Lorand University**, in **Budapest**, on the applications of Complex systems and of Carfi's S-linear Algebra to Natural and Social Sciences.
22. **2001**, January, invited – for 1 year - by **Professor David Blair, of the Michigan state University**, to hold a series of seminars about **S-differentiable manifolds**, and to conduct researches in Differential Geometry (pure and applied), at the **Michigan state University (USA)**.
23. **2000**, July, invited by **prof. Klaus Buchner**, at **Department of mathematics of the Technische Universitat of Munich (Bavaria Germany)**, on the application of **Differential Geometry** and of the **S-differentiable manifolds (defined by D. Carfi)** to **Economics** and **Theoretical Physics**, researches totally **supported and granted by the Department of mathematics of the Technische Universitat of Munich (Bavaria Germany)**.

24. 2000, June, invited by **prof. dr. Anton Stefanescu, Faculty of Mathematics and Computer Science<sup>[17]</sup> University of Bucharest<sup>[17]</sup> - Str. Academiei 14<sup>[17]</sup> 010014 Bucharest, Romania**, on the applications of **Differential Geometry** and **Convex Analysis** to **Economics and Physics**.
25. 1999, December, invited by **prof. Leopold Verstraelen, Katholieke Universiteit di Brussel**, on the applications of **Differential Geometry**, and of **S-differentiable manifolds (introduced by Carfi)** to **Economics** and **Theoretical Physics**.

## 9.6 Contributed talks at International Conferences (67)

1. '20, **D. Carfi**. Schwartz diagonalizable operators, relativistic Quantum Mechanics and Dirac equation in distribution spaces, *Joint Mathematics Meetings 2020 (AMS Special Session on Mathematical Physics Some Open Problems for the 21<sup>st</sup> Century, I)*, January 15-18, 2020, Colorado Convention Center, **Denver, USA**.  
[http://jointmathematicsm meetings.org/meetings/national/jmm2020/2245\\_program\\_ss45.html](http://jointmathematicsm meetings.org/meetings/national/jmm2020/2245_program_ss45.html)
2. '19, **D. Carfi, A. Donato, M.I. Fredella, M. Squillante**. Plastic Ocean and Climate Change: a cooperative integrated risk management approach, *AGU Fall Meeting 2019*, December 9-13, 2019, **San Francisco, USA**.  
<https://agu.confex.com/agu/fm19/prelim.cgi/Search/0?sort=Relevance&size=10&page=1&searchterm=carf>  
<https://agu.confex.com/agu/fm19/prelim.cgi/Paper/609895>  
Abstract: <https://dx.doi.org/10.13140/RG.2.2.16869.55529>
3. '18, **D. Carfi, A. Donato**, Risk Management of Food Production Scarcity: A Cooperative Approach, *DySES 2018: Systemic Risk* - Paris 1, Panthéon Sorbonne University, October 9-12, 2018, **Paris, France**.
4. '18, **D. Carfi, A. Donato, D. Schilirò**. An Environmentally Sustainable Global Economy. A cooperative model. *24<sup>th</sup> International Sustainable Development Research Society Conference, Action for a Sustainable World: from Theory to Practice*, June 13/15 2018, Department of Economics, University of Messina, Messina, **Italy**.
5. '18, **D. Carfi, A. Donato, D. Schilirò**. Sustainability of Global Feeding. Cooperative interaction among Vegan and Non-Vegan Food Firms. *24<sup>th</sup> International Sustainable Development Research Society Conference, Action for a Sustainable World: from Theory to Practice*, June 13/15 2018, Department of Economics, University of Messina, Messina, **Italy**.
6. '16, **D. Carfi, A. Donato, G. Gambarelli**. Kalai-Smorodinsky Balance for n-tuples of Interfering Elements. *Autumn Seminar 2016* at the WSB University in Wroclaw, **Poland**.
7. '16, **D. Carfi, A. Caterino, R. Ceppitelli**. State preference models and jointly continuous utilities. *15<sup>th</sup> International Conference on Applied Mathematics - APLIMAT 2016* - February 2/4, 2016, Faculty of Mechanical Engineering, Slovak University of Technology in Bratislava, **Bratislava, Slovakia**.  
Abstract: <https://dx.doi.org/10.13140/RG.2.1.2558.8568>  
URL: <https://dx.doi.org/10.13140/RG.2.1.3689.0966>
8. '15, **D. Carfi**. Schwartz Linear Algebra: foundations and some applications. *Special Session on Mathematical Techniques in Quantum Theories and Quantum Finance, with Applications – AMS Fall Western Sectional Meeting, Meeting #1114*, October 24/25, 2015, California State University Fullerton, **Fullerton California (USA)**.  
[http://www.ams.org/meetings/sectional/2221\\_program\\_ss11.html](http://www.ams.org/meetings/sectional/2221_program_ss11.html)  
Abstract: <https://dx.doi.org/10.13140/RG.2.1.4671.4645>
9. '15, **D. Carfi, A. Donato**. Dirac Calculus and Schwartz Linear Algebra: Dirac inner product and Dirac orthonormality. *Special Session on Mathematical Techniques in Quantum Theories and Quantum Finance, with Applications – AMS Fall Western Sectional Meeting, Meeting #1114*, October 24/25, 2015, California State University Fullerton, **Fullerton California (USA)**.  
[http://www.ams.org/meetings/sectional/2221\\_program\\_ss11.html](http://www.ams.org/meetings/sectional/2221_program_ss11.html)  
Abstract: <https://dx.doi.org/10.13140/RG.2.1.4958.8887>  
URL: <https://dx.doi.org/10.13140/RG.2.1.3137.2885>
10. '15, **D. Carfi, G. Orlando**. Transposable Schwartz families. *Special Session on Mathematical Techniques in Quantum Theories and Quantum Finance, with Applications – AMS Fall Western Sectional Meeting, Meeting #1114*, October 24/25, 2015, California State University Fullerton, **Fullerton California (USA)**.  
[http://www.ams.org/meetings/sectional/2221\\_program\\_ss11.html](http://www.ams.org/meetings/sectional/2221_program_ss11.html)  
Abstract: <https://dx.doi.org/10.13140/RG.2.1.3648.1681>  
URL: <https://dx.doi.org/10.13140/RG.2.1.4561.8643/1>
11. '15, **D. Carfi**. Spectral expansion of Schwartz linear operators. *Special Session on Mathematical Techniques in Quantum Theories and Quantum Finance, with Applications – AMS Fall Western Sectional Meeting, Meeting*



- #1114, October 24/25, 2015, California State University Fullerton, **Fullerton California (USA)**.  
[http://www.ams.org/meetings/sectional/2221\\_program\\_ss11.html](http://www.ams.org/meetings/sectional/2221_program_ss11.html)  
 Abstract: <https://dx.doi.org/10.13140/RG.2.1.2026.1529>  
 URL: <https://dx.doi.org/10.13140/RG.2.1.3688.7762>
12. '14, **D. Carfi, F. Musolino** A Coopetitive-dynamical game model for currency markets stabilization, *USA-Uzbekistan Conference on Analysis and Mathematical Physics*, May 20/23, 2014. California State University, Fullerton, **Fullerton, USA**.  
 Abstract: <https://dx.doi.org/10.13140/RG.2.1.1764.0081>  
 URL: <https://dx.doi.org/10.13140/RG.2.1.1294.2162>
  13. '13, **D. Carfi, F. Lanzafame**, A Coopetitive Game Theory Approach to Asymmetric R&D Alliances, *VII International Conference on Game Theory and Management (GTM2013)*, June 26/28, 2013, **St. Petersburg, Russia**.  
[http://www2.gsom.spbu.ru/en/all\\_news/vii\\_mezhdunarodnaya\\_nauchnaya\\_konferenciya\\_teorija\\_igr\\_i\\_menedzhment\\_2013/](http://www2.gsom.spbu.ru/en/all_news/vii_mezhdunarodnaya_nauchnaya_konferenciya_teorija_igr_i_menedzhment_2013/)  
 Abstract: <https://dx.doi.org/10.13140/RG.2.1.3508.9048>  
 URL: <https://dx.doi.org/10.13140/RG.2.1.2279.2726>
  14. '13, **D. Carfi, A. Donato, F. Lanzafame**. A Coopetitive Game Theory Approach to Asymmetric R&D Alliances, *9th Spain-Italy-Netherlands Meeting on Game Theory (SING9)*, July 8/10, 2013, **Vigo, Spain**.  
[http://xsgapeio.uvigo.es/index.php?option=com\\_content&view=article&id=77:9th-spain-italy-netherlands-meeting-on-game-theory-sing9&catid=13:congresses&Itemid=9](http://xsgapeio.uvigo.es/index.php?option=com_content&view=article&id=77:9th-spain-italy-netherlands-meeting-on-game-theory-sing9&catid=13:congresses&Itemid=9)  
 Abstract: <https://dx.doi.org/10.13140/RG.2.1.4950.6968>  
 URL: <https://dx.doi.org/10.13140/RG.2.1.1248.1362>
  15. '12, **D. Carfi**. Payoff dynamics and coopetitive payoff dynamics in Game Theory. *Conference on The Applications of Fractal Geometry & Dynamical Systems Theory*, June, 2012, **Riverside, USA**.  
 Abstract: <https://dx.doi.org/10.13140/RG.2.1.1450.8568>
  16. '12, **D. Baglieri, D. Carfi, G. Dagnino**. Asymmetric R&D Alliances and Coopetitive Games. *14th International Conference on Information Processing and Management of Uncertainty in Knowledge-Based Systems, IPMU 2012*, July 9/13, 2012, **Catania, Italy**.  
 Abstract: <https://dx.doi.org/10.13140/RG.2.1.4318.0560>
  17. '12, **D. Carfi, F. Musolino**. A Coopetitive Approach to Financial Markets Stabilization and Risk Management. *14th International Conference on Information Processing and Management of Uncertainty in Knowledge-Based Systems, IPMU 2012*, July 9/13, 2012, **Catania, Italy**.  
 Abstract: <https://dx.doi.org/10.13140/RG.2.1.4301.6724>
  18. '12, **D. Carfi, A. Ricciardello**. Algorithms for Payoff Trajectories in C1 Parametric Games. *14th International Conference on Information Processing and Management of Uncertainty in Knowledge-Based Systems, IPMU 2012*, July 9/13, 2012, **Catania, Italy**.  
 Abstract: <https://dx.doi.org/10.13140/RG.2.1.1745.7689>
  19. '12, **D. Carfi, D. Schilirò**. Global Green Economy and Environmental Sustainability: A Coopetitive Model. *14th International Conference on Information Processing and Management of Uncertainty in Knowledge-Based Systems, IPMU 2012*, July 9/13, 2012, **Catania, Italy**.  
 Abstract: <https://dx.doi.org/10.13140/RG.2.1.4629.3526>
  20. '12, **D. Baglieri, D. Carfi, G. Dagnino**, Asymmetric R&D Alliances and Coopetitive Games, *Fifth EIASM Workshop on "Cooperation and Value Networks"*, September 13/14, 2012, University of Economics Katowice, **Katowice, Poland**.  
 Abstract: <https://dx.doi.org/10.13140/RG.2.1.3154.7926>
  21. '12, **D. Carfi**. Coopetitive Games and Applications. "Models of collusion, games and decisions for applications to judging, selling and voting". June 18/19, 2012, Castello Oldofredi, **Monte Isola, Italy**.  
 Abstract: <https://dx.doi.org/10.13140/RG.2.1.3006.5689>
  22. '12, **D. Carfi, T. Arthanari**. Strong and Weak countries in the Euro-Area: a Coopetitive Game Scenario, *XXXVI Convegno AMASES*, 13/15 September 2012, **Foggia, Italy**.  
<http://www.amases.org/events/icalrepeat.detail/2012/09/13/1/-/xxxvi-convegno-amases>  
 Abstract: <https://dx.doi.org/10.13140/RG.2.1.2220.1361>  
 Presentation: <https://dx.doi.org/10.13140/RG.2.1.4841.5762>
  23. '12, **D. Carfi, D. Schilirò**. Coopetitive models for a global sustainable green economy, *SIMAI 2012 – 11th Congress of SIMAI*, June 25/28, 2012, **Torino, Italy**. Communicated in MSP 21 - Mathematical methods in decisions, economics, finance and games - I.  
<http://www.simai.eu/it/congressi/archivio/simai-2012-torino-25-28-giugno-2012.html>

- Abstract: <https://dx.doi.org/10.13140/RG.2.1.1183.1120>
24. '12, **D. Carfi, I. Ciuntacu**. Circulation of informational flows in organizations, *SIMAI 2012 – 11th Congress of SIMAI*, June 25/28, 2012, **Torino, Italy**. Communicated in MSP 21 - Mathematical methods in decisions, economics, finance and games - I.  
<http://www.simai.eu/it/congressi/archivio/simai-2012-torino-25-28-giugno-2012.html>  
Abstract: <https://dx.doi.org/10.13140/RG.2.1.3095.9443>
  25. '12, **D. Carfi, A. Pintaudi**. Optimal participation in illegitimate market activities: complete Pareto analysis of 2-dimensional cases, *SIMAI 2012 – 11th Congress of SIMAI*, June 25/28, 2012, **Torino, Italy**. Communicated in MSP 22 - Mathematical methods in decisions, economics, finance and games - II.  
<http://www.simai.eu/it/congressi/archivio/simai-2012-torino-25-28-giugno-2012.html>  
Abstract: <https://dx.doi.org/10.13140/RG.2.1.2755.9766>
  26. '12, **D. Carfi, A. Ricciardello**. Algorithms for payoff trajectories in C1 cooperative games, *SIMAI 2012 – 11th Congress of SIMAI*, June 25/28, 2012, **Torino, Italy**. Communicated in MSP 22 - Mathematical methods in decisions, economics, finance and games – II.  
<http://www.simai.eu/it/congressi/archivio/simai-2012-torino-25-28-giugno-2012.html>  
Abstract: <https://dx.doi.org/10.13140/RG.2.1.4066.6960>
  27. '12, **D. Carfi, T. Arthanari**. Game Theoretic Modeling of Supply Chain Competition among Growers, 21<sup>st</sup> *International Symposium on Mathematical Programming (ISMP 2012)*, August 19/24, 2012, **Berlin, Germany**.  
<http://ismp2012.mathopt.org/>  
Presentation: <https://dx.doi.org/10.13140/RG.2.1.4675.6883>;  
Abstract: <https://dx.doi.org/10.13140/RG.2.1.1792.1043>
  28. '12, **D. Carfi**. Cooperative Games and Applications, *The Sixth International Conference Game Theory and Management (GTM2012)*, June 27/29, 2012, **St. Petersburg, Russia**.  
<http://www.old.gsom.spbu.ru/en/gtm2012/>  
Abstract: <https://dx.doi.org/10.13140/RG.2.1.3090.5361>
  29. '12, **D. Carfi**. Cooperative Dynamics in Evolutionary Game Theory. *Conference on The Applications of Fractal Geometry & Dynamical Systems Theory*, June, 2012, **Riverside, USA**.  
Abstract: <https://dx.doi.org/10.13140/RG.2.1.1319.7844>
  30. '11, **D. Carfi**. Cooperative Dynamics in Game Theory and Applications. *First international Meeting PISRS - Analysis, Fractal Geometry, Dynamical Systems and Economics – PISRS Conference 2011*, November 8/13, 2011, **Messina, Italy**.  
Abstract: <https://dx.doi.org/10.13140/RG.2.1.4516.9688>
  31. '11, **D. Carfi**. Financial Lie groups, *The International Conference "Differential Geometry and Dynamical Systems 2011" - DGDS 2011*, October 6/9, 2011, University Politehnica of Bucharest, **Bucharest, Romania**.  
Abstract: <https://dx.doi.org/10.13140/RG.2.1.3377.8324>  
URL: <https://dx.doi.org/10.13140/RG.2.1.1086.0561>
  32. '11, **D. Carfi, D. Schilirò**. Cooperative Games in Economic Policy, *SING 7 - 7th International Spanish-Italian-Netherlands Game Theory Meeting*, July 18/20, 2011, **Paris, France**. Abstract published in the Proceedings of the Congress (Book of abstracts).  
Abstract: <https://dx.doi.org/10.13140/RG.2.1.2429.5447>
  33. '11, **D. Carfi**. Cooperative Games and Greek crisis, *XXXV Convegno AMASES*, September 15/17, 2011, **Pisa, Italy**. Published in "Convegno AMASES 2011".  
<http://www.amases.org/files/files/Allegati/NM2011/Programma.pdf>;  
<http://www.amases.org/events/icalrepeat.detail/2011/09/15/8/-/xxxv-convegno-amases>.  
Abstract: <https://dx.doi.org/10.13140/RG.2.1.3066.5368>  
URL: <https://dx.doi.org/10.13140/RG.2.1.1406.5687>
  34. '11, **D. Carfi, D. Schilirò**. A game theory model of competition: an application to the global Green Economy, *Conference "Moving from crisis to sustainability: Emerging issues in the International context"*, May 23/25 2011, University of Messina, Faculty of Economics, **Messina, Italy**.  
Abstract: <https://dx.doi.org/10.13140/RG.2.1.4353.1281>
  35. '11, **D. Carfi**. Competition and sustainability: an application for tourism firms interaction, *Conference "Moving from crisis to sustainability: Emerging issues in the International context"*, May 23/25 2011, University of Messina, Faculty of Economics, **Messina, Italy**.  
Abstract: <https://dx.doi.org/10.13140/RG.2.1.4746.3445>

36. '11, **D. Carfi, A. Trunfio**. A non-linear cooperative game for global Green Economy, *Conference "Moving from crisis to sustainability: Emerging issues in the International context"*, May 23/25, 2011, University of Messina, Faculty of Economics, **Messina, Italy**.  
Abstract: <https://dx.doi.org/10.13140/RG.2.1.4549.7369>
37. '11, **D. Carfi, G. Patanè, S. Pellegrino**. Cooperative games and sustainability in project financing, *Conference "Moving from crisis to sustainability: Emerging issues in the International context"*, May 23/25, 2011, University of Messina, Faculty of Economics, **Messina, Italy**.  
Abstract: <https://dx.doi.org/10.13140/RG.2.1.2714.7286>
38. '11, **D. Carfi, F. Musolino**. Game complete analysis for financial markets stabilization, *First International On-line Conference on "Global Trends in Finance"*, 2011, October 25<sup>th</sup>, 2011, **Bucharest, Romania**. (published in "Proceedings of the First International On-line Conference on "Global Trends in Finance" 2011, ASERS).  
[http://www.asers.eu/conferences/gtf\\_2011.html](http://www.asers.eu/conferences/gtf_2011.html)  
Abstract: <https://dx.doi.org/10.13140/RG.2.1.1658.4724>
39. '10, **D. Carfi**. A Model for Cooperative Games. *SING 6 - 6th International Spanish-Italian-Netherlands Game Theory Meeting*, July 6/9, 2010, **Palermo, Italy**. (Abstract published in the Proceedings of the Congress) Abstract: <https://dx.doi.org/10.13140/RG.2.1.4166.1522>
40. '10, **D. Carfi**. Cooperative games, *SIMAI 10th Congress with SEMA - MSP26: Mathematics in Decisions, Economics, Finance and Games- June 21/25, 2010, Cagliari, Italy*.  
<http://openconference.simai.eu/index.php/sc/2010/paper/view/280>  
Abstract: <https://dx.doi.org/10.13140/RG.2.1.2520.4563>
41. '10, **D. Carfi**. Cristoffel bilinear forms for financial evolutions, *SIMAI 10th Congress with SEMA - MSP26: Mathematics in Decisions, Economics, Finance and Games- June 21/25, 2010, Cagliari, Italy*.  
<http://openconference.simai.eu/index.php/sc/2010/paper/view/201>  
Abstract: <https://dx.doi.org/10.13140/RG.2.1.1353.0960>
42. '10, **D. Carfi, G. Gambarelli, A. Uristani**. Balancing interfering elements, *SIMAI 10th Congress with SEMA - MSP26: Mathematics in Decisions, Economics, Finance and Games- June 21/25, 2010, Cagliari, Italy*.  
<http://openconference.simai.eu/index.php/sc/2010/paper/view/281>.  
Abstract: <https://dx.doi.org/10.13140/RG.2.1.2094.4729>
43. '10, **D. Carfi, D. Baglieri, G. Dagnino**. Profiting from asymmetric R&D alliances: cooperative games and firms' strategies, *4<sup>th</sup> Workshop On Competition Strategy*, June 16/20, 2010, University of Montpellier South of France and GSCM Montpellier Business School, **Montpellier, France**.  
[http://www.eiasm.org/frontoffice/event\\_announcement.asp?event\\_id=671](http://www.eiasm.org/frontoffice/event_announcement.asp?event_id=671)  
Abstract: <https://dx.doi.org/10.13140/RG.2.1.3719.6560>  
URL: <https://dx.doi.org/10.13140/RG.2.1.2072.9043>
44. '10, **D. Carfi**. A Model for Cooperative games, *XXXIV Convegno AMASES*, September 1/4, 2010, **Macerata, Italy**.  
<http://www.amases.org/events/icalrepeat.detail/2010/09/01/9/-/xxxiv-convegno-amases> ;  
<http://www.amases.org/files/files/Allegati/NM2010/Programma.pdf>.  
Abstract: <https://dx.doi.org/10.13140/RG.2.1.2806.2801>
45. '09, **D. Carfi**. Globalization and differentiable general sum game, *3rd International Symposium Globalization and convergence in economic thought*, Bucharest, Faculty of Economics - Communication and Economic Doctrines Department - The Bucharest Academy of Economic Studies, December 11/14, 2009, **Bucharest, Romania**.  
Abstract: <https://dx.doi.org/10.13140/RG.2.1.1819.1124>  
URL: <https://dx.doi.org/10.13140/RG.2.1.2560.0086/1>
46. '09, **D. Carfi**. Reactivity in decision-form games, *5th Spain, Italy, Netherlands Meeting on Game Theory (SING5) - Session on Games and Economics - July 1/3 2009, Amsterdam, Netherlands*.  
[http://www.cwi.nl/events/Spain-Italy-Netherlands-Meeting-on-Game-Theory-\(SING5\)](http://www.cwi.nl/events/Spain-Italy-Netherlands-Meeting-on-Game-Theory-(SING5))  
Abstract: <https://dx.doi.org/10.13140/RG.2.1.1032.6807>  
URL: <https://dx.doi.org/10.13140/RG.2.1.4598.2801>
47. '09, **D. Carfi**. Non-reactive strategies in decision-form games, *XXXIII Convegno AMASES*, September 1/4, 2009, **Parma, Italy**. <http://www.amases.org/events/icalrepeat.detail/2009/09/01/10/-/xxxiii-convegno-amases> ;  
<http://www.amases.org/files/files/Allegati/NM2009/Programma.pdf>  
Abstract: <https://dx.doi.org/10.13140/RG.2.1.2180.6163>  
URL: <https://dx.doi.org/10.13140/RG.2.1.1066.5045>
48. '09, **D. Carfi**. Differentiable game complete analysis for tourism firm decisions, *The 2009 International Conference on Tourism and Workshop on Sustainable tourism within High Risk areas of environmental crisis*, April 22/25, 2009, **Messina, Italy**.

- Presentation: <https://dx.doi.org/10.13140/RG.2.1.4343.8168>;  
 Abstract: <https://dx.doi.org/10.13140/RG.2.1.2297.8649>  
 URL: <https://dx.doi.org/10.13140/RG.2.1.1445.8960>
49. '08, **D. Carfi**. Parametric manifolds and  $C^1$ -games, *SIMAI 9th Congress*, September 15/19, 2008, **Rome, Italy**.  
<http://www.simai.eu/it/congressi/archivio/simai-2008-2.html>.  
 Abstract: <https://dx.doi.org/10.13140/RG.2.1.1197.3204>
  50. '08, **D. Carfi, M. Magaudda**. Complete study of linear infinite games, *SIMAI 9th Congress*, September 15/19, 2008, **Rome, Italy**. <http://www.simai.eu/it/congressi/archivio/simai-2008-2.html>.  
 Abstract: <https://dx.doi.org/10.13140/RG.2.1.2770.1848>  
 URL: <https://dx.doi.org/10.13140/RG.2.1.3365.1289>
  51. '08, **D. Carfi, E. Venini**. Generalized inverses of resource and service linear operators, *SIMAI 9th Congress*, September 15/19, 2008, **Rome, Italy**. <http://www.simai.eu/it/congressi/archivio/simai-2008-2.html>.  
 Abstract: <https://dx.doi.org/10.13140/RG.2.1.2508.0408>
  52. '08, **D. Carfi**. Radon measure of a  $C^1$ -game and applications, *XXXII Convegno AMASES*, September 1/4, 2008, **Trento, Italy**. <http://www.amases.org/events/icalrepeat.detail/2008/09/01/3/-/xxxii-convegno-amases>;  
<http://www.amases.org/files/files/Allegati/NM2008/Programma.pdf> .  
 Abstract: <https://dx.doi.org/10.13140/RG.2.1.4243.3362>
  53. '07, **D. Carfi**. Optimal boundaries for decisions, *XXXI convegno AMASES*, September 3/6, 2007, **Lecce, Italy**.  
<http://www.amases.org/events/icalrepeat.detail/2007/09/03/11/-/xxxi-convegno-amases>;  
<http://www.amases.org/files/files/Allegati/NM2007/Programma.pdf>  
 Abstract: <https://dx.doi.org/10.13140/RG.2.1.2555.7841>.
  54. '06, **D. Carfi**. An S-Linear State Preference Model, *SIMAI 2006, VIII Congress of the Italian Society of Applied Mathematics to Industry*, May 22/2,6 2006, **Baia Samuele (Ragusa), Italy**.  
<http://www.simai.eu/it/congressi/archivio/simai-2006.html>  
 Abstract(1): <https://dx.doi.org/10.13140/RG.2.1.1900.4247>  
 Abstract(2): <https://dx.doi.org/10.13140/RG.2.1.4646.2807>  
 URL: <https://dx.doi.org/10.13140/RG.2.1.1006.2800>
  55. '05, **D. Carfi**. Thermodynamical systems with a continuous range of states, *International Conference and Summer-school "Thermal Theories of Continua", Thermocon'05*, September 25/30, 2005, **Messina, Italy**.  
[http://cab.unime.it/journals/index.php/AAPP/issue/view/Vol86\\_Supplement1/showToc](http://cab.unime.it/journals/index.php/AAPP/issue/view/Vol86_Supplement1/showToc).  
 Abstract: <https://dx.doi.org/10.13140/RG.2.1.2387.3365/1>
  56. '04, **D. Carfi**. S-convexity in the space of Schwartz distributions and applications, *V International Conference on Stochastic Geometry*, September 6/11, 2004, **Palermo (Mondello), Italy**.  
 Abstract: <https://dx.doi.org/10.13140/RG.2.1.3923.7201>
  57. '04, **D. Carfi**. S-linear algebra in thermodynamical and mechanical theories, *SIMAI 2004, VII Congress of the Italian Society of Applied Mathematics to Industry*, September 20/24, 2004, **Venice, Italy**. Communicated during the Mini-symposium "On different applications of recent thermodynamical and mechanical theories" (published on CD with seal SIAE RM 02060722 - R 00000407, lib UN I. 2000).  
<http://www.simai.eu/it/congressi/archivio/simai-2006-2.html>.  
 Abstract: <https://dx.doi.org/10.13140/RG.2.1.4384.1368>
  58. '04, **D. Carfi**. S-linear algebra and applications, *SIMAI 2004, VII Congress of the Italian Society of Applied Mathematics to Industry*, September 20/24, 2004, **Venice, Italy**. Communicated during the Mini-symposium "Geometry and applications". Published on CD with seal SIAE RM 02060722 - R 00000407, lib UN I. 2000 in "Proceeding of SIMAI 2004, VII Congress of the Italian Society of Applied Mathematics to Industry".  
<http://www.simai.eu/it/congressi/archivio/simai-2006-2.html>.  
 Abstract: <https://dx.doi.org/10.13140/RG.2.1.2483.5924>
  59. '04, **D. Carfi**. New algebraic and geometric aspects of a capitalization, *XXVIII Convegno AMASES*, September 8/12, 2004, **Modena, Italy**. <http://www.amases.org/events/icalrepeat.detail/2004/09/08/14/-/xxviii-convegno-amases>; <http://www.amases.org/files/files/Allegati/NM2004/Programma.pdf>.  
 Abstract: <https://dx.doi.org/10.13140/RG.2.1.4975.4963>
  60. '03, **D. Carfi**. S-Differential Calculus for Microeconomics, *Giornata di studio: "Lecture about the applications of the S-Differential Calculus upon the space of tempered distributions to microeconomics"*, University of Messina, June 2003, **Taormina (Messina), Italy**.  
 Abstract: <https://dx.doi.org/10.13140/RG.2.1.4522.4721>  
 URL: <https://dx.doi.org/10.13140/RG.2.1.3942.9208>

61. '03, **D. Carfi**. New frameworks for the one consumer model: exterior differential calculus, *Giornata di Studio Differential Geometry, Geometric Dynamics and Economics: new perspectives of research*, October 24/25, 2003, **Messina, Italy**.  
Abstract: <https://dx.doi.org/10.13140/RG.2.1.4325.8645>  
URL: <https://dx.doi.org/10.13140/RG.2.1.4334.4720/1>
62. '03, **D. Carfi**. A property of spaces admitting a continuous bijection onto  $[0,1]$ , *Giornata di Studio Differential Geometry, Geometric Dynamics and Economics: new perspectives of research*, October 24/25, 2003, **Messina, Italy**.  
Abstract: <https://dx.doi.org/10.13140/RG.2.1.4104.6804>  
URL: <https://dx.doi.org/10.13140/RG.2.1.4978.1206/1>
63. '03, **D. Carfi**. Existence theorems of utility functions for preferences on spaces of tempered distributions, *XXVII convegno AMASES*, September 3/6, 2003, **Cagliari, Italy**.  
<http://www.amases.org/events/icalrepeat.detail/2003/09/03/15/-/xxvii-convegno-amases>  
Abstract: <https://dx.doi.org/10.13140/RG.2.1.4781.8324>
64. '02, **D. Carfi**. A new algebraic structure in the space  $S^n$  for Natural and Social Sciences, *International Workshop on Complex Systems in Natural and Social Sciences, (CSNSS '02)*, September 26/29, 2002, **Matrafured, Ungary**.  
Abstract: <https://dx.doi.org/10.13140/RG.2.1.1177.3521>
65. '01, **D. Carfi**. Some properties of a generalized scalar product in the space  $S^n$ , *Sixth International Symposium OPSFA 2001*, June 18/22, 2001, **Rome, Italy**.  
<http://ricerca.mat.uniroma3.it/Conferenze/opsfa2001/>  
Abstract: <https://dx.doi.org/10.13140/RG.2.1.4497.8960>  
URL: <https://dx.doi.org/10.13140/RG.2.1.3542.5369>
66. '01, **D. Carfi**. Dirac-orthogonality in the space of tempered distributions, *Sixth International Symposium OPSFA 2001*, June 18/22, 2001, **Rome, Italy**.  
<http://ricerca.mat.uniroma3.it/Conferenze/opsfa2001/>  
Abstract: <https://dx.doi.org/10.13140/RG.2.1.5087.7208>  
URL: <https://dx.doi.org/10.13140/RG.2.1.1990.4086>
67. '98, **D. Carfi**. A conformally invariant characterization of constant mean curvature surfaces in 3-dimensional space forms, *International Congress of Differential Geometry in honor of Pasquale Calapso*, October 12/14, 1998, **Messina, Italy**.  
Abstract: <https://dx.doi.org/10.13140/RG.2.1.4989.0962>  
URL: <https://dx.doi.org/10.13140/RG.2.1.2023.7526>

## 10. Honors, International competitions, Awards and Scholarships

### Math Genealogy Project

Descendant of Elie Cartàn. <http://genealogy.math.ndsu.nodak.edu/id.php?id=153737>

### Admissions and cooptation to International Scientific Associations and Institutes (3)

1. **2012**, because of his research activity, he was co-opted as a **Visiting Researcher** of IAMIS, *Institute for the Applications of Mathematics & Integrated Sciences*, Riverside, California, **USA**.
2. **2007**, because of his research activity, he was co-opted as an aggregate member of the *Accademia Peloritana dei Pericolanti (APP)*.
3. **1992**, because of his research activity, he was accepted as an **ordinary member** of the *National (Italian) Group for Functional Analysis and its Applications* (G.N.A.F.A.).



### Winner of international competitions (6)

1. **2007, 1<sup>st</sup> classified, permanent position, full time, tenure track of Assistant Professor of Mathematics for Economics and Finance**, University of Messina.
2. **2006, 1<sup>st</sup> classified, part-time position of Lecturer of Mathematics for Economics and Finance**, University of Bergamo.
3. **2005, 1<sup>st</sup> classified, part-time position of Lecturer of Mathematics for Economics and Finance**, University of Bergamo.
4. **2004, 1<sup>st</sup> classified, part-time position of Lecturer of Mathematics for Economics and Finance**, University of Bergamo.
5. **2002, 1<sup>st</sup> classified, fixed-term (4 years) full-time position of Researcher, Math for Economics and Finance**, University of Messina.
6. **1995, 1<sup>st</sup> classified**, grade 158/160, admission to PhD in math, University Consortium of Messina-Catania-Palermo ('95/'99).

### Research scholarships (3)

1. 1995, **1<sup>st</sup> national classified**, winner of a research scholarship (lasting ten months) for graduated in mathematics, **CNR (Italy Research National Council)**.
2. 1994, **1<sup>st</sup> national classified**, of a scholarship of research (six months), by Bonino Pulejo Foundation. **University Federico II of Naples**.
3. 1993, **1<sup>st</sup> national classified**, grade 49.80/50, of a scholarship of research (12 months) **CNR (Italy Research National Council)**.

### International Awards (6)

1. 2016, **Premio Orione**, Messina, 16 December <http://www.messinaweb.eu/cultura/categories/item/3483-premio-orione-2016-david-carf%C3%AC.html>
2. 2010, "Antonello da Messina", for research, **Rome**, October 15<sup>th</sup>, 2010.
3. 2008, Premio Maurizio Bello XI edizione, Messina, May 31<sup>th</sup>, 2008.
4. 2005, International prize "Fiera di Messina", for research, **Messina**, July '05.
5. 2001, "Premio Cartagine", for research, **Tunis, Tunisia**, July 15<sup>th</sup>, 2001.
6. 1999, Anassilaos prize "Antonio Oliva", for research, **Reggio Calabria (Italy)**.

## 11. Professional Services and Activities

### Membership of Scientific Committee of international conferences (9)

1. **2020, DGDS '20, Differential Geometry, Dynamical Systems**, Bucharest, October
2. **2019, DGDS '19, Differential Geometry, Dynamical Systems**, Bucharest, October
3. **2018, DGDS '18, Differential Geometry, Dynamical Systems**, Bucharest, October
4. **2017, DGDS '17, Differential Geometry, Dynamical Systems**, Bucharest, October
5. **2016, DGDS '16, Differential Geometry, Dynamical Systems**, Bucharest, October
6. **2015, DGDS '15, Differential Geometry, Dynamical Systems**, Bucharest, October
7. **2014, DGDS '14, Differential Geometry, Dynamical Systems**, Bucharest, October
8. **2011, 1<sup>st</sup> International PISRS Conference - Analysis, Fractal Geometry, Dynamical Systems and Economics**, Messina, Nov 8<sup>th</sup>-12<sup>th</sup>.
9. **2011, International Conference "Geometry, Optimal Control and Economics"**, August 15/26, Astrakhan (Russia)

### Membership of Doctorate Boards (3)

1. **2012**, PhD in Mathematics of Belgrade University, Faculty of Mathematics
2. **From 2011**, PhD in Economic Sciences and Quantitative Methods, Messina University
3. **From 2009**, PhD in Economics, Statistics and Taxes", University of Messina.

### Membership of Advisory Council of International Journals (4)

1. From 2020 *Soft Computing*, Springer-
2. From 2014 JMEF, ASERS (**Editor in Chief**)
3. From 2011 to 2014, AAPP, Acta Academy Peloritana Pericolanti.
4. From 2009, ReE - Revista de Estudios Empresariales. Segunda Época. ISSN 1988/9046

### Membership of Scientific Associations (5)

1. From 2021, Member of AMS (American Mathematical Society).
2. From 2007, Member of Academia Peloritana dei Pericolanti, Messina.
3. From 2011 to 2014, Member of UMI (Italian Society of Mathematics).
4. From 2004 to 2014, Member of SIMAI (Italian Society of Mathematics Applied to Industry).
5. From 2003 to 2014, Member of AMASES (Italian Society of Mathematics Applied to Economics and Finance).

### Editor of Proceedings (4)

1. 2014, SCOPUS volume of the **Permanent International Session Research Seminars, vol. 3 AAPP**.
2. 2013, SCOPUS volume of the **Permanent International Session Research Seminars, vol. 2 AAPP**.
3. 2013, two volumes of "Fractal geometry and dynamical systems in pure and applied mathematics" of the **AMS - American Mathematical Society**, Special Session at the **Joint Annual Meeting in Boston**, the first meeting of the Permanent International Session of Research Seminars and the **AMS Special Session at the Spring 2012 Meeting in Hawaii; American Mathematical Society** in the series Contemporary Mathematics.
4. 2012, SCOPUS volume of the **Permanent International Session Research Seminars, vol. 1 AAPP**.

### Reviewer and Expert activities (18)

1. From 2019, Reviewer of **Entropy**, MDPI
2. From 2018, Reviewer of **Symmetry**, MDPI
3. From 2018, Reviewer of **Mathematics**, MDPI
4. From 2017, Reviewer of **Journal of Reviews on Global Economics**, SCOPUS
5. From 2017, Reviewer of **Lecture Notes on Computational Science**, Springer.
6. From June 2014, Reviewer of the international journal *Economic Research*, edited by Department of Economics and Tourism «Dr. Mijo Mirkovic», Croatia. ISI, SCOPUS.
7. From 2013, **Expert of Economics** and **official Reviewer of The European Union (EU)**
8. From 2013, Expert of Economics and Reviewer of **Croatian National Science Foundation**
9. From 2013, Reviewer of the **Journal of Transport Economics & Policy**
10. From 2013, Reviewer of the International Journal “Quality and Quantity”
11. From 2012 Reviewer of **Physica A. ISI, SCOPUS**
12. From 2012 Reviewer of **Physics Letters A. ISI, SCOPUS**
13. ‘12, IPMU ‘12, 14<sup>th</sup> **International Conference on Information Processing and Management**. Catania.
14. From 2011, Reviewer of the International Journal **Economic Modelling**, Elsevier. **SCOPUS**
15. From 2011, **reviewer of Elsevier**.
16. From 2011, **reviewer of MIUR** (Ministry of the University and Research of Italy).
17. 2010, International Symposium “Continuum Mechanics and Microstructure”, session of ICNAAM 2010, Rhodes (Greece), September.
18. From 2009, reviewer of **Springer Verlag** (Physics books and Physics journals).

### Research projects financially supported by Italian Universities (3)

1. ‘08-‘12, head of the project *Game Theory and Cooperative Games in Economics and Finance*.
2. ‘04-‘08, head of the project *Tempered distributions, S-linear algebra, D-linear algebra, S-manifolds in Economics and Finance*.
3. ‘02-‘06, head of the project *Applications of S-Linear Algebra and the theory of S-differentiable manifolds to Econophysics and Decision Theory*.

### Organizations of special sessions at International Conferences (7)

1. **2015, Special Session on Mathematical Techniques in Quantum Theories and Quantum Finance, with Applications – AMS Fall Western Sectional Meeting, Meeting #1114**, October 24/25, 2015, California State University Fullerton, **Fullerton California (USA)**.  
[http://www.ams.org/meetings/sectional/2221\\_program\\_ss11.html](http://www.ams.org/meetings/sectional/2221_program_ss11.html)
2. **2014, Industrial Organization and its Mathematical Methods, ECMI 2014**, Taormina, June - 2014.
3. **2014, Schwartz distributions and their applications to Industry, Physics, Quantum Mechanics and Economics; in the centennial of Laurent Schwartz (1915-2015), proposed by David Carfi and Michael Maroun,, SIMAI 12<sup>th</sup>**, Taormina, June - 2014.
4. **2012, Cooperation strategy, cooperative games and the management of uncertainty**, IPMU 2012, 14th International Conference on Information Processing and Management of Uncertainty in Knowledge-Based Systems. Catania, Italy, July 9-13, 2012.
5. **2012, Mathematics in Decisions, Economics, Finance and Games**, SIMAI 11<sup>th</sup>, Turin, June 25-29 - 2012.
6. **2010, Mathematics in Decisions, Economics, Finance and Games**, SIMAI 10<sup>th</sup>, Cagliari, June 21-26 - 2010.
7. **2008, Mathematical Methods of Economic Theories, Game Theory and applications, SIMAI 9<sup>th</sup> Congress**, Rome, September 15-19 - 2008.



## Organization of international Conferences and international seminars (7)

1. '14, **Chair**, Permanent International Session of Research Seminars - PISRS. Messina, from May, 2011.
2. '13, **Chair**, Permanent International Session of Research Seminars - PISRS. Messina, from May, 2011.
3. '12, **Chair**, Permanent International Session of Research Seminars - PISRS. Messina, from May, 2011.
4. '11, **Chair**, 1<sup>st</sup> International PISRS Conference, Analysis, Fractal Geometry, Dynamical Systems and Economics. Messina, Nov. 8-12.
5. '11, **Chair**, Permanent International Session of Research Seminars - PISRS. Messina, from May, 2011.
6. '08, **Member of the Organizer Committee**, Conference for Applied Geophysics for Engineering - AGE 2008. Messina, Nov. 24-29.
7. '98, **Member of the Organizer Committee** of the Conference of Differential Geometry in honor of P. Calapso. Messina, Oct 12-14.

## 12. Other Interests

### Software competences

1. MacOS, OsX, iOS. BASIC. Microsoft Office, Finale, LaTeX2e, Scientific Word, Curvus Pro, Grapher.

### Other studies and skills – miscellanea

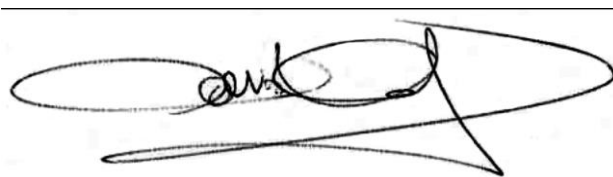
1. **Music. Master degree in piano** ('95). He is a concert pianist and composer. He gives concert-lectures in schools, theaters, universities, cultural society, embassies, museums, churches, cathedrals, City halls.
2. **Classics**. The love for classical literature led him to study Greek and Latin Literatures.
3. **History**. He is interested in Greek-Roman History, from the Minoan and Mycenaean civilizations to the fall of Western Roman Empire.
4. **English Literature**. He loves and studies *W. Shakespeare* and his masterpieces.
5. **Classic of Mathematics and Physics**. He read the treatises of **Newton**, **Galileo** and **Descart** in their original language (Latin).

### Reference Persons

1. **Dr. Prof. Michel Lapidus, University of California Riverside UCR, Riverside CA, USA.**  
[lapidus@math.ucr.edu](mailto:lapidus@math.ucr.edu)
2. **Dr. Prof. Michael Moroun, University of California Riverside UCR, Riverside CA, USA.**  
[mmaro001@ucr.edu](mailto:mmaro001@ucr.edu)
3. **Dr. Prof. Robert Niemeyer, University of California Riverside UCR, Riverside CA, USA.**  
[niemeyer@math.ucr.edu](mailto:niemeyer@math.ucr.edu)
4. **Jonathan Sarhard, University of California Riverside UCR, Riverside CA, USA.**  
[jonathan.sarhard@ucr.edu](mailto:jonathan.sarhard@ucr.edu)
5. **Dr. Prof. Zair Ibragimov, California State University at Fullerton, Fullerton CA, USA.**  
[zibragimov@exchange.fullerton.edu](mailto:zibragimov@exchange.fullerton.edu)
6. **Dr. Prof. Robert Michaels, California State University at Fullerton, Fullerton CA, USA.**  
[rmicheals@exchange.fullerton.edu](mailto:rmicheals@exchange.fullerton.edu)
7. **Dr. Distinguished Prof. Vladislav Goldberg (†), New Jersey Institute of Technology, Newark, USA.**  
[vze29sp7@verizon.net](mailto:vze29sp7@verizon.net)
8. **Dr. Prof. Maria Gualdani, George Washington University, Washington DC, USA.**

- [gualdani@gwu.edu](mailto:gualdani@gwu.edu)
9. **Dr. Prof. Michael Frankenhuijsen, Utah Valley University, Orem, Utah, USA.**  
[vanframa@uvu.edu](mailto:vanframa@uvu.edu)
  10. **Dr. Prof. Giuseppe Fontana, Leeds University Business School (LUBS), University of Leed, UK.**
  11. **Dr. Prof. Salvatore Federico, University of Calgary, Canada.**  
[salvatore.federico@ucalgary.ca](mailto:salvatore.federico@ucalgary.ca)
  12. **Dr. Prof. Tiru Arthanari, Business school, University of Auckland, New Zealand.**  
[t.arthanari@auckland.ac.nz](mailto:t.arthanari@auckland.ac.nz)
  13. **Dr. Prof. Okura Mahito, University of Nagasaki, Japan.**  
[okura@nagasaki-u.ac.jp](mailto:okura@nagasaki-u.ac.jp)
  14. **Dr. Prof. Alexei Kushner, Russian Academy of Sciences, Moscow, Russia.**  
[kushnera@mail.ru](mailto:kushnera@mail.ru)
  15. **Dr. Prof. Alexander Shelekov, University of Moscow, Moscow, Russia.**  
[amshlekhov@rambler.ru](mailto:amshlekhov@rambler.ru)
  16. **Dr. Prof. Samvel Haroutunian, Chairman at the Armenian State University, Yerevan, Armernia.**  
[S\\_Haroutunian@netsys.am](mailto:S_Haroutunian@netsys.am)
  17. **Dr. Prof. Vladimir Balan, University of Bucharest, Bucharest, Romania.**  
[vbalan@mathem.pub.ro](mailto:vbalan@mathem.pub.ro)
  18. **Prof. Dr. Radu Rosca (†), Academie Royal de Belgique, Belgium.**
  19. **Dr. Distinguished Prof. Leopold Verstraelen, Katholieke Universiteit, Brussel, Belgium.**  
[leopold.verstraelen@wis.kuleuven.be](mailto:leopold.verstraelen@wis.kuleuven.be)
  20. **Dr. Prof. Massimo Squillante, Dean of Economics, University of Sannio, Italy.**  
[squillan@unisannio.it](mailto:squillan@unisannio.it)
  21. **Dr. Prof. Aldo Ventre, Second University of Naples, Italy.**  
[aldoventre@yahoo.it](mailto:aldoventre@yahoo.it)
  22. **Dr. Distinguished Prof. Maria Teresa Calapso, University of Messina, Italy.**  
[mari@unime.it](mailto:mari@unime.it)
  23. **Dr. Prof. Daniele Schilirò, University of Messina, Italy.**  
[schi.unime@katamail.com](mailto:schi.unime@katamail.com)

Messina, May 12<sup>th</sup>, 2021

A handwritten signature in black ink, enclosed in a rectangular box. The signature is stylized and appears to read 'D. Schilirò'.