

Giuseppe De Marco

Curriculum Vitae

PERSONAL INFORMATION

Date of birth: 8 November 1975
Place of birth: Naples
Citizenship: Italian
Status: Married (to Mariella), 1 daughter (Simona)

CONTACT

Department of Statistics and Mathematics for Economic Research,
University of Naples "Parthenope"
Via Medina 40, Naples 80133, Italy.
giuseppe.demarco@uniparthenope.it

CURRENT POSITION

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

FIELDS

Research: game theory, mathematical economics, control theory, variational analysis,
mathematical finance.

Teaching: mathematics, mathematical finance, game theory, mathematical economics.

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 of Arts 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)

ACADEMIC POSITIONS

6/2006 - 12/2006 **Research Fellow**,
CSEF and Department of Economics and Statistics, University of Salerno.
Field: *Economics*; Research 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"

TEACHING

- **Mathematics**
University of Naples Parthenope, Faculty of Law, undergraduate in Economics; 2006/07, 2007/08; 48 hours, 6 CFU.
- **Financial Mathematics**
University of Naples Parthenope, Faculty of Law, undergraduate in Economics; 2007/08; 2008/09, 2009/10, 48 hours, 6 CFU.
- **Financial Mathematics**
Second University of Naples, Faculty of Mathematical, Physical and Natural Sciences, undergraduate in Mathematics; 2005/06, 2006/07, 2007/08, 2008/09, 2009/10; 48 hours; 6 CFU.
- **Applied Mathematics**
University of Naples Parthenope, Secondary School Teacher Training, graduate; 2006/07; 70 hours

◇ **Teaching assistant**

University of Naples Federico II, Faculty of Economics:

- **Mathematical Analysis for Economics**, undergraduate, (Prof. J. Morgan), academic years 2002/03, 2003/04.
- **Linear Algebra and Geometry for Economics**, undergraduate, (Prof. J. Morgan), academic years 2002/03, 2003/04
- **Mathematical Methods for Decision Theory**, undergraduate, (Prof. J. Morgan), academic years 2002/03, 2003/04, 2005/06.
- **Game Theory**, graduate, (Prof. J. Morgan), academic years 2002/03, 2003/04, 2005/06
- **Mathematical Methods**, undergraduate. (Prof. M.G. Graziano), academic year 2003/04
- **Optimization**, graduate (Prof. J. Morgan), academic year 2005/06

University of Naples Federico II, Faculty of Mathematical, Physical and Natural Sciences

- **Mathematical Economics**, undergraduate. (Prof. A. De Simone), academic year 2006/07

University of Salerno, Faculty of Political Sciences:

- **Mathematical Economics**, graduate. (Prof. A. Bennardo), academic year 2006/07

§ **Thesis supervisor**

- *Second University of Naples*, degree in Mathematics:

- G. T., title: *On the Rothschild and Stiglitz criteria in the Theory of Choice under Uncertainty*, June 2008.
- V. M., title: *Semi-deterministic and Stochastic Immunization*, December 2008.
- V. D.G., title: *Herd Behavior in Financial Markets*, March 2009.
- G. D.F., title: *Information, Common Knowledge and Equilibria in Game Theory*, November 2009.
- V. M., title: *Arbitrage and Pricing in Financial Markets*, February 2010.
- A. I., topic: *Moral Hazard, Insurance Markets and Partnerships*, in preparation.

RESEARCH

Research Interests

Game theory: normal form games and Nash equilibrium refinements, cooperative games and coalition formation, social network formation games, psychological games, moral hazard, ambiguous games, global games. Differential inclusions, control theory and viability theory with applications to evolutionary games, differential games and finance. Set-valued analysis and variational analysis.

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. AND M. ROMANIELLO (2010): “On the Dynamics of Coalition Structure Beliefs”, in *Handbook of Optimization Theory: Decision Analysis and Applications* (J. Varela and S. Acuna eds) , Nova Science Publishers, New York.
- [8] DE MARCO G. (2010), “On the Effects of Agents’ Heterogeneity on One way Flow Network Formation”. *International Journal of Intelligent Systems*, 25(3), 226-236.
- [9] DE MARCO G. AND J. MORGAN: “Kalai-Smorodinsky Bargaining Solution Equilibria”, *Journal of Optimization Theory and Applications*, 145(3) to appear in 2010.
- [10] DE MARCO G. AND M. ROMANIELLO: “ A Dynamic Game of Coalition Formation under Ambiguity”, *Soft Computing*, to appear in 2010

Working Papers

- [11] DE MARCO G. AND J. MORGAN: “On Multicriteria Games with Uncountable Sets of Equilibria”.

Conference Presentations and Seminars

- DE MARCO G. AND J. MORGAN, “Selecting Equilibria via Altruistic Behavior in Normal Form Games”; *1st S.I.N.G.*, Maastricht, 24-26 June 2005. (Speaker J. Morgan).
- DE MARCO G. AND M. ROMANIELLO , “A Model of Evolution of Cooperation: A Viability Approach”, *XXIX Convegno AMASES* , 12-15 September 2005, Palermo, (Speaker G. De Marco).
- DE MARCO G. AND J. MORGAN, “Slightly Altruistic Equilibria in Normal Form Games”; *5th ISDG Workshop*, Segovia, 21-24 September 2005. (Speaker J. Morgan).
- DE MARCO G. AND J. MORGAN, “On a New Refinement Concept in Multicriteria Games”; *2nd S.I.N.G.*, Foggia, 14-17 June 2006, (Speaker G. De Marco).
- DE MARCO G. AND M. ROMANIELLO, “Cooperation and Cohesion: Dynamics and Viability”, *2nd S.I.N.G.*, Foggia, 14-17 June 2006, (Speaker M. Romaniello).
- DE MARCO G. AND J. MORGAN, “Friendliness and Reciprocity in Noncooperative Games”, *XXX Convegno AMASES*, 4-7 September 2006, Trieste, (Speaker G. De Marco).
- 21/11/06 **CSEF Seminars**, University of Salerno
- DE MARCO G. AND J. MORGAN, “Altruistic Behavior and Friendliness in Normal Form Games”; *3rd S.I.N.G.*, Madrid, 3-6 July 2007, .(Speaker J. Morgan).
- DE MARCO G. AND M. ROMANIELLO, “Evolution of Coalition Structures under Uncertainty”: 1) *XVII European Workshop on General Equilibrium Theory*, 13-15 June 2008, Paestum, (Speaker G. De Marco). 2) *III Workshop MTISD*, 18-20 September 2008, Lecce, (Speaker M. Romaniello)

DE MARCO G. AND J. MORGAN, “Social Networks: Equilibrium Selection and Friendliness”; 1) **4th CSEF-IGIER Symposium on Economics and Institutions**, 22-27 June 2008, Anacapri, (Speaker J. Morgan). 2) **13th International Symposium on Dynamic Games and Applications** 30 June-3 July, 2008, Wroclow, (Speaker J. Morgan). 3) **XXXII Convegno AMASES**, 1-4 September 2008, Trento, (Speaker G. De Marco).

DE MARCO G. “Equilibria in Social Networks with Heterogeneous Agents”, **III Workshop MTISD**, 18-20 September 2008, Lecce.

DE MARCO G. AND J. MORGAN “Kalai-Smorodinsky Bargaining Solution Equilibria”, i) **5th CSEF-IGIER Symposium on Economics and Institutions**, 22-27 June 2009, Anacapri, (Speaker G. De Marco), ii) **9th SAET Conference**, 29 June - 5 July 2009, Ischia, (Speaker G. De Marco)

Teaching Material

DE MARCO G.(2008), “Mathematical Finance” (in Italian).

PARTICIPATIONS TO SCHOOLS AND WORKSHOPS

Schools

- 23-26/5/2005, *International School on Evolution Equations*. Scuola Normale Superiore. Pisa.
- 7-9/7/2004, *3rd International School in Nonlinear Dynamics: Discrete Dynamical Systems and Applications*. University of Urbino.
- 3-20/ 6/2003, *5th Workshop on Foundations and Developments in Mathematics for Economics*. University of Naples Federico II.”
- 28/ 5 -15/6 / 2001, *4th Workshop on Foundations and Developments in Mathematics for Economics*. University of Naples Federico II.
- ” 14 -28/7/2000, *International School in Applied Mathematics: Game Theory*. University of Siena.

Workshops

- 22-23/1/2010, *Workshop on Equilibrium under Uncertainty*, University of Naples Federico II
- 29/6-5/7/2009, *9th SAET Conference*, University of Naples Federico II
- 22-27/6/ 2009, *5th CSEF-IGIER Symposium on Economics and Institutions*, University of Naples Federico II.
- 18-20 /9/ 2008, *III Workshop MTISD*, University of Lecce.
- 1-4 /9/ 2008, *XXXII Convegno AMASES* , University of Trento.
- 22-27/6/ 2008, *4th CSEF-IGIER Symposium on Economics and Institutions*, University of Naples Federico II
- 13-15/6/ 2008, *XVII European Workshop on General Equilibrium Theory*, University of Salerno
- 4-7 /9/ 2006 *XXX Convegno AMASES*, University of Trieste.
- 14-17 /6 /2006, *2nd S.I.N.G..* University of Foggia
- 12-13 /5 /2006, *International Workshop on Behavioral Game Theory and Experiments*. Second University of Naples.
- 11-14 /9/ 2005, *XXIX Convegno AMASES* , University of Palermo.
- 28-29 /1/ 2005, *10th Coalition Theory Workshop*, University of Paris I.
- 18-22 /8 /2003, *18th International Symposium on Mathematical Programming*, Technical University of Denmark. Copenhagen.
- 9-12 / 6 / 2003, *15th Italian Meeting on Game Theory and Applications*, University of Urbino.
- 26-28 / 9 / 2002, *Dynamical Models in Economics and Finance* University of Urbino.
- 1-3 / 7 / 2002, *5th Spanish Meeting on Game Theory*, University of Sevilla.

- 11-12 /1 / 2002, *7th Coalition Theory Workshop*, University of Venice.
- 14 / 7 / 2001, *14th Italian Meeting on Game Theory and Applications*, University of Naples Federico II.

MEMBERSHIPS

2005–present AMASES
2004–present GNAMPA
2005 GNAMPA Research Unit of Naples on “*Dynamic and Vector Quasi Variational Problems*”,
Director: J. Morgan.

EXTRACURRICULAR

1987-88 Secondary school student at the *European School* of Cuhlam, Oxfordshire, Great Britain.

February 22, 2010