

# **CHRISTINA PARPOULA**

## **Curriculum Vitae**

(last updated January 2022)

### **Personal Information**


#### **Current Position**

Assistant Professor of Applied Statistics & Research Methodology (since 02/2020, untenured), Department of Psychology, Panteion University of Social and Political Sciences

#### **Work Address**

Panteion University of Social and Political Sciences, 136, Syggrou Ave, 17671 Athens, Greece, Department of Psychology, Office: B11, 2nd floor, New Bldg.

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*\*For more info at Google Scholar*

### **Education**

- **Postdoc in Applied Statistics (2016-2017)**, postdoctoral research scholarship awarded by the State Scholarships Foundation (IKY) "IKY FELLOWSHIPS OF EXCELLENCE FOR POSTGRADUATE STUDIES IN GREECE-SIEMENS PROGRAM", Lab of Statistics and Data Analysis, Department of Mathematics, University of the Aegean, Greece, Postdoc supervisor Prof. Alex Karagrigoriou.

***Postdoc Thesis** "Early and Accurate Outbreak Detection in Biosurveillance Systems through Statistical Methods"*

- **Ph.D. in Statistics (2015)**, School of Applied Mathematics and Physics, Department of Mathematics, National Technical University of Athens, Greece, Ph.D. Supervisor Prof. Christos Koukouvinos.

***Ph.D. Thesis** "Statistical Analysis of Factorial Designs, Generalized Linear Models and Model Selection Criteria".*

- **M.Sc. in Mathematical Modelling in Modern Technologies and Financial Engineering (2010)**, School of Applied Mathematics and Physics, Department of Mathematics, National Technical University of Athens, Greece, M.Sc. Supervisor Prof. Christos Koukouvinos.

**M.Sc.Thesis** “Data Mining and Statistical Analysis of Real Medical Data Using Classification, Association and Clustering Algorithms”.

- **B.Sc. in Mathematics (2007)**, Department of Mathematics, University of Ioannina, Greece.

## Fellowships/Prizes/Awards

- **First prize (among 174 e-posters)** awarded to the e-poster (no. P060) entitled “Depression and quality of life in women with endometriosis” (joint work with M. Psychogyiou and F. Anagnostopoulos) in the context of the **29th Panhellenic Congress of Psychiatry** of the Hellenic Psychiatric Association
- **Liaison-contact person** of the Greek Statistical Institute (ESI) **on Young Statisticians issues** (after the recommendation of the ESI Board).
- **Representative of the Greek Statistical Institute** (ESI), European Young Statisticians Conference in **Belgrade**, Serbia “21st European Young Statisticians Meeting-EYSM2019” (under the auspices of the Bernoulli Society for Mathematical Statistics and Probability), July 29-August 2, **2019** (oral presentation) .
- **Representative of the Greek Statistical Institute** (ESI), European Young Statisticians Conference and Workshop in **Paris**, France “Regional Workshop of European Young Researchers in Statistics”, October 29-31, **2018** (oral presentation).
- 09/2016-08/2017, **1 year Postdoc Scholarship**, IKY Fellowships of excellence for postgraduate studies in Greece-Siemens Program, Greece.
- 07/2012-11/2014, **2 ½ years PhD Scholarship**, Secretariat of the Research Committee, National Technical University of Athens, Greece.
- 2012, **Thomaidion Prize** for the “**Progress of Sciences and Arts**”, National Technical University of Athens, Greece.
- 2011, **Thomaidion Prize** for the “**Progress of Sciences and Arts**”, National Technical University of Athens, Greece.
- 2010, **Thomaidion Prize** for the “**Progress of Sciences and Arts**”, National Technical University of Athens, Greece.

## Research Interests

Statistical Modeling, Design of Experiments, Linear and Generalized Linear Models, Model Selection Criteria, Variable Selection, Information Theory Measures, Time Series Analysis, Statistical Quality Control, Data Mining, Biostatistics, Biosciences, Research Methodology in Health Sciences and Social Sciences, Qualitative and Quantitative Research Methods.

## Research Experience

11/2019-09/2022

**Scientific Expert position, Institute of Commerce and Services (ICS) of National Confederation of Hellenic Commerce (ESEE)**, Greece, project “Actions of the social partners for identifying and forecasting skills within the National Diagnosis System of

*labor market needs*", Operational Program "Human Resources Development, Education and Life Long Learning", National Strategic Reference Framework (NSRF) 2014-2020.

11/2017-03/2017

***Biostatistician/Public Health Professional position, Department of Epidemiological Surveillance and Intervention, Hellenic Center for Disease Control and Prevention (HCDCP), Ministry of Health, Greece, "CARE – Common Approach for REfugees and other migrants' health" Project (CARE Project Syndromic Surveillance).***

12/2015-06/2016

***Biostatistician position, Office of the National Cancer Registry and Rare Diseases, Hellenic Center for Disease Control and Prevention (HCDCP), Ministry of Health, Greece.***

10/2015-12/2015

***Scientific Collaborator position, National Confederation of Hellenic Commerce (ESEE), Greece, Subproject 5 "Qualitative research of the labor market needs in skills from ESEE" of the action "Actions of the social partners for identifying and forecasting skills and labor market needs within the National Diagnosis System of labor market needs", Operational Program "Human Resources Development" co-funded by Greece and the European Union (ESF), National Strategic Reference Framework (NSRF) 2007-2013.***

12/2014-10/2015

***I. Researcher/Statistician position, Department of Epidemiological Surveillance and Intervention, Hellenic Center for Disease Control and Prevention (HCDCP), Ministry of Health, Greece, National Strategic Reference Framework (NSRF) 2007-2013 "Sentinel surveillance system, primary health care services (private and public) networking for epidemiological surveillance and control of communicable disease".***

***II. Scientific Expert position, Institute of Commerce and Services (ICS) of National Confederation of Hellenic Commerce (ESEE), Greece, National Strategic Reference Framework (NSRF) 2007-2013 "Consulting support of small and medium-sized enterprises in the municipality of Athens in entrepreneurship and partnerships matters aiming at fostering innovation and competitiveness".***

## **Coordination/Participation in Funded Research Programs**

1. CARE –"Common Approach for REfugees and other migrants' health" project (**CARE Project Syndromic Surveillance**), Hellenic Center for Disease Control and Prevention (HCDCP), Greece.

2. **“Sentinel surveillance system, primary health care services (private and public) networking for epidemiological surveillance and control of communicable disease”,** National Strategic Reference Framework (NSRF) 2007-2013, Hellenic Center for Disease Control and Prevention (HCDCP), Greece.
3. Subproject 5 “Qualitative research of the market labor needs in skills from ESEE” of the action **“Actions of the social partners for identifying and forecasting skills and labor market needs within the National Diagnosis System of labor market needs”,** Operational Program “Human Resources Development” co-funded by Greece and the European Union (ESF), National Confederation of Hellenic Commerce (ESEE), Greece.
4. **“Consulting support of small and medium-sized enterprises in the municipality of Athens in entrepreneurship and partnerships matters aiming at fostering innovation and competitiveness”,** National Strategic Reference Framework (NSRF) 2007-2013, Institute of Commerce and Services (ICS) of National Confederation of Hellenic Commerce (ESEE), Greece.
5. **European Programme** for Intervention Epidemiology Training - EPIET/EUPHEM **“Rapid Assessment and Survey Methods”** Module, organized from the European Centre for Disease Prevention and Control (ECDC), the Hellenic Center for Disease Control & Prevention (HCDCP), and the National School of Public Health, Athens, Greece, June 15-20, 2015.

## Teaching Experience

### Current Teaching Experience

#### ***Undergraduate Program, Department of Psychology, Panteion University***

- Statistics I: An Introduction to Univariate Analysis
- Statistics II: An Introduction to Bivariate and Multivariate Analysis
- Practice in Statistical Analysis (laboratory course familiarizing students with the use of IBM SPSS software)
- Advanced Statistical Methods for Data Analysis

#### ***Postgraduate Program “Psychology”, Department of Psychology, Panteion University***

- Statistics

#### ***Postgraduate Program “Social Psychology of Conflicts”, Department of Psychology, Panteion University***

- Methodology and Statistical Analysis of Research Data (lectures in selected thematic units)

10/2018-07/2019

**Adjunct Faculty Member (tutor/counselor),** Postgraduate Course **“Advanced Tools and Methods for Quality Control”,** Postgraduate Study Programme “Quality Management and Technology”, School of Science and Technology, **Hellenic Open University.**

10/2018-06/2019

**Adjunct Lecturer (Academic Scholarship)** for the undergraduate courses “**Statistical Quality Control**”, “**Multivariate Analysis**”, “**Databases**”, Department of Statistics and Actuarial Financial Mathematics, **University of the Aegean**, Greece.

10/2017-07/2018

**Adjunct Faculty Member (tutor/counselor)**, Postgraduate Course “**Basic Tools and Methods for Quality Control**”, Postgraduate Study Programme “Quality Management and Technology”, School of Science and Technology, **Hellenic Open University**.

02/2018-07/2018

**Adjunct Lecturer (Academic Scholarship)** for the undergraduate course “**Financial Econometrics**”, Department of Statistics and Insurance Science, **University of Piraeus**, Greece.

10/2017-02/2018

**Adjunct Lecturer (Academic Scholarship)** for the undergraduate course “**Special Issues in Probability and Statistics I**”, Department of Mathematics, **University of the Aegean**, Greece.

03/2017-08/2017

**Adjunct Lecturer (Academic Scholarship)** for the undergraduate course “**Statistical Quality Control**”, Department of Statistics and Insurance Science, **University of Piraeus**, Greece.

10/2016-02/2017

**Adjunct Lecturer (PD407/80)** for the undergraduate course “**Applied Linear Models**”, Department of Statistics, **Athens University of Economic and Business**, Greece.

*Academic years 2012-2013 & 2013-2014*

**Laboratory Assistant** for the undergraduate courses “**Linear Models and Designs**” and “**Regression Analysis**”, & postgraduate courses “**Statistical Quality Control**” and “**Statistical Design of Experiments**”, School of Applied Mathematical and Physical Sciences, Department of Mathematics, **National Technical University of Athens**, Greece.

## **Student Supervision**

*Member of the Seven-member Examination Committee for the Evaluation of a Doctoral Thesis*

1. D. Lekka, *Removing “Human” from the Human: A Study of Perceptions, Attitudes and Behaviors in the Public Hospital* (Supervisor A. Stalikas), Department of Psychology, Panteion University, 2022.
2. E. Petrato, *Nostalgia’s Effect on Creativity, Psychological Functions and Mechanisms* (Supervisor A. Stalikas), Department of Psychology, Panteion University, 2022.

#### MSc Student Supervision

#### **Postgraduate Study Programme “Quality Management and Technology”, School of Science and Technology, Hellenic Open University**

1. V. Gkountroumani, *Environmental Management Systems: Review, Development and Application of ISO 14001:2015 Standard to a Greek Company*, September 2019.
2. M. Kalaitzi, *Quality Control and Improvement in Digital Banking: A Case Study of a Greek Systemic Bank*, September 2019.
3. A. Stamos, *Implementation of ISO/IEC 27001:2013 Standard and Related Guidelines as an Effective Tool of Compliance with the European General Data Protection Regulation*, September 2019.
4. K. Giotis, *Reliability and Failure Analysis of Fighter Aircraft Using Statistical Process Control Techniques*, September 2018.
5. E. Karampetsos, *Risk Factor Analysis Based on International Standards and Quality Control Techniques: Review and Evaluation of ISO/IEC 17025:2017 Standard*, September 2018.
6. D. Vlachodimos, *Analysis and Assessment of Vibrations in Rotary Machines Based on International Standards and Statistical Process Control Techniques*, September 2018.
7. A. Koukoulis, *Application of Statistical Process Control in Computer Science: Evaluation of Quality of Service in LTE Wireless Networks*, May 2018.

#### MSc Student Co-Supervision (member of the advisory committee)

#### **Postgraduate Program “Psychology”, Department of Psychology, Panteion University**

1. E. Alexiadou, *Assessment of Time Perception and its Correlation with Working Memory Performance Using a Virtual Reality Game*, July 2021.
2. M. Panou, *Assessment of Timing and its Correlation with Executive Functioning Performance Using a Virtual Reality Game*, December 2020.

#### **Postgraduate Study Programme “Quality Management and Technology”, School of Science and Technology, Hellenic Open University**

3. M. Karali, *International Standards for Management Systems and the Evolution of their Certification Over Time*, September 2019.
4. M. Mayris, *Presentation and Study of Experimental Designs Applicable to Agricultural Crops, with Emphasis on Block Designs*, September 2019.

5. S. Spiridonakos, *Design and Analysis of Experiments & Taguchi Methods for the Development of a New Road Marking Product*, September 2019.
6. I. Tilipakis, *Requirements Analysis and Process Improvement in the "Sport for All" Program*, September 2019,
7. E. Kouseri, *Customer Satisfaction Assessment in a Product Marketing Company Implementing Quality, Environmental Management and Food Safety Systems*, May 2019.
8. P. Askounis, *Study and Assessment of Individual Ionizing Radiation Doses of Physicians in Invasive Cardiology*, September 2018.
9. F. Kazakos, *Evolution of ISO 9001 and Investigation of Certification Trends in Transmission Services Companies*, September 2018.
10. I. Zavanti, *Inverse Gaussian Distribution Control Charts*, September 2018,
11. E. Arbaras, *Analysis of Factors Affecting the Packaging of Crop Protection Products*, May 2018.

#### Undergraduate Student Supervision

##### **Undergraduate Study Program, Department of Psychology, Panteion University**

1. F. Diamanti, *The Mediating Role of Anxiety in the Relationship Between Meaning in Life and Emotional Well-Being*, September 2021.
2. E. Siebou, *Measuring Anxiety and Attitudes of Psychology Students Toward Statistics*, September 2021.
3. K. Tzatzou, *Exploring Psychology Students' Beliefs and Attitudes toward Statistics*, September 2021.
4. N. Tzaferi, *A Qualitative study Exploring Skills Needs for the Profession of Psychologist*, September 2021.

#### **Publications in Peer-Reviewed International Journals**

1. M. Psychogiou, F. Anagnostopoulos and C. Parpoula (2022). Pain catastrophizing, chronic pain, depression and quality of life in women with endometriosis. *Archives of Hellenic Medicine*, 39(1), 60-71.
2. C. Vova-Chatzi, E. Symvoulakis, C. Parpoula, V. Sbarouni and C. Lionis (2020). Robustness of the EUROPEP questionnaire as regards data quality, reliability, and construct validity: The Greek experience before and after the economic crisis. *Health Policy*, 124(8), 856-864.
3. E.-N.Kalligeris, A. Karagrigoriou and C. Parpoula (2020). Periodic-type autoregressive moving average modeling with covariates for time-series incidence data via changepoint detection. *Statistical Methods in Medical Research*, 29(6), 1639-1649.
4. E.-N.Kalligeris, A. Karagrigoriou and C. Parpoula (2020). On mixed PARMA modeling of epidemiological time series data. *Communications in Statistics: Case Studies, Data Analysis and Applications*, 6(1), 36-49.
5. E.-N. Kalligeris, A. Karagrigoriou, K. Ladopoulos and C. Parpoula (2019). Adjusted Transformation Methods for Reproduction Quality Control. *Journal of Mathematics and Statistics*, 15 (1), 273-279.
6. K. Chatterjee, C. Koukouvinos and C. Parpoula (2017). On the analysis of unbalanced two-level supersaturated designs via generalized linear models. *Communications in Statistics - Simulation and Computation*, 46, 3383-3395.

7. K. Chatterjee, C. Koukouvinos and C. Parpoula (2016). Computer-aided unbalanced supersaturated designs involving interactions. *Journal of Statistical Computation and Simulation*, 86, 756-770.
8. N. Balakrishnan, C. Koukouvinos and C. Parpoula (2015). Analyzing supersaturated designs for discrete responses via generalized linear models. *Statistical Papers*, 56, 121-145.
9. N. Balakrishnan, C. Koukouvinos and C. Parpoula (2015). On the computation of entropy prior complexity and marginal prior distribution for the Bernoulli model. *Journal of Statistical Theory and Practice*, 9, 59-72.
10. C. Koukouvinos and C. Parpoula (2015). A penalized wrapper method for screening main effects and interactions in supersaturated designs. *Quality and Reliability Engineering International*, 31, 1423-1435.
11. C. Parpoula, K. Drosou, C. Koukouvinos and K. Mylona (2014). A new variable selection approach inspired by supersaturated designs given a large-dimensional dataset. *Journal of Data Science*, 12, 35-52.
12. C. Parpoula, C. Koukouvinos, D.E. Simos and S. Stylianou (2014). Supersaturated plans for variable selection in large databases. *Statistics, Optimization and Information Computing*, 2, 161-175.
13. N. Balakrishnan, C. Koukouvinos and C. Parpoula (2013). An information theoretical algorithm for analyzing supersaturated designs for a binary response. *Metrika*, 76, 1-18.
14. C. Koukouvinos, K. Mylona and C. Parpoula (2013). A combination of variable selection and data mining techniques for high-dimensional statistical modeling. *International Journal of Information and Decision Sciences*, 5, 154-168.
15. C. Parpoula, K. Drosou and C. Koukouvinos (2013). Large-scale statistical modelling via machine learning classifiers. *Journal of Statistics Applications and Probability*, 2, 1-20.
16. N. Balakrishnan, C. Koukouvinos and C. Parpoula (2012). Analysis of a supersaturated design using entropy prior complexity for binary responses via generalized linear models. *Statistical Methodology*, 9, 478-485.
17. C. Koukouvinos and C. Parpoula (2012). Development of a model for trauma outcome prediction. A real-data comparison of artificial neural networks, logistic regression and data mining techniques. *International Journal of Biomedical Engineering and Technology*, 10, 84-99.
18. C. Koukouvinos and C. Parpoula (2012). A comparative study for the use of ROC analysis for variable selection in medical data. *Journal of Applied Probability and Statistics*, 6, 47-60.
19. C. Koukouvinos and C. Parpoula (2012). Variable selection and computation of the prior probability of a model via ROC curves methodology. *Journal of Data Science*, 10, 653-672.
20. C. Koukouvinos and C. Parpoula (2012). Analyzing supersaturated designs by means of an information based criterion. *Communications in Statistics - Simulation and Computation*, 41, 44-57.
21. C. Koukouvinos, C. Parpoula and E.-M. Theodoraki (2012). Classification methods and ROC analysis for outcome prediction of patients following injuries. *International Journal of Biomedical Engineering and Technology*, 8, 49-59.
22. C. Koukouvinos, E. Massou, K. Mylona and C. Parpoula (2011). Analyzing supersaturated designs with entropic measures. *Journal of Statistical Planning and Inference*, 141, 1307-1312.
23. C. Koukouvinos and C. Parpoula (2011). ROC analysis and data mining techniques for optimal management of trauma patients. *International Journal of Decision Sciences*, 2, 145-158.



24. E.-M. Theodoraki, S. Katsaragakis, C. Koukouvinos and C. Parpoula (2010). Innovative data mining approaches for outcome prediction of trauma patients, *Journal of Biomedical Science and Engineering*, 3, 791-798.

## **Publications in Peer-Reviewed Book Chapters/Collective Volumes**

1. C. Parpoula (2021). Phase I Nonparametric Control Charts for Individual Observations: A Selective Review and Some Results. Book Chapter in *Applied Modeling Techniques and Data Analysis 1: Computational Data Analysis Methods and Tools* (Eds. Y. Dimotikalis et al.), Chapter 13, Vol. 7, Part 2, pp. 233-248, iSTE Wiley, London.
2. C. Parpoula and A. Karagrigoriou (2020). On Change-Point Analysis-Based Distribution-Free Control Charts with Phase I Applications. Book Chapter in *Distribution-free Methods for Statistical Process Monitoring and Control* (Eds. M. Koutras, I. Triantafyllou), pp. 157-182, Springer, Cham.
3. E.-N. Kalligeris, A. Karagrigoriou, A. Lambrou and C. Parpoula (2020). Statistical Techniques and Stochastic Modeling in Public Health Surveillance Systems Engineering. Book Chapter in *Recent Advances in Mathematics for Engineering* (Eds. Mangey Ram), Chapter 1, pp. 1-19, CRC Press, Taylor & Francis.
4. C. Parpoula, A. Lambrou, K. Gkolfinopoulou, L. Veneti, M. Pantelikizi, M. Potamiti-Komi, E. Terzaki, T. Georgakopoulou, A. Baka, C. Hadjichristodoulou (2016). A comparative study of statistic-based techniques for detecting changes in influenza-like illness activity, Greece, influenza seasons 2010- 2015. *Hellenic Centre for Disease Control and Prevention Newsletter [online]*, March 2016, Issue 62, ISSN 1792-9016, pp. 14-17.

## **Publications in Peer-Reviewed International Conference Proceedings**

1. E.-N. Kalligeris, A. Karagrigoriou, A. Makrides, C. Parpoula and V.S. Barbu (2021). On some aspects of discrete-time semi-Markov switching models, In A. Makrides et al. (Eds.), *Proceedings of the 22nd European Young Statisticians Meeting-EYSM 2021*, Depts. of Psychology & Sociology, Panteion University, Athens, pp. 46-50, ISBN: 978-960-7943-23-1.
2. E.-N. Kalligeris, A. Karagrigoriou and C. Parpoula (2021). An Advanced Markov Switching Approach for the Modelling of Consultation Rate Data, *Engineering Proceedings*, 5(1): 2 <https://doi.org/10.3390/engproc2021005002>.
3. C. Parpoula, E.-N. Kalligeris and A. Karagrigoriou (2019). A comparative study of change-point analysis techniques for outbreak detection, In Bojana Milosevic, Marko Obradovic (Eds.), *Proceedings of the 21st European Young Statisticians Meeting-EYSM 2019*, Faculty of Mathematics, Belgrade, pp. 85-89, ISBN: 978-86-7589-137-6.
4. C. Parpoula, A. Karagrigoriou and A. Lambrou (2017). Epidemic Intelligence Statistical Modelling for Biosurveillance. In J. Blömer et al. (Eds.): *MACIS 2017, Lecture Notes in Computer Science (LNCS)*, LNCS volume 10693, pp. 349-363, Springer International Publishing AG.
5. C. Koukouvinos, C. Parpoula and D.E. Simos (2013). Genetic algorithm and data mining techniques for design selection in databases. In *Proceedings of the 2013 IEEE International Conference on Availability, Reliability and Security (ARES2013)*, pp. 743-746, DOI: 10.1109/ARES.2013.98.

6. E.-M., Theodoraki, C. Koukouvinos and C.Parpoula (2010). Neural Networks for prediction of Trauma victims' outcome. Comparison with the TRISS and Revised Trauma Score. In *Proceedings (refereed) of the 10th IEEE International Conference on Information Technology and Applications in Biomedicine (ITAB2010)*, Corfu, Greece, No. 133, pp. 1-4, ISBN: 978-1-4244-6561-3.

### **Publications in Peer-Reviewed Panhellenic Conference Proceedings**

1. E.-N.Kalligeris, A. Karagrigoriou, A. Lambrou and C. Parpoula (2018). A comparative study for the use of periodic regression models for detection of influenza outbreaks. In *Proceedings of the 31st Panhellenic Statistics Conference*, pp. 292-301.
2. E. Karabetsos and C. Parpoula (2018). A Review of ISO/IEC 17025:2017 - Risk Factors Analysis Based on International Standards and Quality Control Techniques. In *Proceedings of the 7th Hellenic National Conference on Metrology*, ID73, Athens, Greece.

### **Special Issues/Bulletins/ Publications**

1. C. Parpoula (2016-17). *Early and Accurate Outbreak Detection in Biosurveillance Systems through Statistical Methods*, Postdoc Thesis, Lab of Statistics and Data Analysis, Department of Mathematics, University of the Aegean, Greece.
2. E. Tzala, C. Parpoula, S. Kapnidi (2016). *Improving the Functioning of the National Cancer Registry: Outcomes of the Consensus Process*, Office of the National Cancer Registry and Rare Diseases, Hellenic Center for Disease Control and Prevention (HCDCP), Ministry of Health, Athens, Greece.
3. F. Dalianis, S. Pardalis, C. Parpoula, M. Stamboulis, M. Synzouki, K. Eleftheriou (2015). *Qualitative Study/Skills Requirements Report for the Profession of a Specialized Sales Employee*, Subproject 5 "Qualitative research of the labor market needs in skills from ESEE" of the action "Actions of the social partners for identifying and forecasting skills and labor market needs within the National Diagnosis System of labor market needs", Operational Program "Human Resources Development" co-funded by Greece and the European Union (ESF), National Confederation of Hellenic Commerce (ESEE), Athens, Greece.
4. F. Dalianis, S. Pardalis, C. Parpoula, M. Stamboulis, M. Synzouki, K. Eleftheriou (2015). *Qualitative Study/Skills Requirements Report for the Profession of an E-Commerce Management System Employee*, Subproject 5 "Qualitative research of the labor market needs in skills from ESEE" of the action "Actions of the social partners for identifying and forecasting skills and labor market needs within the National Diagnosis System of labor market needs", Operational Program "Human Resources Development" co-funded by Greece and the European Union (ESF), National Confederation of Hellenic Commerce (ESEE), Athens, Greece.
5. C. Parpoula (2015). *Statistical Analysis of Factorial Designs, Generalized Linear Models and Model Selection Criteria*, Ph.D. Thesis, School of Applied Mathematics and Physics, Department of Mathematics, National Technical University of Athens, Greece.

## Presentations at Scientific Conferences (oral talk)

1. "On nonparametric Phase I analysis of individual observations from a change-point model perspective", **63rd International Statistical Institute World Statistics Congress 2021 (ISI WSC 2021)**, virtual, July 12-16, **2021**.
2. "A Recursive Optimization Algorithm for Optimal Multiple Change-Point Detection and Inference", **19th Applied Stochastic Models and Data Analysis International Conference (ASMDA 2021)**, Athens (hybrid), Greece, June 1-4, **2021**.
3. "A Distribution-Free Phase I Control Charting Technique for Individual Observations Based on Change-Point Analysis", Session "Nonparametric statistics", **Bernoulli-IMS One World Symposium 2020** on "Probability and Mathematical Statistics", co-organized by the Bernoulli Society, the Institute of Mathematical Statistics and the One World Probability Project, August 24-28, **2020**.
4. "Nonparametric Univariate and Multivariate Change-Point Analysis-Based Control Charts", **6th Stochastic Modeling Techniques and Data Analysis International Conference with Demographics Workshop (SMTDA 2020)**, Barcelona, Spain, June 2 - 5, **2020** (turned into an online conference).
5. "Phase I Distribution-Free Control Charting Methods Based on Change-Point Analysis for Outbreak Detection", **5th International Conference on Advances in Statistics**, Athens, Greece, April 22-24, **2019**.
6. "Serfling-type Periodic Regression Models for Epidemiological Time Series Analysis", **1st Regional Workshop of European Young Researchers in Statistics**, Paris, France, October 29-31, **2018**.
7. "Periodic Regression Models for Outbreak Detection in Biosurveillance Systems", **5th Stochastic Modeling Techniques and Data Analysis International Conference (SMTDA 2018)**, Special Invited Session: Statistical, Stochastic and Data Analysis Methods and Applications (SSDAMA), Chania, Crete, Greece, June 12-15, **2018**.
8. "Time Series Model Selection and Goodness of Fit in Epidemiological Surveillance", **2nd Conference of Young Researchers in the Branches of Mathematical Science**, Department of Mathematics, University of Ioannina, Ioannina, Greece, June 1-2, **2018**.
9. "Time Series Analysis of Epidemiological Data using Serfling-type Periodic Regression Models", **31st Panhellenic Statistics Conference** "The Data Science in Information Technology and Biomedicine", Lamia, Greece, May 4-6, **2018**.
10. "Model Selection in Time Series Studies of Influenza Morbidity", **21th Conference of the Romanian Society of Probability and Statistics**, Bucharest Academy of Economic Studies, Bucharest, Romania, April 13-14, **2018**.
11. "Epidemic Intelligence Statistical Modelling for Biosurveillance", **7th International Conference on Mathematical Aspects of Computer and Information Sciences (MACIS 2017)**, Vienna, Austria, November 15-17, **2017**.
12. "Improving the Functioning of National Cancer Registry: Consensus Panel Results", **11th National Conference of Public Health & Health Services** "Public Health and Primary Health Care: Common Goals", organized by the National School of Public Health & the Hellenic Association of Public Health, Athens, Greece, March 21-23, **2016**.
13. "Statistic-based Techniques for Detecting Changes in Influenza-like Illness Activity, Greece, Influenza Seasons 2010-2015", **11th National Conference of Public Health & Health Services** "Public Health and Primary Health care: Common Goals", organized by the National School of Public Health & the Hellenic Association of Public Health, Athens, March 21-23, **2016**.

14. "Analyzing Supersaturated Designs via Penalized Support Vector Machines", **28<sup>th</sup> Panhellenic Statistics Conference** "Spatial Statistics and Statistical Applications in Genetics and Informatics", Athens, Greece, April 15-18, **2015**.
15. "A Variable and Design Selection Method for High-dimensional Data", **27<sup>th</sup> Panhellenic Statistics Conference** "Big Data Analysis - Business Analytics", Thessaloniki, Greece, April 23-26, **2014**.
16. "Optimal Design Selection and Data Mining Techniques for Statistical Analysis and Modelling of Databases", **26<sup>th</sup> Panhellenic Statistics Conference** "Statistics in Actuarial, Finance and Risk Management", Piraeus, Greece, May 8-12, **2013**.
17. "Variable Selection and Computation of the Prior Probability of a Model with Application in Real Medical Data", **25<sup>th</sup> Panhellenic Statistics Conference** "Statistics in Biosciences", Volos, Greece, April 18-22, **2012**.
18. "Variable Selection and Computation of the Prior Probability of a Model", **6<sup>th</sup> International Conference of the Eastern Mediterranean Region International Biometric Society**, Hersonissos, Crete, Greece, May 8-12, **2011**.
19. "Data Mining Algorithms, Evaluation Measures and ROC Analysis Applied to High Dimensional Real Medical Data", **23<sup>rd</sup> Panhellenic Statistics Conference** "Statistics and Internet", Veroia, Greece, April 7-11, **2010**.

### Presentations at Scientific Conferences (participation)

20. "Continuous-Time Hidden Semi-Markov Modeling of Time-Series Incidence Data" **33<sup>rd</sup> Panhellenic Statistics Conference** "Statistics in the Economy and Administration", online, September 23-26, **2021**.
21. "Semi-Markov Regime Switching Modeling for Anomaly Detection in Time-Series Incidence Data", **22<sup>nd</sup> European Young Statisticians Meeting (EYSM 2021)**, Athens (online), Greece, September 6-10, **2021**.
22. "An Advanced Markov Switching Approach for the Modeling of Consultation Rate Data", **7<sup>th</sup> International Work-Conference on Time Series (ITISE 2021)**, Gran Canaria, Spain, July 19-21, **2021**.
23. "Depression and quality of life in women with endometriosis" (e-poster), **29<sup>th</sup> Panhellenic Congress of Psychiatry** of the Hellenic Psychiatric Association, Thessaloniki (online), Greece, June 10-13, **2021**.
24. "The Use of Penalized Regime Switching for the Modeling of Consultation Rate Data", **19<sup>th</sup> Applied Stochastic Models and Data Analysis International Conference (ASMDA 2021)**, Athens (hybrid), Greece, June 1-4, **2021**.
25. "The use of Changepoint Detection Analysis for the Modeling of Time-Series Consultation Rate Data", **e-Workshop "2nd LabSTADA Statistics and Probability e-Day"**, Department of Statistics and Actuarial-Financial Mathematics, University of the Aegean, Samos, Greece, May 15, **2021**.
26. "A Changepoint Approach for the Modeling of Time-Series Incidence Data", **Bernoulli-IMS One World Symposium 2020**, Session "Case studies in statistics", August 24-28 **2020**.
27. "Time-series Incidence Data Modeling via Penalized Markov Switching", **6<sup>th</sup> Stochastic Modeling Techniques and Data Analysis International Conference with Demographics Workshop (SMTDA 2020)**, Barcelona, Spain, June 2 - 5, **2020** (turned into an online conference).
28. "A Penalized Likelihood Approach for Markov Switching Modeling of Time-Series Incidence Data", **e-Workshop "1st LabSTADA Statistics and Probability e-Day"**, Department of Statistics and Actuarial-Financial Mathematics, University of the Aegean, Samos, Greece, May 6, **2020**.

29. "Modelling of Multi-State Systems via a Markov Switching Approach", **5th International Conference on Advances in Statistics**, Athens, Greece, April 22-24, **2019**.
30. "On Generalized Linear Mixed Modeling of Epidemic Prone Syndromes in Biosurveillance", **5th Stochastic Modeling Techniques and Data Analysis International Conference (SMTDA 2018)**, Special Invited Session: Statistical, Stochastic and Data Analysis Methods and Applications (SSDAMA), Chania, Crete, Greece, June 12-15, **2018**.
31. "A Review of ISO/IEC 17025:2017 - Risk Factors Analysis Based on International Standards and Quality Control Techniques", **7th Hellenic National Conference of Metrology**, Athens War Museum, May 11-12, **2018**.
32. "On Mixed PARMA Modeling of Epidemic Activity in Biosurveillance Systems", **31st Panhellenic Statistics Conference** "The Data Science in Information Technology and Biomedicine", Lamia, Greece, May 4-6, **2018**.
33. "On Mixed PARMA Modeling of Epidemic Activity in Biosurveillance Systems", **21th Conference of the Romanian Society of Probability and Statistics**, Bucharest Academy of Economic Studies, Bucharest, Romania, April 13-14, **2018**.
34. "Creating a Modern National Sentinel Surveillance Network in Public Health Care", **11th National Conference of Public Health & Health Services** "Public Health and Primary Health care: Common Goals", organized by the National School of Public Health & the Hellenic Association of Public Health, Athens, March 21-23, **2016**.
35. "A Comparative Study of Statistic-based Techniques for Detecting Changes in Influenza-like illness activity, Greece, influenza seasons 2010-2015", **European Scientific Conference on Applied Infectious Disease Epidemiology (ESCAIDE 2015)**, Stockholm, Sweden, November 11-13, **2015**.
36. "Neural Networks for Prediction of Trauma Victims' Outcome", **10th IEEE International Conference on Information Technology and Applications in Biomedicine (ITAB 2010)**, Corfu, Greece, November 2-5, **2010**.
37. "Innovative Data Mining Approaches for Outcome Prediction of Trauma Patients", **International Conference on Biomedical Data & Knowledge Mining: Towards Biomarker Discovery (DMBIO 2010)**, Chania, Crete, Greece, July 7-9, **2010**.

### Academic Visits (invited scientific talk)

1. "Optimal Multiple Change-Point Detection and Inference" (scientific talk), e-workshop "**StatMod2021-Statistical Modeling with Applications**", "Gheorghe Mihoc-Caius Iacob" Institute of Mathematical Statistics and Applied Mathematics, **Romanian Academy**, Bucharest, Romania, **University of Caen Normandy (UNICAEN)** and Laboratory of Mathematics Raphael Salem, **University of Rouen**, Normandy, France, December 3-4, **2021**.
2. "Optimal Multiple Change-Point Detection and Inference" (scientific talk), **Special Session** "Young (Greek) Statisticians Contribution to Probability and Statistics with Applications" **33rd Panhellenic Statistics Conference** "Statistics in the Economy and Administration", online, September 23-26, **2021**.
3. "A distribution-free multiple change-point model for Phase I analysis of individual observations" (scientific talk), e-workshop "**StatMod2020-Statistical Modeling with Applications**", Institute of Mathematical Statistics and Applied Mathematics, **Romanian Academy**, Bucharest, Romania, and Laboratory of Mathematics Raphael Salem, **University of Rouen**, Normandy, France, November 6-7, **2020**.
4. "Nonparametric Univariate and Multivariate Change-Point Analysis-Based Control Charts" (scientific talk), e-Workshop "**1st LabSTADA Statistics and Probability**

- e-Day**", Lab of Statistics and Data Analysis, Department of Statistics and Actuarial-Financial Mathematics, **University of the Aegean**, Samos, Greece, May 6, 2020.
5. "*Distribution-Free Change-Point Outbreak Detection Control Charts in Biosurveillance*"(scientific talk), **21<sup>st</sup> European Young Statisticians Meeting (EYSM 2019)** under the auspices of **Bernoulli Society** for Mathematical Statistics and Probability, Belgrade, Serbia, July, 29-August 02, 2019.
  6. "*Non Parametric Control Charts for Biosurveillance*" (scientific talk), **Statistics and Actuarial-Financial Mathematics Seminar Series**, Department of Statistics and Actuarial-Financial Mathematics, **University of the Aegean**, Samos, Greece, April 10, 2019.
  7. "*The Use of R in Biosciences*" (scientific lectures), Invited Speaker/Tutor at the **Summer School "R and Big Data Analytics-RaBDA2018"** organized by the Lab of Statistics and Data Analysis, Department of Statistics and Actuarial-Financial Mathematics, **University of the Aegean**, Karlovasi, Samos, June 22-28, 2018.
  8. "*Periodic Regression Models for Outbreak Detection in Biosurveillance Systems*" (scientific talk), **Statistics and Actuarial-Financial Mathematics Seminar Series**, Department of Mathematics, **University of the Aegean**, Samos, Greece, December 5, 2017.
  9. "*An Algorithmic Approach for Analyzing Supersaturated Designs via Information Theory Measures*"(scientific talk), **Statistics and Probability Seminar Series**, Department of Mathematics and Applied Mathematics, **University of Crete (UOC)**, Greece, April 28, 2017.
  10. "*Analyzing Supersaturated Designs for Discrete Responses via Generalized Linear Models*" (scientific talk), **Statistics Seminar Series**, Department of Statistics, **Athens University of Economic and Business (AUEB)**, Greece, January 26, 2017.

## Event Organization/Co-Organization/Chairing

### Conference Organization/Co-Organization

C. Parpoula, **Chair** of the **22<sup>nd</sup> European Young Statisticians Meeting (EYSM 2021)**, Athens (online), September 6 - 10, 2021 <https://www.eysm2021.panteion.gr/> under the auspices of the European Regional Committee (ERC) of *Bernoulli Society for Mathematical Statistics and Probability*.

- *Committee Membership for EYSM 2021*

<https://www.eysm2021.panteion.gr/committees.html>

- Member (chair) of the **Local Organizing Committee (LOC)** of EYSM 2021
- Member of the **International Organizing Committee (IOC)** of EYSM 2021
- Member of the **Scientific Programme Committee (SPC)** of EYSM 2021
- **Liaison** between EYSM 2021 co-organizers and the **European Regional Committee (ERC)** members of the Bernoulli Society for Statistics and Probability

1. A. Makrides, F. Milienos, P. Papastamoulis, C. Parpoula & A. Rakitzis (2021). **Proceedings of the 22nd European Young Statisticians Meeting-EYSM 2021** under the auspices of Bernoulli Society, Depts. of Psychology & Sociology, Panteion University, Athens, ISBN: 978-960-7943-23-1 <https://www.eysm2021.gr/publications.html>
2. A. Makrides, F. Milienos, P. Papastamoulis, C. Parpoula & A. Rakitzis (2021), **Book of Abstracts of the 22nd European Young Statisticians Meeting-EYSM 2021** under the auspices of Bernoulli Society, Depts. of Psychology & Sociology, Panteion University, Athens, ISBN: 978-960-7943-23-1 <https://www.eysm2021.gr/publications.html>

#### Special Session Organization/Co-Organization

A. Karagrigoriou, C. Parpoula, I. Vonta [Organizers], **Special Session: Models & Methods in Stochastic and Multivariate Data Analysis** [Part I, Part II (chair), Part III], *19th Applied Stochastic Models and Data Analysis International Conference (ASMDA2021)* and the Demographics 2021 Workshop, June 1-4, 2021, Athens, Greece.

### Other Academic Activities

#### Books/Proceedings/Journals/Periscopes – Editorial Work

1. **Scientific Editor** (with E.-N. Kalligeris and C. Karagrigoriou-Vonta) of the **77th Statistical Periscope**, *The News of the Greek Statistical Institute*, Greek Statistical Institute, Vol. 77, pp. 1-9, ISSN: 2529-105X, Januray 2022. <https://esi-stat.gr/στατιστικά-περισκόπια/>
2. **Scientific Editor** (with E. Gaki και I. Santouridis) of the Book «**An Adventure in Statistics: The Reality Enigma**», Author **Andy Field**, 1<sup>st</sup> edition (752 pages) ISBN: 9786185036621, Propobos Publications, Athens, 2021 <https://www.propobos.gr/product/mia-peripeteia-sti-statistiki/>
3. A. Makrides, F. Milienos, P. Papastamoulis, C. Parpoula & A. Rakitzis (2021). **Proceedings of the 22nd European Young Statisticians Meeting-EYSM 2021** under the auspices of Bernoulli Society, Depts. of Psychology & Sociology, Panteion University, Athens, ISBN: 978-960-7943-23-1 <https://www.eysm2021.gr/publications.html>
4. A. Makrides, F. Milienos, P. Papastamoulis, C. Parpoula & A. Rakitzis (2021), **Book of Abstracts of the 22nd European Young Statisticians Meeting-EYSM 2021** under the auspices of Bernoulli Society, Depts. of Psychology & Sociology, Panteion University, Athens, ISBN: 978-960-7943-23-1 <https://www.eysm2021.gr/publications.html>
5. Dimotilakis, Y., Karagrigoriou, A., Parpoula, C. & Skiadas, C. (2021). **Applied Modeling Techniques and Data Analysis 1: Computational Data Analysis Methods and Tools**, Vol. 7 “Big Data, Artificial Intelligence and Data Analysis set” iSTE Wiley, London, ISBN: 9781786306739 <http://www.iste.co.uk/book.php?id=1754>
6. Dimotilakis, Y., Karagrigoriou, A., Parpoula, C. & Skiadas, C. (2021). **Applied Modeling Techniques and Data Analysis 2: Financial, Demographic, Stochastic and Statistical Models and Methods**, Vol. 8 “Big Data, Artificial Intelligence and



- Data Analysis set" iSTE Wiley, London, ISBN: 9781786306746  
<http://www.iste.co.uk/book.php?id=1755>
7. T. Gelsinis, K. Ntotsis & C. Parpoula (2020). Periodic digital edition "e-Periscope" (vol. 1 & vol. 2 editing) <https://labstada.weebly.com/e-periscope.html>  
 - e-periscope vol. 1 "What would you like to show?"  
 - e-periscope vol. 2 "Reversion and Regression: two peas in a pod - Part 1"
  8. A. Karagrigoriou & C. Parpoula (2019) [Guest Editors]. Special Issue: **Statistical Modelling with Applications**, Journal of Mathematics and Statistics, Vol. 15 (100 pages), Science Publications <https://thescipub.com/jmss/special-issue/49222>

#### Committee Membership/ Administrative Work

- Member of the **International Organizing Committee** (IOC) of the 22<sup>nd</sup> European Young Statisticians Meeting (EYSM 2021)
- Member of the **Scientific Programme Committee** (SPC) of the 22<sup>nd</sup> European Young Statisticians Meeting (EYSM 2021)
- Member (Chair) of the **Local Organizing Committee** (LOC) of the 22<sup>nd</sup> European Young Statisticians Meeting (EYSM 2021)
- **Liaison** between EYSM 2021 co-organizers and the **European Regional Committee (ERC)** members of the Bernoulli Society for Statistics and Probability
- Member of the **Internal Evaluation Group** (IEG) of the Department of Psychology, Panteion University (2020-21, 2021-22)
- **Deputy Coordinator** of the specialized direction "Positive Psychology", Postgraduate Program "Psychology", Department of Psychology, Panteion University (2020-21, 2021-22)
- Member of the **three-member recommendation committee** for the evaluation of PhD Candidate Applications (November 2021)
- Member of the **Qualifying Exams Committee** for the course "Research Methodology", Department of Psychology, Panteion University (May 2021, December 2021)

#### Membership to Scientific Associations/Labs/Registers

- Member of the Greek Statistical Institute (ESI)
- Member of the Young Statisticians Europe group-YSE (liaison-contact person of the Greek Statistical Institute on Young Statisticians issues)
- Member of the Eastern Mediterranean Region of the International Biometric Society (EMR-IBS)
- Member of the Romanian Society of Probability and Statistics
- Member of the Laboratory of Statistics and Data Analysis (Lab S.T.A.D.A.), Department of Statistics and Actuarial-Financial Mathematics, University of the Aegean

#### Journals – Referee Activity

1. Communications in Statistics-Simulation and Computation
2. Communications in Statistics-Theory and Methods
3. Communications in Statistics-Case Studies, Data Analysis and Applications
4. Journal of Applied Probability and Statistics
5. Journal of Statistical Computation and Simulation



6. Journal of Applied Statistics
7. Statistica Neerlandica
8. Statistics and Probability Letters
9. Statistics in Medicine
10. Statistical Methods in Medical Research
11. Journal of Mathematics and Statistics
12. Journal of Advances in Mathematics and Computer Science
13. Journal of Realibility and Statistical Studies  
etc.

## Other Scientific Skills

### Foreign Language Skills:

- *English:* Certificate of Proficiency in English, University of Michigan
- *French:* Diplôme d'études françaises, Université de Paris, Sorbonne I & Sorbonne II

### Computer Skills:

- Statistical Packages and Programming Languages (SPSS, SPSS Modeler, Statgraphics, Minitab, Stata, R)
- Computer Programming Languages: MATLAB, LaTeX
- Relational Database Management Systems (MySQL, SQL Server Report Builder)
- Computer Mapping Applications (GIS, Quantum GIS)
- “Certified Computer User”, Aristotle Certification Training & Assessment (ACTA), Aristotle University of Thessaloniki, Modules: MS Word, MS Excel, MS Internet Explorer & MS Outlook Express, MS PowerPoint.