

## Short Curriculum Vitae

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### Qualifications and Academic Appointments

- 09/88-07/92. First Degree in Mathematics with major in Statistics and Mathematical Analysis. University of Ioannina, Department of Mathematics, Greece. 1<sup>st</sup> Class degree, 4 years studies.
- 06/98. PhD in Statistics. University of Ioannina, Department of Mathematics, Greece.
- 07/98-07/01 Post-Doctoral Research Fellow at Department of Mathematics, Statistics and Operational Research, Nottingham Trent University. GEOPRO TMR research network.
- 07-08/01 Visiting professor at State University of New York, Binghamton, working with Prof. Zacks on Sampling and Prediction Theory.
- 10/01-10/02 Post doctoral research fellow at Athens University of Business and Economics, Department of Statistics, Athens, Greece.  
Teaching Contract, University of Peiraias.
- 10/02-04/07 Lecturer, Department of Statistics, Athens University of Economics and Business.
- 40/07-present Associate Professor, Department of Statistics, Athens University of Economics and Business.

In parallel (during 2002-2006):

- Teaching staff for three years with Hellenic Open University.
- Participate in LUCAS European project. Assessment of the results of the Lucas 2001 survey.

## Teaching Experience

- As a lecturer/associate professor the classes be taught since 2002:

Undergraduate:

1. Sampling theory and techniques
2. Mathematical Statistics
3. Probability Theory
4. Distribution Theory
5. Introduction to Probability and Statistics

Postgraduate:

1. Sampling Theory
  2. Multivariate Analysis
  3. Multivariate Techniques
- Introduction to Probability Theory. Adjunct lecturer at University of Peiraias, Dept. of Statistics and Actuarial, Athens, 2001-2002.
  - Seminars for the use of the Statistical Package S-Plus (Athens, February 2000 and Nottingham, UK, January 2001).
  - Seminars for the module “Methods of Multivariate Analysis with Minitab”. Nottingham Trent University, Department of Mathematics, Statistics and Operational Research, final year students, 1999-2000.
  - Teaching of the module “Probability Theory” at Public Technical Institute. Actuarial Sciences. 2 semesters, 1996-1997.
  - Auxiliary teaching in undergraduate level studies, while a PhD student.

## Technical Skills

Operational Systems: Unix, Microsoft Windows, DOS.

Statistical Packages: S-Plus, Minitab, SPSS. Some experience with SAS.

Programming Languages: FORTRAN, BASIC, S, *Mathematica*, MATLAB.

Other Packages and General Software: Thorough use of *Mathematica*. Competency in General Software including Word, Scientific Word, Excel, Powerpoint, HTML.

### Publications in International Scientific Journals

1. **Papageorgiou, Ioulia** & Karakostas, K. X. (1997). 'Exact Optimum Sampling Designs for Autocorrelated Finite Populations: The Moving Average Case'. *Internat. Journal of Mathem. and Statist. Sciences.*, **6**, 161-178.
2. **Papageorgiou, Ioulia** & Karakostas, K. X. (1998). 'On Optimal Sampling Designs for Autocorrelated Finite Populations'. *Biometrika*, **85**, 2, pp. 482-486.
3. Paschidis C. A., Stephaniotou N., **Papageorgiou, J.**, Skourtis P., Psilas K. (1998). 'Ocular surface and environmental changes'. *Acta Ophthalmologica*, **76**, 74-77.
4. **Papageorgiou, Ioulia** & Karakostas, K. X. (2001) Model-complete strategies for sampling from convex autocorrelated finite populations. *Journal of Statistical Planning and Inference*, **99**, 71-89.
5. **Papageorgiou, Ioulia**, Baxter M.J. & Cau, M. A. (2001) Model-based clustering techniques in archaeological ceramic provenance studies. *Arhaeometry*, **43**, 4, 571-588.
6. Beardah C.C., Baxter M.J., **Papageorgiou I.** and Cau, M.A. (2002) Approaches to petrographic data analysis using S-Plus. In Burenhult, G. (ed.) *Archaeological Informatics: Pushing the Envelope, CAA2001. BAR (British Archaeological Reports). International Series 1016*, Oxford: Archaeopress, 441-448.
7. Baxter M.J. and **Papageorgiou, I.** (2002) Statistical modeling of artefact compositional data: some considerations. . *Modern Trends in Scientific Studies on Ancient Ceramics, BAR (British Archaeological Reports), International Series*.
8. **Papageorgiou, I.** and Baxter M.J. (2002) Model-based clustering methods in archaeological ceramic provenance studies. *Modern Trends in Scientific Studies on Ancient Ceramics, BAR (British Archaeological Reports), International Series*, 51-58.
9. Moustaki, Irimi & **Papageorgiou, Ioulia**. (2004) Latent class models for mixed outcomes in identifying clusters in Archaeometry. *Computational Statistics and Data Analysis*, **48**, 3, 659-675.

10. Cau M.A., **Papageorgiou I.**, Day P.M., Baxter M.J., Iliopoulos I, & Montana G. (2004). Exploring Automatic Grouping Procedures in Ceramic Petrology. *Journal of Archaeological Science*, **31**, 1325-1338.
11. Dellaportas, P. & **Papageorgiou, Ioulia** (2006) Multivariate mixtures of Normals with unknown number of components. *Statistics and Computing*, **16**, 1, 57-68.
12. **Papageorgiou, I.** and Liritzis, I. Multivariate Mixture of Normals with unknown number of components. An application to cluster Neolithic Ceramics from Aegean and Asia Minor. *Archaeometry*, **49**, **4**, 795-813.
13. Baxter, M.J., Beardah, C.C., **Papageorgiou, I.**, Cau, M.A, Day, P.M. On statistical approaches the study of ceramic artefacts using geochemical and mineralogical data (accepted for publication to *Journal of Archaeological Science*).

### Conference Publications

1. Baxter M.J., **Papageorgiou, Ioulia**, Cau M.A., Day P.M. and Jackson C.M. (1999) In press. Integrating geochemical and mineralogical data in studies of ceramic provenance: some statistical issues. Computer Application in Archaeology Conference 99, Dublin, April 1999. Oxford: **BAR**.
2. **Papageorgiou, I.** and Baxter M.J. (1999) Model-based clustering methods in archaeological ceramic provenance studies. 5<sup>th</sup> European Meeting on Ancient Ceramics (EMAC). Athens, 18-20 October 1999. Oxford, **BAR**.
3. Baxter M.J. and **Papageorgiou, I.** (1999) Statistical modelling of artefact compositional data: some considerations. 5<sup>th</sup> European Meeting on Ancient Ceramics (EMAC). Athens, 18-20 October 1999. Oxford, **BAR**.
4. Beardah C.C., Baxter M.J., **Papageorgiou I.** and Cau. M.A. (2002) Approaches to petrographic data analysis using S-Plus. In Burenhult, G. (ed.) *Archaeological Informatics: Pushing the Envelope*, CAA2001. BAR International Series 1016, Oxford: Archaeopress, 441-448.
5. **Papageorgiou, I.** and Baxter, M.J. (2002) Model-based clustering methods in archaeological ceramic provenance studies. In Kilikoglou, V., Hein, A. and Maniatis, Y. (eds.), *Modern Trends in Scientific Studies on Ancient Ceramics*. BAR International Series 1011, Oxford: Archaeopress, 51-58.

6. Beardah, C.C., Baxter, M.J., **Papageorgiou, I.** and Cau, M.A. (2003) "Mixed-mode" approaches to the grouping of ceramic artefacts using S-Plus. In Doerr, M. and Sarris, A. (eds.), *The Digital Heritage of Archaeology: CAA2002*, Hellenic Ministry of Culture, 261-265.

### **Conference Presentations**

1. **Papageorgiou I** & Karakostas K. X. Optimal Sampling Schemes for Finite Populations with Convex Autocorrelation function'. **8<sup>th</sup> 10th Conference of the Greek Statistical Institute, 9-11 June, 1995, Delfoi, Greece.**
2. **Papageorgiou I** & Karakostas KX. Exact optimum sampling designs for finite autocorrelated populations. **10th Conference of the Greek Statistical Institute, Xanthi, Greece, April 18-20, 1996.**
3. **Papageorgiou I** & Karakostas KX. On optimal sampling designs for autocorrelated finite populations. **2<sup>nd</sup> World Congress of IFNA (Institute of Federation of Nonlinear Analysts), Athens, Greece, July 10-17, 1996.**
4. **Papageorgiou I** & Karakostas KX. Systematic Sampling for the finite Autocorrelated Populations. **4<sup>th</sup> World Congress of the Bernoulli Society, Vienna, Austria, August 26-31, 1996.**
5. Baxter MJ, **Papageorgiou I**, Cau MA, Day PM, Jackson CM. Integrating geochemical and mineralogical data in studies of ceramic provenance: some statistical issues. Poster presentation. *Computer Applications and Quantitative Methods in Archaeology. CAA International Conference 1999. 14th - 18th April 1999, Dublin, Ireland. (Poster).*
6. **Papageorgiou I**, Baxter MJ. Model-Based clustering methods in Archaeological ceramic provenance studies. **EMAC'99, 18 - 20 October 1999, Athens.**
7. Baxter MJ, **Papageorgiou I.** Statistical modelling of artefact compositional data: some considerations. **EMAC'99, 18 - 20 October 1999, Athens.**
8. **Papageorgiou Ioulia** and Baxter, M. J. Multivariate Statistical Techniques on the Analysis of compositional data from Archaeometry. *Third World Congress of Nonlinear Analysts, WCNA-2000. Catania, Sicily, July 2000, Invited speaker.*

9. C.C. Beardah, M.J. Baxter, **I. Papageorgiou** and M.A. Cau. Approaches to petrographic data analysis using S-Plus. **CAA International Conference 2001. 25th - 29th April 2001, Visby, Gotland, Sweden.**
10. Beardah, C.C., Baxter, M.J., **Papageorgiou, I.**, Cau, M.A., Day, P.M., and Rutter, J.B. "'Mixed-mode" approaches to the grouping of ceramic artefacts using S-Plus." **Computer Applications and Quantitative Methods in Archaeology 2002**, Heraklion, Crete, Greece (to be submitted for publication in the proceedings of the same).
11. Baxter, M.J., **Papageorgiou, I.**, and Cau, M.A. "Statistical analysis of geochemical and mineralogical data in ceramic provenancing." 33rd International Symposium on Archaeometry 2002, Amsterdam, Holland.
12. **Ιουλία Παπαγεωργίου** & Κ. Χ. Καρακώστας. "Model –Complete Strategies For Sampling From Convex Autocorrelated Finite Populations". 15<sup>ο</sup> Συνέδριο Ελληνικού Στατιστικού Ινστιτούτου (ΕΣΙ), Ιωάννινα 2002.
13. **Papageorgiou Ioulia** and M.J. Baxter, "Multivariate Statistical Techniques for Integrating geochemical and mineralogical data in studies of ceramic provenance". 15<sup>ο</sup> Συνέδριο Ελληνικού Στατιστικού Ινστιτούτου (ΕΣΙ), Ιωάννινα 2002.
14. Μουστάκη, Ειρήνη & **Παπαγεωργίου Ιουλία**. "Latent class model for mixed variables with applications in Archaeometry". 16<sup>ο</sup> Πανελλήνιο Συνέδριο **Ελληνικού Στατιστικού Ινστιτούτου (ΕΣΙ)**, Καβάλα, **30 Απριλίου-3 Μαΐου, 2003.**
15. **Moustaki, Irini and Papageorgiou, Ioulia.** Latent Class Models for mixed variables with Applications in Archaeometry. Computational Management Science, **2-5 April 2004, Neuchâtel, Switzerland.**
16. **Dellaportas, P. and Papageorgiou, Ioulia.** Multivariate Mixture of Normals with unknown number of components, **2-5 April 2004, Neuchâtel, Switzerland.**
17. **Dellaportas, P. and Papageorgiou Ioulia.** Multivariate Mixture of Normals with unknown number of components. 17<sup>ο</sup> Πανελλήνιο Συνέδριο **Ελληνικού Στατιστικού Ινστιτούτου (ΕΣΙ)**, Λευκάδα, **14-18 Απριλίου 2004.**
18. Papageorgiou, I. and Liritzis, I. Multivariate Mixture of Normals with unknown number of components. An application to cluster Neolithic Ceramics from Aegean and Asia Minor. 8th WSEAS International Conference on AUTOMATIC CONTROL, MODELLING & SIMULATION (ACMOS '06), 12-14 March, 2006.

## Citations

Titterton, D.M. (2001) *Biometrika: One Hundred Years*. Oxford University Press Inc., NY.

Smith TMF and Cox, D.R. (2001) Biometrika Centenary: Sample surveys, *Biometrika* **88**, 1, 167-194.

Baxter, M.J. (2003) *Statistics in Archaeology*, Oxford University Press Inc. NY., p.126

Martini, M. (edited) (2004) *Physics Methods in Archaeometry*, Societa Italiana di Fisica. p. 35.

Garrison, E. G. (2003) *Techniques in Archaeological Geology*, Springer-Verlag, Berlin, Heidelberg, New York, p. 289.

Weihs, C. and Gaul, W. (edited) (2005) *Classification - the Ubiquitous Challenge*, Springer-Verlag, Berlin, Heidelberg, New York, p. 324.

Hall, M. and Minyaev, S.(2002) Chemical Analyses of Xiong-nu Pottery: A Preliminary Study of Exchange and Trade on the Inner Asian Steppes. *Journal of Archaeological Science*, **29**, 135-144.

Hall, M.E. (2004) Pottery production during the Late Jomon period: insights from the chemical analyses of Kasori B pottery, *Journal of Archaeological Science*, **31**, pp. 1439-1450.

Hein, A. Day, P.M., Cau Ontiveros, M.A. Kilikoglou, V. (2004) Red clays from Central and Eastern Crete: geochemical and mineralogical properties in view of provenance studies on ancient ceramics. *Applied Clay Science* **24**, pp.245– 255.

Stutz AJ, Estabrook GF (2004). Computationally intensive multivariate statistics and relative frequency distributions in archaeology (with an application to the Early Epipaleolithic of the Levant). *J Archaeol. Sci*, **31**, 12, 1643-1658.

Jasra, A. Holmes, CC and Stephens, DA. (2005) Markov chain Monte Carlo methods and the label switching problem in Bayesian mixture modeling. *Statistical Science*, **20**, 1, 50–67.

Nobile, A. and Fearnside, A. (2005) Bayesian finite mixtures with an unknown number of components: Technical Report 05-4, Department of Statistics, University of Glasgow, UK

Hastie, D. (2005) Towards Automatic Reversible Jump Markov Chain Monte Carlo PhD dissertation, University of Bristol, Department of Mathematics,UK.

Jasra, A., Stephens, DA, & Holmes, CC (2005). Population-Based Simulation for Static Inference. Technical Report, Imperial College London, UK.

Mommsen, H., Beier, T, & Hein, A. (2002) A Complete Chemical Grouping of the Berkeley Neutron Activation Analysis Data on Mycenaean Pottery. *Journal of Archaeological Science*, **29**, 613 – 637.

Baxter, M.J., Cool, H.E.M. & Jackson, C.M. (2005) Further studies in the compositional variability of colourless Romano-British Vessl Glass. *Archaeometry*, **47**, 1, 47.

Schwedt, A. (2004) Untersuchung von (Spuren-Elementkonzentrationspro\_ len in archaologischer Keramik mittels Neutronenaktivierungsanalyse. Dissertation zur Erlangung des Doktorgrades (Dr. rer. nat) Der Mathematisch {Naturwissenschaftlichen Fakult□at Der Rheinischen Friedrich {Wilhelms {Universit□at Bonn vorgelegt , Bonn 2004.

Schwedt, A. and Mommsen, H. (2004) Clay paste mixtures identified by Neutron Activation Analysis in pottery of a Roman workshop in Bonn, Germany. *Journal of Archaeological Science*, **31**, 9, 1251-1258.

## Workshops-Short Courses

1. EC Summer School: ‘Methods for Molecular Phylogenies’. Isaac Newton Institute, Cambridge, UK, August 10-14, 1998.
2. Computer Applications and Quantitative Methods in Archaeology (UK) **CAA1999**. Cardiff University, February 27-28 1999.
3. One day, short course on ‘Practical Applications of Bayesian Statistics’, 13/6/2000, RSS, London, UK.
4. Two day, short course on ‘Statistics in Finance’, Convenor: David Hand (Imperial College, London), RSS2000 pre-conference short course, 11-12 Sept. 2000, Reading, UK.
5. **RSS2000** International Conference of the Royal Statistical Society, 13-15 Sept. 2000, Reading, UK.