

# Maria Symeonaki

## Senior Lecturer in Social Statistics

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### EDUCATION

**1998 – 2000: National and Kapodistrian University of Athens, Greece**

Postgraduate Diploma in ‘Basic and Applied Cognitive Science’

Department of Methodology, History and Theory of Science

Units: Logic, Artificial Intelligence, Neuroscience, Psychology, Cognitive Psychology,

**1992 - 1998: Aristotle University of Thessaloniki, Faculty of Sciences, School of Mathematics, Greece**

PhD in Statistics and Operation Research (School of Mathematics)

Thesis Title: ‘*Theory of Perturbed Non Homogeneous Markov Systems*’

Supervisors: Prof. P. C. Vassiliou, Prof. Tsaklides and Reader N. Tsantas

**1987 - 1991: Aristotle University of Thessaloniki, Faculty of Sciences, School of Mathematics, Greece**

BSc (Hons) in Mathematics (4 – year degree)

Units: Algebra, Calculus, Analytic Geometry, Mathematical Programming, Probability Theory, Statistics, Mathematical Statistics, Statistical Inference, Time Series, Programming Languages, Topology of Metrics Spaces, Differential Equations, Didactics in Mathematics, Mathematical Methods in Operation Research, Differential Geometry, Numeric Analysis, Stochastic Processes, Computational Mathematics, Deterministic Methods and Optimisation, Group Theory, Control Theory, Data Structure, Number Theory, Meteorology, Climatology, Seismology

### TEACHING

**2010 – present: Senior Lecturer in Social Statistics, Dept. of Social Policy, Panteion University of Social and Political Sciences, Athens, Greece**

**Postgraduate level:** Statistical methods for social science research II

**Undergraduate level:** Statistics I: Descriptive Statistics, Statistics II: Sample survey theory and practice, Introduction to social survey research: theory and methods, Informatics: SPSS II, Stochastic models for the social sciences

**2004 – 2010: Lecturer in Social Statistics, Dept. of Social Policy, Panteion University of Social and Political Sciences, Athens, Greece**

**Postgraduate level:** Statistical methods for social science research II, Planning social policy programmes, Evaluating social policy programmes

**Undergraduate level:** Statistics I: Descriptive Statistics, Inferential Statistics, Introduction to social survey research: theory and methods, Informatics: SPSS I, Informatics: SPSS II, Planning and Evaluating social policy programmes

**1999 – 2004: Lecturer, Dept. of Statistics and Actuarial Sciences, University of Pireaus, Greece**

- Undergraduate level:** Issues of Mathematical Statistics, Applied Linear Algebra and Differential Equations, Operation Research
- 2003 – 2004:** **Lecturer, Dept. of Sociology, Panteion University of Social and Political Sciences, Athens, Greece**
- Undergraduate level:** Informatics, Statistics III
- 1998 – 1999:** **Lecturer, Air Force Academy, Athens, Greece**
- Undergraduate level:** Operation Research I, Operation Research II
- 1995 – 1996:** **Teaching Assistant, School of Computer Sciences, Aristotle University of Thessaloniki, Greece**
- Undergraduate level:** Operation Research I
- 1994 – 1995:** **Teaching Assistant, School of Mathematics, Aristotle University of Thessaloniki, Greece**
- Undergraduate level:** Stochastic Processes in Operation Research II

## PROFESSIONAL & RESEARCH EXPERIENCE

- 2015 – 2017** Scientific responsible and investigator in ‘NEGOTIATE’ (<https://blogg.hioa.no/negotiate/>) (Overcoming early job insecurity in Europe, Horizon2020, Collaborative project)
- 2015 – 2016** Scientific responsible and investigator in ‘Gender Equality in the Workforce: Reconciling work, private and family life in Greek Industries’, GSRT – EOX.
- 2013 – 2016** Investigator in ‘INSPIRES’ (<http://www.inspires-research.eu>) (Innovative Social and Employment Policies for Inclusive and Resilient Labour Markets in Europe, FP7-SSH-2012-2, Collaborative project)
- 2013 – 2014** Principal Investigator (PI) in ‘Exploring the social and cognitive profile of students attending Experimental Schools in Greece’ (Ministry of Education, collaboration between all Experimental Schools in Thessaloniki and Panteion University of Social and Political Sciences)
- 2013** Investigator in ‘Digitised Manuscripts to Europeana’ project (<http://dm2e.eu>) ((European Commission – ICT Policy Support Programme as part of the Competitiveness and Innovation framework Programme (CIP))
- 2013 – 2014** Investigator in ‘ICILAS’ project: Investigating Crucial Interdisciplinary Linkages in Ageing Societies, THALIS (Ministry of Education)
- 2011** Visiting academic, Department of Statistics, London School of Economics (LSE), UK
- 2005 – 2006** Investigator in ‘Strengthening the economic immigrants and refugees in the labour market’, EQUAL (European Social Fund (ESF) and EU Member States)
- 2005 – 2006** Investigator in ‘Countryside Women and Food: Social Perception and Operational Initiatives in regional level’, Pythagoras II (Ministry of Education and EU Member States)
- 2005 – 2006** Reforming Postgraduate Studies' Programme, Department of Social Policy, Panteion University of Social and Political sciences, (Ministry of Education and EU Member States)
- 1999 – 2001** Investigator in ‘LEXIS’: Building new e-dictionaries and an experts’ knowledge system for stenographic typing (European Commission: Operational Programme for Research and Technology and the General Secretariat for Research and Technology (GSRT))
- 1999 – 2001** Investigator in ‘Developing a video-teleconferencing network for e-learning and e-working’ (Operational Programme for Research and Technology and the General

Secretariat for Research and Technology (GSRT))

- 1999 – 2001** Investigator in ‘DIDO: Developing expert tools for e-learning’ (Ministry of Education)
- 1999 – 2001** Investigator in ‘TECHNIKORAMA: Virtual Reality Technology and Multimedia for Ecological training in cultural, developmental and touristic issues’ (Operational Programme for Research and Technology and the General Secretariat for Research and Technology (GSRT))
- 1998- 2000** Investigator in ‘Simulating conceptual change in Physics using probabilistic models’ (Operational Programme for Research and Technology and the General Secretariat for Research and Technology (GSRT))

## SCIENTIFIC PUBLICATIONS

### **In peer-reviewed journals and book chapters:**

1. P.-C. Vassiliou and M. Symeonaki, The perturbed non homogeneous Markov system in continuous time, *Applied Stochastic Models and Data Analysis*, 13(3-4), 207-216, 1997.
2. P.-C. Vassiliou and M. Symeonaki, The perturbed non homogeneous Markov system, *Linear Algebra and its Applications*, 289 (1-3), 319-332, 1999.
3. M. Symeonaki, G. Stamou and S. Tzafestas, Fuzzy Markov Systems for the Description and Control of Population Dynamics, in: *Computational Intelligence in Systems and Control Design and Applications*, Boston (Kluwer Academic Publishers), 301-310, 2000.
4. M. Symeonaki, G. Stamou and S. Tzafestas, Fuzzy non homogeneous Markov Systems, *Applied Intelligence*, 17(2), 203-214, 2002.
5. M. Symeonaki and G. Stamou, Theory of Markov Systems with Fuzzy States, *Fuzzy Sets and Systems*, 143, 427-445, 2004.
6. M. Symeonaki and G. Stamou, Input Control in Non Homogeneous Markov systems with fuzzy states, *International Mathematical Journal*, 5(6), 567-575, 2004.
7. M. Symeonaki and G. Stamou, Rate of Convergence, Asymptotically attainable structures and Sensitivity in non homogeneous Markov systems with Fuzzy States, *Fuzzy Sets and Systems*, 157(1), 143-159, 2006.
8. M. Symeonaki, Modelling conceptual changes in Physics using Probabilistic, Fuzzy and Symbolic approaches, *International Mathematical Forum*, 1(12), 577-591, 2006.
9. M. Symeonaki, and P.-C. Vassiliou, Periodicity of the Perturbed Non-Homogeneous Markov System, in: *Recent Advances in Stochastic Modelling and Data Analysis*, (World Scientific Publishers), 182-190, 2007.
10. M. Symeonaki and G. Stamatopoulou, Exploring the transition to Higher Education in Greece: issues of intergenerational educational mobility, *Policy Futures in Education*, Volume 12, 5, 681-694, 2014.
11. M. Symeonaki, C. Michalopoulou and A. Kazani, A fuzzy set theory solution to combining Likert items into a single overall scale (or subscales), *Quality and Quantity*, 49(2), 739-762, 2015.
12. M. Symeonaki, Theory of Fuzzy Non-Homogeneous Markov Systems with Fuzzy States, *Quality and Quantity*, 49(6), 2369-2385, 2015.
13. M. Symeonaki, G. Stamatopoulou and C. Michalopoulou, Intergenerational educational mobility in Greece: Transitions and social distances, *Communications in Statistics – Theory and Methods*, 2015, DOI: 10.1080/03610926.2014.957857.

14. M. Symeonaki and G. Stamatopoulou, Intergenerational mobility as a distance measure between probability distribution functions, in: *Theoretical and Applied Issues in Statistics and Demography* (C. H. Skiadas (Ed)), 2016 (to appear).
15. M. Symeonaki, Quality of Life in the third age: a descriptive analysis, *Social Policy*, 4, 2016.
16. M. Symeonaki and C. Filopoulou, Gender distances in education, occupation and unemployment: a comparative study of southern European countries, *Gender Issues*, (under revisions), 2016.
17. M. Symeonaki, Identifying Quality of Life patterns in the third age: a cluster analysis approach with evidence from SHARE, in: *Statistical, Stochastic and Data Analysis Methods and Applications* (A. Karagrigoriou, T. Oliveira and C. H. Skiadas (Eds)), 2016, to appear.
18. G. Stamatopoulou, M. Symeonaki, and C. Michalopoulou, Occupational and educational gender segregation in Southern Europe, in: *Stochastic and Data Analysis Methods and Applications in Statistics and Demography*, (J. R. Bozeman, T. Oliveira and C. H. Skiadas (Eds)), 2016, to appear.

#### **International Conferences:**

19. M. Symeonaki and G. Stamou, Input Control in Fuzzy non homogeneous Markov systems, *ASMDA, Brest, France*, 17-20 May, 2005.
20. M. Symeonaki and O. Filopoulou, Fuzzy systems for the description of Occupational choices in Greece, *SMTDA, Chania, Greece*, 12-15 June, 2010.
21. M. Symeonaki, O. Filopoulou and G. Stamatopoulou, Measuring Intergenerational Educational Mobility in Greece, *ASMDA, Rome, Italy*, 7-10 June, 2011.
22. M. Symeonaki and A. Kazani, Developing a fuzzy Likert scale for measuring Xenophobia in Greece, *ASMDA, Rome, Italy*, 7-10 June, 2011.
23. M. Symeonaki and C. Michalopoulou, Measuring Xenophobia in Greece: A Cluster Analysis Approach, *ASMDA, Rome, Italy*, 7-10 June, 2011.
24. M. Symeonaki and A. Kalamatianou, Markov systems with fuzzy states for the description of students' educational progress in Greek Universities, *ISI, Dublin, Ireland*, 22-26 August, 2011.
25. M. Symeonaki and O. Filopoulou, Fuzzy Markov Systems for the simulation of gender based educational and occupational choices, *International Sociological Association RC04 & RC10 conference: Social Justice and Participation: the Role of Higher Education, Nicosia, Cyprus*, 25-27 November, 2011.
26. M. Symeonaki, A. Kazani and C. Michalopoulou, Fuzzifying Likert scales with factor analysis techniques, 4<sup>th</sup> International Conference of the *ERCIM wg on Computing and Statistics, London, UK*, 15-17 December, 2011.
27. M. Symeonaki, G. Stamatopoulou and C. Michalopoulou, Intergenerational Occupational Mobility in Greece: Evidence from EU-SILC, *Demographic Analysis and Research International Conference, Chania, Greece*, 5-8 June 2012.
28. M. Symeonaki and A. Kazani, Measuring Xenophobia in Greece using neural networks and fuzzy techniques, *SMTDA, Chania, Greece*, 5-8 June, 2012.
29. M. Symeonaki, C. Michalopoulou and G. Stamou, An attitude scaling application of fuzzy sets to profile analysis, 6<sup>th</sup> International Conference of the *ERCIM wg on Computational and Methodological Statistics, London, UK*, 14-16 December, 2013.
30. G. Stamatopoulou, M. Symeonaki and C. Michalopoulou, Intergenerational transmission of education in Greece: evidence from the European Social Survey 2002-2010, *ASMDA, Barcelona, Spain*, 25-28 June, 2013.

31. M. Symeonaki, Resilient Labour Market Indicators: a fuzzy forecast approach for female unemployment rates in the Southern European Countries, *12th Annual ESPAnet conference, Beyond the Crisis in Europe - New Opportunities for reconciling sustainability, equality and economic robustness*, Oslo, Norway, 4-6 September, 2014.
32. M. Symeonaki, Comparing Quality of Life in the third age among European countries: gender and age differences with evidence from SHARE, *Aging and Society: Fourth Interdisciplinary Conference*, Manchester, UK, 7-8 November 2014.
33. M. Symeonaki and G. Stamatopoulou, A Markov chain analysis application on labour market dynamics: the case of Greece, IWPLMS, 22–24 June, 2015, Athens, Greece.
34. M. Symeonaki, M. Karamessini and G. Stamatopoulou, Gender-based differences on the impact of the economic crisis on labour market flows in Southern Europe, SMTDA, Valletta, Malta, 1-4 June 2016.
35. M. Symeonaki, Rate of convergence in fuzzy non-homogeneous Markov systems, SMTDA, Valletta, Malta, 1-4 June 2016.
36. M. Symeonaki, M. Karamessini and G. Stamatopoulou, Measuring School-to-Work Transition Probabilities in Europe with Evidence from the EU-SILC, 5<sup>th</sup> Demographics Workshop, Malta, 1-4 June, 2016.

#### **Reports and Working papers:**

1. D. Papadopoulou, C. Dimoulas, and M. Symeonaki, *National report on the labour market position of vulnerable groups in Greece*. Athens: Panteion University of Social and Political Studies, 2014. [http://www.inspires-research.eu/userfiles/D2\\_1%20National%20report%20Greece.pdf](http://www.inspires-research.eu/userfiles/D2_1%20National%20report%20Greece.pdf)
2. M. Karamessini, M. Symeonaki, G. Stamatopoulou and A. Papazachariou, *The careers of young people in Europe during the economic crisis: Identifying risk factors*, 2016. <https://blogg.hioa.no/negotiate/files/2015/04/NEGOTIATE-working-paper-no-D3.2-The-careers-of-young-people-in-Eurpa-during-the-economic-crisis.pdf>
3. M. Karamessini, M. Symeonaki and G. Stamatopoulou, *The role of the economic crisis in determining the degree of early job insecurity in Europe*, 2016.<sup>1</sup>

#### **In Greek:**

##### **Books**

- M. Symeonaki, *Statistics with SPSS*, Sophia Pub., Thessaloniki, 2015.
- M. Symeonaki, *Statistical analysis of social data with SPSS 15.0*, Sophia Pub., Thessaloniki, 2008.
- C. Bagavos, D. Papadopoulou and M. Symeonaki (eds), *Immigration and Services Provision to Immigrants in Greece*. Athens: INE/GSEE-ADEDY, 2008.

##### **Translations to Greek**

- M. Symeonaki, Translation and Editing of ‘I. Diamond and J. Jefferies, *Beginning Statistics: an introduction for social scientists*, Sage, London, 2004’, Papazisis, Athens, 2006.

##### **Reports**

- M. Symeonaki, Evaluating the postgraduate program ‘Methods and Applications in Social Policy’, Panteion University, 2008, 2009, 2010, 2011, 2012, 2013.

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<sup>1</sup> Θα παραδοθεί έως 30/6/2016

## ADMINISTRATIVE RESPONSIBILITIES

- 2008** – Member of the postgraduate programme board of the Dept. of Social Policy, Panteion University of Social and Political Sciences
- 2008** – Responsible for the Departmental website, Dept. of Social Policy, Panteion University of Social and Political Sciences
- 2004 – 2011** Faculty representative of the University Library, Dept. of Social Policy, Panteion University of Social and Political Sciences
- 2004** – Responsible for the educational services provided in the IT Labs, Dept. of Social Policy, Panteion University of Social and Political Sciences
- 2004** – Member of interview panels for new faculty positions, Dept. of Social Policy, Panteion University of Social and Political Sciences
- 2000 – 2002** Member of the Departmental International Staff and Student Exchange Committee, Dept. of Statistics and Actuarial Science, University of Pireaus

## OTHER PROFESSIONAL ACTIVITIES

### Membership in Organizations

- 2014** – Member of the Directory Board of the Hellenic Social Policy Association
- 2013** – Member of the specialized team of the international working group CMStatistics (Computational and Methodological Statistics): ISDA, Imprecision in Statistical Data Analysis,
- 2013** – Member of the specialized team of the international working group CMStatistics (Computational and Methodological Statistics): LVSEM, Latent Variable and Structural Equation Models,
- 2008** – Member of the Hellenic Society of Social Policy,
- 2004** – Member of the Greek Statistics Institute,
- 2003** – Member of the Greek Statisticians (StatWeb),
- 1997** – Member of the Hellenic Society of Operations Research

### Review of Scientific Papers

International Journal of Uncertainty, Fuzziness and Knowledge-Based Systems,  
Linear Algebra and its Applications  
Applied Stochastic Models and Data Analysis  
Applied Intelligence  
IEEE Transactions on Fuzzy Systems  
Fuzzy Sets and Systems  
Mathematical Reviews

### Organization of Conferences

**2010:** Social Policy and Local Government: Trends and Perspectives, 13-14 May, Athens, Greece.

## IT & OTHER SKILLS

**Statistics:** SPSS, S-PLUS, Minitab, R, Statistics

**Operation Research:** Lindo, Excell Solver, Stella, CMOM

**Mathematics:** MATLAB, R, Maple, Mathematica

**Data Bases:** MS Access

**Project Management:** MS Project

**OS:** Windows, Mac

## Languages

Fluent in Greek (mother tongue) and English (C2: Certificate of Proficiency in English, Cambridge University); Working knowledge of German (B2: Mittelstufe: Deutsch als Fremdsprache, Goethe Institute)