Giuseppe De Marco
Curriculum Vitae

PERSONAL INFORMATION

Date of birth: 8 November 1975
Place of birth: Naples
Citizenship: Italian
Status: Married, 3 children

OFFICE

Dipartimento di Studi Aziendali e Quantitativi,
University of Naples "Parthenope". Via Generale Parisi 13, Naples 80132, Italy.
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http://www.csef.it/De-Marco

CURRENT POSITION

1/2016 -   ***Associate Professor*** *in Mathematics for Economics, Finance and Actuarial Sciences*,
University of Naples "Parthenope".

5/2011 -   ***CSEF Research Fellow***

9/2018 -   Qualified as Full Professor of Mathematical Methods for Economics, Finance and Actuarial Sciences,
according to the (Italian) National Scientific Qualification Procedure, 2018

PAST POSITIONS

2/2007 - 12/2015   ***Assistant Professor (Ricercatore)*** *in Mathematics for Economics and Finance*,
University of Naples "Parthenope".

6/2006 - 12/2006   ***Post-Doctoral Fellow***,
CSEF and Department of Economics and Statistics, University of Salerno.
    Field: *Economics*; research program director: Prof. T. Jappelli.

9/2004 - 6/2005   ***Visiting Fellow***,
CREA, École Polytechnique, Paris.
    Field: *Mathematics*; research supervisor: Prof. J.-P. Aubin.

11/2001 - 10/2005   ***Doctoral Fellow***,
Department of Mathematics and Statistics, University of Naples "Federico II".

EDUCATION

2006   ***Ph.D. in Mathematics for Economics and Finance***,
University of Naples "Federico II".
    Thesis: *New Refinement Concepts in Normal Form Games*
    Advisor: Prof. J. Morgan
    Ph.D. program director: Prof. A. Basile.

2003   ***Master in Economics and Finance***,
University of Naples "Federico II".

2001   ***Laurea (Master Degree) in Mathematics*** ,
University of Naples "Federico II"
Final score: summa cum laude (110/110 e lode).

RESEARCH

Research Interests

Game theory: normal form games and Nash equilibrium refinements, psychological games, ambiguous games; moral hazard and partnerships models; social network formation games, cooperative games and coalition formation. Imprecise probability theory and decision theory under uncertainty. Networks and financial contagion. Differential inclusions, control theory and viability theory. Set-valued analysis and variational analysis.

Main Conference Presentations and Seminars

1) *XXIX Workshop AMASES 2005 , Palermo, 12-15 September 2005.* 2) *2nd S.I.N.G., Foggia, 14-17 June 2006.* 3) *XXX Workshop AMASES 2006,Trieste, 4-7 September 2006.* 4) *CSEF Seminars, University of Salerno, 21 November 2006.* 5) *XVII European Workshop on General Equilibrium Theory, Paestum, 13-15 June 2008.* 6) *III Workshop MTISD, Lecce, 18-20 September 2008.* 7) *XXXII Workshop AMASES 2008, Trento,1-4 September 2008.* 8) *5th CSEF-IGIER Symposium on Economics and Institutions, Capri, 22-27 June 2009.* 9) *9th SAET Conference, Ischia, 29 June - 5 July 2009.* 10) *V DYSES, Benevento, 22-25 September 2010.* 11) *Workshop on Equilibrium Analysis under Ambiguity, Napoli, 28-29 January 2011.* 12) *Workshop ME@Ravello, Ravello, 13-15 May 2011.* 13) *XX European Workshop on General Equilibrium Theory, Vigo, 13-15 June 2011.* 14) *Workshop on Equilibrium Analysis, Napoli, 24-25 January 2014.* 15) *XXXIX Workshop AMASES 2015, Padova, 10-12 September 2015.* 16) *Games Markets Ambiguity, Napoli, 22-23 October 2015.* 17) *17th SAET Conference, Faro, Portugal June 25-30, 2017.* 18) *ADT 2017, the 5th International Conference on Algorithmic Decision Theory Luxembourg, 25-27 October 2017.* 19) *The Lisbon Meetings in Game Theory and Applications 9. Lisbon, Portugal, November 9-11, 2017.* 20) *ICAART 2018.Funchal-Madeira, Portugal, January 16-18, 2018.* 21) *XLII Workshop AMASES 2018. Napoli, Italy, September, 2018.* 22) *XLIII Workshop AMASES 2019. Perugia, Italy, September 2019.*

Conference Organization

- Session organizer at the **V DYSES**, 22-25 September 2010. Session title: *Game Theory and Applications*.

- Member of the Organizing Committee of the AMASES Conference 2018, University of Naples Parthenope, September 2018

- Member of the Organizing Committee of the Quantitative Finance Workshop 2020, University of Naples Parthenope, January 2020

- Member of the Scientific Committee of the Quantitative Finance Workshop 2020, University of Naples Parthenope, January 2020

Main Publications

[1] DE MARCO G. AND M. ROMANIELLO (2006): "Dynamics of Mixed Coalitions under Social Cohesion Constraints", **Mathematical Population Studies**, 13, 39-62.

[2] DE MARCO G. AND J. MORGAN (2007): "A Refinement Concept in Multicriteria Games via Stable Scalarizations", **International Game Theory Review**, 9(2), 169-181.

[3] DE MARCO G. AND J. MORGAN (2008): "Friendliness and Reciprocity in Equilibrium Selection", **International Game Theory Review**, 10(1), 53-72.

[4] DE MARCO G. AND J. MORGAN (2008): "Slightly Altruistic Equilibria", **Journal of Optimization Theory and Applications**, 137(2), 347-362.

[5] DE MARCO G. (2009): "Unknown Heterogeneity in Noncooperative Social Network Formation", **Journal of Pure and Applied Mathematics: Advances and Applications**, 1(1), 59-82.

[6] DE MARCO G. AND J. MORGAN (2009): "Equilibrium Selection and Altruistic Behavior in Noncooperative Social Networks", **Top**, 17(2), 454-470.

[7] DE MARCO G. (2010), "On the Effects of Agents' Heterogeneity in One way Flow Network Formation". **International Journal of Intelligent Systems**, 25(3), 226-236.

[8] DE MARCO G. AND J. MORGAN (2010): "Kalai-Smorodinsky Bargaining Solution Equilibria", **Journal of Optimization Theory and Applications**, 145(3), 429-449.

[9] DE MARCO G. AND M. ROMANIELLO (2011): " A Dynamic Game of Coalition Formation under Ambiguity", **Soft Computing**, 15(4), 637-644.

[10] DE MARCO G. AND M. ROMANIELLO (2011): "On the Dynamics of Coalition Structure Beliefs", in **Handbook of Optimization Theory: Decision Analysis and Applications** (J. Varela and S. Acuna eds), pp 237-258, *Nova Science Publishers, New York*.

[11] DE MARCO G. AND J. MORGAN (2011): "Altruistic Behavior and Correlated Equilibrium Selection", **International Game Theory Review**, 13(4), 363-381.

[12] DE MARCO G. AND M. ROMANIELLO (2012): "Beliefs Correspondences and Equilibria in Ambiguous Games". **International Journal of Intelligent Systems**, 27, 86-107.

[13] CUTILLO L., DE MARCO G. AND C. DONNINI (2013): "Networks of Financial Contagion", **Studies in Computational Intelligence**, Vol. 448, 31-48, *Springer*.

[14] DE MARCO G. AND G. IMMORDINO (2013): "Partnership, Reciprocity and Team Design". **Research in Economics**, 67, 39-58.

[15] DE MARCO G. AND M. ROMANIELLO (2013): "On the Stability of Equilibria in Incomplete Information Games under Ambiguity". **Applied Mathematical Sciences**, 7 (73), 3601 - 3614.

[16] DE MARCO G. (2013): "On the Genericity of the Finite Number of Equilibria in Multicriteria Games: A Counterexample". **International Journal of Mathematics in Operational Research**, 5(6), 764-777.

[17] DE MARCO G. AND M. ROMANIELLO(2013): "Games, Equilibria and the Variational Representation of Preferences". **Applied Mathematical Sciences**, 7 (96), 4789-4800.

[18] DE MARCO G. AND M. ROMANIELLO (2013): "A Limit Theorem for Equilibria under Ambiguous Beliefs Correspondences". **Mathematical Social Sciences**, 66, 431-438.

[19] DE MARCO G. AND J. MORGAN (2014): "On Ordered Weighted Averaging Social Optima". **Journal of Optimization Theory and Applications**, 160(2), 623-635.

[20] DE MARCO G. AND G. IMMORDINO(2014): "Reciprocity in the Principal Multiple Agent Model". **The B.E. Journal of Theoretical Economics**, 14, 445-482.

[21] DE MARCO G. AND M. ROMANIELLO (2015): "Variational Preferences and Equilibria in Games under Ambiguous Beliefs Correspondences". **International Journal of Approximate Reasoning**, 60, 8-22.

[22] DE MARCO G. AND M. ROMANIELLO (2015): "Games and Equilibria with Coherent Lower Expectations". **Mathematical Problems in Engineering**, Article ID 690295 .

[23] DE MARCO G. (2018): "Ambiguous Games without a State Space and Full Rationality". **International Journal of Approximate Reasoning**, 93, 330-353.

[24] DE MARCO G., DONNINI C., GIOIA F. AND F. PERLA (2018): "On the Measure of Contagion in Fuzzy Financial Networks". **Applied Soft Computing** , 67, 584-595.

[25] DE MARCO G. (2019): "On the convexity of preferences in decisions and games under (quasi-)convex/concave imprecise probability correspondences". **International Journal of Approximate Reasoning**, 113, 256-286.

[26] DE MARCO G., DONNINI C., GIOIA F. AND F. PERLA (2019): "On the Fictitious Default Algorithm in Fuzzy Financial Networks". **CSEF Working paper 535**.

Teaching material

DE MARCO G.(2008), "Notes on Financial Mathematics and Mathematical Finance" (in Italian).

DE MARCO G.(2016), "Finance and Stochastics" (in Italian).

Refereeing
- Member of the Editorial Board of: *Asia-Pacific Journal of Mathematics, Current Advances in Mathematics, International Journal of Advanced Mathematical Sciences; Journal of Intelligence Systems; Open Journal of Optimization; Statistics, Optimization and Informational Computation, Studies in Microeconomics* .
- Referee for *Annals of the International Society of Dynamic Games; Annals of Operation Research; Applied Soft Computing; Fuzzy Sets and Systems; Game Theory; Games and Economic Behavior; International Game Theory Review; International Journal of Approximate Reasoning; Journal of Global Optimization; Journal of Inequalities and Applications; Journal of Machine Learning and Computing; Journal of Mathematical Economics; Journal of Optimization Theory and Applications; Optimization.*
- Reviewer for *Mathematical Reviews, Zentralblatt MATH*

Grants and Awards
-Group research grant funded by University Parthenope 2017, Risk Management, (36 months), participant.
- Individual research grant funded by University Parthenope 2016, (24 months), principal investigator.
- Individual research grant funded by University Parthenope 2015, (24 months), principal investigator.
- CSEF Research Award: 2014, 2015.

- Program STAR 2014. Equilibrium with ambiguity, (36 months), participant.
- MIUR PON 2013. Sea-Land Logistics, (48 months), participant.
- MIUR PON 2013. Modelli di governance, riconfigurazione e monitoraggio delle attivita' logistico portuali ed interportuali, (48 months), participant.
- PRIN 2010: Robust decision making in markets and organizations,(36 months), participant.
- GNAMPA 2005: Generalized quasi-variational problems: dynamical and vectorial approaches. (12 months), participant.
- PRIN 2002: Approximations and applications in game theory. (24 months), participant.

TEACHING

1) UNDERGRADUATE AND MASTER LEVEL

- **Mathematical Methods for Economics** (Calculus and Linear Algebra)
    - *University of Naples Parthenope*, undergraduate in Management (6CFU, 48h); 2006-2008 (2 editions).
    - *University of Naples Parthenope*, undergraduate in Management(9CFU, 72h); 2010-2013 (3 editions).
    - *University of Naples Parthenope*, undergraduate in Administration (3CFU, 24h); 2010-2013 (2 editions).

- **Financial Mathematics** (Financial Calculus, Choice under Uncertainty, Portfolio Theory)
    - *University of Naples Parthenope*, undergraduate in Management (6CFU, 48h): 2007-10, 2014/15 (4 editions).
    - *University of Naples Parthenope*, undergraduate in Statistics (9CFU, 72h) 2016-18 (3 editions)
    - *Second University of Naples*, Faculty of Sciences (6CFU, 48h), undergraduate in Mathematics; 2005-10, 11/12 (6 editions).

- **Finance and Stochastics** (Discrete Time Pricing Models)
    - *University of Naples Parthenope*, Master Degree in Economics (6CFU, 48h); 2014/15 (1 edition).
    - *University of Naples Parthenope*, Master Degree in Statistics (9CFU, 72h); 2015-17 (2 editions).
    - *University of Naples Parthenope*, Master Degree in Statistics (6CFU, 48h); 2017-(2 editions).

- **Quantitative Finance** (Continuous Time Pricing Models)
    - *University of Naples Parthenope*, Master Degree in Statistics (6CFU, 48h); 2019- (1 edition).

- **Risk Theory** (Choice under Uncertainty, Risk Measures, Insurance Models, Loss Models)
    - *University of Naples Parthenope*, Undergraduate in Statistics (9CFU, 72h)); 2019- (1 edition).

2) PH.D. LEVEL

— *Faculty Member of the Ph.D. program in Economics, Statistics and Sustainability, University of Naples Parthenope* 2017-.

- **Mathematics for Economics and Finance (in English)** (Static and Dynamic Optimization)
  Master in Economics and Finance and Ph.D. in Economics (32h), *University of Naples Federico II*, 2012- (8 editions).

- **Game Theory**
  Ph.D. in Management (8h), *University of Naples Federico II, University of Naples Parthenope, Second University of Naples* 2015-17 (3 editions)

- **Dynamic Optimization**
  Ph.D. in Economics, Statistics and Sustainability (16h), *University of Naples Parthenope*, 2017- (3 editions).

3) OTHER TEACHING ACTIVITY

- **Applied Mathematics**
  - *University of Naples Parthenope*, Secondary School Teacher Training; 2006/07, 2013/14 (2 editions).

- **Educational Workhop in Mathematics**
  - 30 hours course for secondary school students, project "Saper vedere la matematica". DD 765/2014 Regione Campania

— Thesis supervisor
  - *Second University of Naples*. Degree in Mathematics (> 10), Master Degree in Mathematics.
  - *University of Naples Parthenope*, Degree in Management, Degree in Statistics, Master Degree in Statistics (> 5)

INSTITUTIONAL RESPONSABILITIES

- Member of the Committee for the Quality Analisys of the Master Degree in Statistics, Un. Parthenope, 2015-

- Member of the Board of the School of Economics and Law, Un. Parthenope, 2019-

January 4, 2020