

PhD – Ricercatore a tempo indeterminato



1. Dati personali

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7. Web page Academia: <http://ucriverside.academia.edu/DavidCarfi>

1.1 Lingue (5)

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

2. Educazione (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 5th, **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. Aree di conoscenza (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. Attività lavorativa (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^t 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 15th 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. Insegnamento (62)

5.1 Insegnamento al 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 Insegnamento ordinario presso la Facoltà di Economia, 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 Insegnamento PhD (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 Tesi

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 Contratti di 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 Contratti di 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 Insegnamento volontario 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 Insegnamento volontario 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. Attività di ricerca

6.1 Leaderships di gruppi di ricerca (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 Principali collaborazioni internazionali (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^[SEP], Financial Mathematics and Physics.
13. **Prof. dr. Karin Cvetko-Vah, Assistant professor at Department of Mathematics, ^[SEP]Faculty of Mathematics and Physics, University of Ljubljana Jadranska 21^[SEP]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^[SEP], 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. Pubblicazioni (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
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6. **D. Carfi**, A cooperative model of advertising strategies: incomplete information in infinite dimension
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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

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2. **D. Carfi**, *Decision Theory, Game Theory and the Industrial Organization: an integrated approach*. ASERS
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5. **D. Carfi, R. Pincak**, *Differential Geometry and Financial Markets: a Dynamical approach*, ASERS

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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
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
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
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. Conferenze e Seminari (153)

9.1 Invited international 1 hour talks and seminars (31)

1. 2021, *Square-integrable Hausdorff-based measures and their products: a Quantum perspective*, **MPDS seminar, UC Riverside**, USA, January 28th <https://math.ucr.edu/~frgmpds/seminars.html>
2. 2020, *Free Relativistic Schrodinger Equation in Distribution Spaces*, **FRG seminar, UC Riverside**, USA, November 12th <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 16th
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 - 29th**
16. 2012, *Coopetitive dynamics in Game Theory*, **Department of Industrial Engineering, University of Catania, May 3rd, PhD in Physical Engineering, Italy.**
17. 2012, *Schwartz Linear Algebra in Quantum Finance*, **Department of Industrial Engineering, University of Catania, May 3rd, 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 28th**
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 7th** 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 7th** 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 26th** 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 24th**
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 24th** 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 12th** 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 7th**
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 26th** 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 20th 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 1st 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 30th.
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 18th - June 30th. 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 18th - June 30th.
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 18th - June 30th. 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 20th - December 23th.

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 24th, 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.
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 30th/July 2nd, 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^[17] University of Bucharest^[17] - Str. Academiei 14^[17] 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 21st Century, I)*, January 15-18, 2020, Colorado Convention Center, **Denver, USA**.
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. *24th 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. *24th 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. *15th 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
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
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
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
 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/
 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
 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, 21st *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 25th, 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
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, *4th 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
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.
 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. Riconoscimenti, Concorsi internazionali, Premi e Borse di studio

Math Genealogy Project

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

Research scholarships (3)

1. 1995, **1st national classified**, winner of a research scholarship (lasting ten months) for graduated in mathematics, **CNR (Italy Research National Council)**.
2. 1994, **1st national classified**, of a scholarship of research (six months), by Bonino Pulejo Foundation. **University Federico II of Naples**.
3. 1993, **1st 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 15th, 2010.
3. 2008, Premio Maurizio Bello XI edizione, Messina, May 31th, 2008.
4. 2005, International prize "Fiera di Messina", for research, **Messina**, July '05.
5. 2001, "Premio Cartagine", for research, **Tunis, Tunisia**, July 15th, 2001.
6. 1999, Anassilaos prize "Antonio Oliva", for research, **Reggio Calabria (Italy)**.

11. Servizi e attività professionali

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, 1st International PISRS Conference - Analysis, Fractal Geometry, Dynamical Systems and Economics**, Messina, Nov 8th-12th.
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, 14th **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
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 12th**, 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 11th, Turin, June 25-29 - 2012.
6. **2010, Mathematics in Decisions, Economics, Finance and Games**, SIMAI 10th, Cagliari, June 21-26 - 2010.
7. **2008, Mathematical Methods of Economic Theories, Game Theory and applications, SIMAI 9th 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**, 1st 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. Altri Interessi

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).

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Messina, 12 Maggio 2021

