

CURRICULUM VITAE

KONSTANTINOS ZOGRAFOS

1. Personal

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2. Current Positions

Professor of Statistics,
Department of Mathematics, Section of Probability-Statistics and Operational Research, University of Ioannina, GREECE,
July 2008 - Present.

3. Previous/Other Positions

Associate Professor,
Department of Mathematics, Section of Probability-Statistics and Operational Research, University of Ioannina, GREECE,
July 2001 - July 2008.

Assistant Professor,
Department of Mathematics, Section of Probability-Statistics and Operational Research, University of Ioannina, GREECE,
May 1994 - July 2001.

Lecturer,
Department of Mathematics, Section of Probability-Statistics and Operational Research, University of Ioannina, GREECE,
January 1990 - May 1994.

Research and Teaching Assistant,
Department of Mathematics, Section of Probability-Statistics and Operational Research, University of Ioannina, GREECE,
May 1982 - September 1987 and May 1989 - January 1990. (Military Service: Sep. 1987-May 1989).

Visiting,
Department of Mathematics and Statistics
University of Cyprus,
January 2006 - June 2006.

Visiting Position for Research,
Department of Mathematics and Statistics
McMaster University, Hamilton, Ontario, Canada
July 2007 - August 2007.

Tutor, Hellenic Open University, Greece, School of Social Sciences, Undergraduate Program in Business Administration, Public Administration, Quantitative Methods, Oct. 2013 – July 2014, Oct. 2014 – July 2015, Oct. 2015 – July 2016, Oct. 2016 – July 2017, Oct. 2017 – July 2018, Oct. 2019 – July 2020, Oct. 2020 – Febr. 2021 and March 2021 – July 2021. Oct. 2021 – July 2022.

Chair, Department of Mathematics, University of Ioannina: Two terms, 2009-2011, 2017-2020.

Director of Graduate Studies, Department of Mathematics, University of Ioannina (2012-2016, Two Terms).

Director of the Section of Probability-Statistics and Operational Research of the Department of Mathematics, University of Ioannina (2001/02, 2004/05, 2008/09, 2011/2012, 2015/2016).

4. Education

Ph.D. in Statistics, University of Ioannina, Greece, June 1987

Title: *Contributions to Statistical Information Theory* (supervisor: Prof. T. Papaioannou).

B.Sc. in Mathematics, University of Ioannina, Greece, March 1982.

Fellowship: 1977-1981, Undergraduate Fellowship, State Scholarships Foundation of Greece.

5. Membership in Professional Societies

Institute of Mathematical Statistics (1993 -)

Greek Statistical Institute (1989 -)

Greek Mathematical Society (1982 -)

6. Research Interests

Statistical Information Theory, Parametric Statistical Inference, Multivariate Analysis, Asymptotic Statistics, Measures of Association and Dependence, Analysis of Categorical Data, Statistical Distributions.

7. Refereed Journal Papers

65. Zografos, K. (2022). On reconsidering entropies and divergences and their cumulative counterparts: Csiszár's, DPD's and Fisher's type cumulative and survival measures. *Probability in the Engineering and Informational Sciences* (Accepted).

64. Popovic, B., Ristic, M. and Zografos, K. (2022). Integral transformation of a copula function. *Communications in Statistics - Theory and Methods* (Accepted).

63. Castilla, E. and Zografos, K. (2022). On distance-type Gaussian estimation. *Journal of Multivariate Analysis*, **188**, 104831, doi.org/10.1016/j.jmva.2021.104831.

62. Castilla, E., Martin, N., Pardo, L. and Zografos, K. (2021). Composite likelihood methods: Rao-type tests based on composite minimum density power divergence estimator. *Statist. Papers*, **62**, 1003-1041.

61. Castilla, E., Martin, N., Pardo, L. and Zografos, K. (2020). Model Selection in a Composite Likelihood Framework Based on Density Power Divergence. *Entropy* **2020**, 22, 270; doi:10.3390/e22030270.

60. Avlogiaris, G. Micheas, A. and Zografos, K. (2019). A criterion for local model selection. *Sankhya A*, **81**, 406-444.

59. Martin, N., Pardo, L. and Zografos, K. (2019). On divergence tests for composite hypotheses under composite likelihood. *Statistical Papers*, **60**, 1883-1919.

58. Chaji, A. and Zografos, K. (2019). An estimator of Shannon entropy of beta-generated distributions and a goodness of fit test. *Communications in Statistics - Simulation and Computation*, **48**, 396-415.

57. Ristic, M., Popovic, B., Zografos, K. and Balakrishnan, N. (2018). Discrimination among bivariate beta-generated distributions. *Statistics: A Journal of Theoretical and Applied Statistics*, **52**, 303-320.
56. Castilla, E., Martin, N., Pardo, L. and Zografos, K. (2018). Composite Likelihood Methods Based on Minimum Density Power Divergence Estimator. *Entropy* 2018, **20**, 18; doi:10.3390/e20010018.
55. Avlogiaris, G. Micheas, A. and Zografos, K. (2016). On testing local hypotheses via local divergence. *Statistical Methodology*, **31**, 20-42.
54. Avlogiaris, G. Micheas, A. and Zografos, K. (2016). On local divergences between two probability measures. *Metrika*, **79**, 303-333.
53. Batsidis, A., Martin, N., Pardo, L. and Zografos, K. (2016). ϕ -divergence based procedure for parametric change-point problems. *Methodology and Computing in Applied Probability*, **18**, 21-35.
52. Batsidis, A., Martin, N., Pardo, L. and Zografos, K. (2014). A necessary power divergence-type family of tests for testing elliptical symmetry. *Journal of Statistical Computation and Simulation*, **84**, 57-83.
51. Batsidis, A., Horváth, L., Martín, N., Pardo, L. and Zografos, K. (2013). Change-point detection in multinomial data using phi-divergence test statistics. *Journal of Multivariate Analysis*, **118**, 53-66.
50. Batsidis, A. and Zografos, K. (2013). A necessary test of fit of specific elliptical distributions based on an estimator of Song's measure. *Journal of Multivariate Analysis*, **113**, 91-105.
49. Batsidis, A., Martin, N., Pardo, L. and Zografos, K. (2013). A necessary power divergence type family tests of multivariate normality. *Communications in Statistics - Simulation and Computation*, **42**, 2253-2013.
48. Batsidis, A. and Zografos, K. (2011). Errors of misclassification in discrimination of dimensional coherent elliptic random field observations. *Statistica Neerlandica*, **65**, 446-461.
47. Menéndez, M. L., Pardo, L. Pardo M. C. and Zografos, K. (2011). Testing the order of Markov dependence in DNA sequences. *Methodology and Computing in Applied Probability*, **13**, 59-74.
46. Menéndez, M. L., Pardo, L. and Zografos, K. (2010). Preliminary test estimators on intraclass correlation model under unequal familial sizes. *Mathematical Methods of Statistics*, **19**, 73-87.
45. Zografos, K. and Balakrishnan, N. (2009). On Families of Beta- and Generalized Gamma-Generated Distributions and Associated Inference. *Statistical Methodology*, **6**, 344-362.
44. Menéndez, M. L., Pardo, L. and Zografos, K. (2009). Ordering and selecting extreme populations by means of entropies and divergences. *Journal of Computational and Applied Mathematics*, **232**, 335-350.
43. Menéndez, M. L., Pardo, L., and Zografos, K. (2009). Preliminary test and Stein-type estimation of location parameter for elliptically contoured distributions. *Advances and Applications in Statistics*, **11**, 101-136.
42. Zografos, K. (2008). On some entropy and divergence type measures of variability and dependence for mixed continuous and discrete variables. *Journal of Statistical Planning and Inference*, **138**, 3899-3914.
41. Mantalos, P. and Zografos, K. (2008). Interval estimation for a binomial proportion. A bootstrap approach. *Journal of Statistical Computation and Simulation*, **78**, 1249 - 1263.
40. Zografos, K. (2008). On Mardia's and Song's measures of kurtosis in elliptical distributions. *Journal of Multivariate Analysis*, **99**, 858-879.
39. Zografos, K. and Kotz, S. (2008). A Generalized Purely Exponential Univariate Distribution. *Far East Journal of Theoretical Statistics*, **24**, 233-251.
38. Batsidis, A. and Zografos, K. (2008). Multivariate Linear Regression Model with Elliptically Contoured Distributed Errors and Monotone Missing Dependent Variables. *Communications in Statistics-Theory and Methods*, **37**, 349-372.

37. Menendez, M. L., Pardo, J. A., Pardo, L. and Zografos, K. (2007). Conditional tests of marginal homogeneity based on ϕ -divergence test statistics. *Applied Mathematics Letters*, **20**, 7-12.
36. Menendez, M. L., Pardo, J. A., Pardo, L. and Zografos, K. (2006). On tests of Independence based on minimum ϕ -divergence estimator with constraints: An application to modeling DNA. *Computational Statistics and Data Analysis*, **51**, 1100-1118.
35. Batsidis, A. and Zografos, K. (2006). Discrimination of observations into one of two elliptic populations based on monotone training samples. *Metrika*, **64**, 221-241.
34. Micheas, A. and Zografos, K. (2006). Measuring stochastic dependence using ϕ -divergence. *Journal of Multivariate Analysis*, **97**, 765-784.
33. Batsidis, A., Zografos, K. and Loukas, S. (2006). Errors in discrimination with monotone missing data from multivariate normal populations. *Computational Statistics and Data Analysis*, **50**, 2600-2634.
32. Batsidis, A. and Zografos, K. (2006). Statistical inference for location and scale of elliptically contoured models with monotone missing data. *Journal of Statistical Planning and Inference*, **136**, 2606-2629.
31. Menendez, M. L., Pardo, J. A., Pardo, L. and Zografos, K. (2005). On tests of symmetry, marginal homogeneity and quasi-symmetry in two-way contingency tables based on minimum ϕ -divergence estimator with constraints. *Journal of Statistical Computation and Simulation*, **75**, 555-580.
30. Zografos, K. and Nadarajah, S. (2005). Survival exponential entropies. *IEEE Transactions on Information Theory*, **51**, 1239-1246.
29. Menendez, M. L., Pardo, J. A., Pardo, L. and Zografos, K. (2005). A preliminary test in classification and probabilities of misclassification. *Statistics*, **39**, 183-205.
28. Zografos, K. and Nadarajah, S. (2005). Expressions for Rényi and Shannon entropies for multivariate distributions. *Statistics and Probability Letters*, **71**, 71-84.
27. Nadarajah, S. and Zografos, K. (2005). Expressions for Rényi and Shannon entropies for bivariate distributions. *Information Sciences*, **170**, 173-189.
26. Pardo, J. A., Pardo, L., Pardo, M. C. and Zografos, K. (2004). An exploratory canonical analysis approach for multinomial populations based on the ϕ -divergence measure. *Kybernetika*, **40**, 757-776.
25. Aulogiari, G. and Zografos, K. (2004). A maximum entropy characterization of symmetric Kotz type and Burr multivariate distributions. *Test*, **13**, 65-83.
24. Nadarajah, S. and Zografos, K. (2003). Formulas for Rényi information and related measures for univariate distributions. *Information Sciences*, **155**, 119-138.
23. Menendez, M.L., Pardo, L., Tsairidis, Ch. and Zografos, K. (2003). Selection of the best population: an information theoretic approach. *Metrika*, **58**, 117-147.
22. Menendez, M. L., Pardo, J. A., Pardo, L. and Zografos, K. (2003). On tests of homogeneity based on minimum ϕ -divergence estimator with constraints. *Computational Statistics and Data Analysis*, **43**, 215-234.
21. Pardo, J. A., Pardo, L. and Zografos, K. (2002). Minimum ϕ -divergence estimators with constraints in multinomial populations. *Journal of Statistical Planning and Inference*, **104**, 221-237.
20. Menendez, M. L., Pardo, L. and Zografos, K. (2002). Tests of hypotheses for and against order restrictions on multinomial parameters based on ϕ -divergences. *Utilitas Mathematica*, **61**, 209-223.
19. Pardo, L., Pardo, M. C. and Zografos, K. (2001). Minimum ϕ -divergence estimator for homogeneity in multinomial populations. *Sankhya*, Ser. A, **63**, 72-92.
18. Tsairidis, Ch., Zografos, K., Ferentinos, K. and Papaioannou, T. (2001). Information in quantal response data and random censoring. *Annals of the Institute of Statistical Mathematics*, **53**, 528-542.

17. Zografos, K. (2000). Measures of multivariate dependence based on a distance between Fisher information matrices. *Journal of Statistical Planning and Inference*, **89**, 91-107.
16. Pardo, L. and Zografos, K. (2000). Goodness of fit tests with misclassified data based on ϕ -divergences. *Biometrical Journal*, **42**, 223-237.
15. Pardo, L., Pardo, M. C. and Zografos, K. (1999). Homogeneity for multinomial populations based on ϕ -divergences. *Journal of the Japan Statistical Society*, **29**, 213-228.
14. Zografos, K. (1999). On maximum entropy characterization of Pearson's Type II and VII multivariate distributions. *Journal of Multivariate Analysis*, **71**, 67-75.
13. Menendez, M. L., Morales, D., Pardo, L. and Zografos, K. (1999). Statistical inference for finite Markov chains based on divergences. *Statistics and Probability Letters*, **41**, 9-17.
12. Morales, D., Pardo, L. and Zografos, K. (1998). Informational distances and related statistics in mixed continuous and categorical variables. *Journal of Statistical Planning and Inference*, **75**, 47-63.
11. Zografos, K. (1998). On a measure of dependence based on Fisher's information matrix. *Communications in Statistics-Theory and Methods*, **27**, 1715-1728.
10. Zografos, K. (1998). f -dissimilarity of several distributions in testing statistical hypotheses. *Annals of the Institute of Statistical Mathematics*, **50**, 295-310.
9. Tsairidis, Ch., Zografos, K., and Ferentinos, K. (1997). Fisher's information matrix and ϕ -divergence for finite and optimal partitions of the sample space. *Communications in Statistics-Theory and Methods*, **26**, 2271-2289.
8. Pardo, L., Morales, D., Ferentinos, K. and Zografos, K. (1994). Discretization problems on generalized entropies and R-divergences. *Kybernetika*, **30**, 445-460.
7. Zografos, K. and Ferentinos, K. (1994). An information theoretic argument for the validity of the exponential model. *Metrika*, **41**, 109-119.
6. Zografos, K. (1994). Asymptotic distributions of estimated f -dissimilarity between populations in stratified random sampling. *Statistics and Probability Letters*, **21**, 147-151.
5. Zografos, K. (1993). Asymptotic properties of Φ -divergence statistic and its applications in contingency tables. *International Journal of Mathematical and Statistical Sciences*, **2**, 5-21.
4. Zografos, K., Ferentinos, K. and Papaioannou, T. (1990). Φ -divergence statistics: Sampling properties and multinomial goodness of fit and divergence tests. *Communications in Statistics-Theory and Methods*, **19**, 1785-1802.
3. Zografos, K., Ferentinos, K. and Papaioannou, T. (1989). Order preserving property of measures of information. *Communications in Statistics-Theory and Methods*, **18**, 2647-2656.
2. Zografos, K., Ferentinos, K. and Papaioannou, T. (1989). Limiting properties of some measures of information. *Annals of the Institute of Statistical Mathematics*, **41**, 451-460.
1. Zografos, K., Ferentinos, K. and Papaioannou, T. (1986). Discrete approximations to the Csiszar, Rényi and Fisher measures of information. *The Canadian Journal of Statistics*, **14**, 355-366.

8. Articles in Edited Refereed Volumes and Proceedings

8. Zografos, K. (2023). A Note on the Notion of Informative Composite Density. In: *Trends in Mathematical Information and Data Science: A Tribute to Leandro Pardo*. Balakrishnan, N., Gil, M.A., Martin, N., Morales, D. and Pardo, M.C. (Eds.). Springer. 107-118.

7. Zografos, K. (2018). On some properties of beta- generated distributions. In: *The Mathematics of the Uncertain: A Tribute to Pedro Gil*. Gil, E., Gil, E., Gil, J., Gil, M.A. (Eds.), Springer. 543-552.
6. Zografos, K. (2011). Generalized Beta Generated - II Distributions. In: *Modern Mathematical Tools and Techniques in Capturing Complexity*, Edited by L. Pardo, N. Balakrishnan and Maria Angeles Gil. Springer. 141-153.
5. Zografos, K. (2010). Introduction, Information Theory and Statistical Applications. (Review Article) In: *Theory and applications to reliability and inference, data mining, bioinformatics, lifetime data, and neural networks*. Including papers from the 12th International Conference on Applied Stochastic Models and Data Analysis (ASMDA) held in Chania, May 29-June 1, 2007. Edited by Christos H. Skiadas. *Birkhäuser Boston, Inc., Boston*, 49-50.
4. Zografos, K. (2008). On some beta generated distributions and their maximum entropy characterization: The beta-Weibull distribution. In: *Advances in Inequalities from Probability Theory & Statistics*, Edited by N.S. Barnett & S.S. Dragomir. Nova Science Publishers. 203-223.
3. Zografos, K. and Batsidis, A. (2008). An overview of procedures for classification and testing hypotheses for elliptic populations and monotone missing data. *Pyrenees International Workshop on Statistics, Probability and Operations Research: SPO 2007*, 83-93, Monogr. Semin. Mat. García Galdeano, 34, *Prensas Univ. Zaragoza, Zaragoza*, 2008.
2. Zografos, K. (2008). Entropy and divergence measures for mixed variables. In: *Statistical Models and Methods for Biomedical and Technical Systems*, Edited by F. Vonta, M. Nikulin, N. Limnios and C. Huber-Carol. Birkhäuser, Boston, 519-534.
1. Batsidis, A. and Zografos, K. (2004). Measures of multivariate association and dependence. In: *Soft methodology and random information systems*, Collection of papers presented at the 2nd International Conference on Soft Methods in Probability and Statistics (SMPS' 2004), Oviedo, Spain, September 2-4, 2004. (Ed: M. Lopez-Diaz, Maria A. Gil, Przemyslaw Grzegorzewski et al.), 371-378, *Advances in Soft Computing Springer, Berlin*, 2004.

9. Academic Visits

Short time academic visits for invited talk and/or research collaboration:

1. Institute of Information Theory and Automation, Academy of Sciences of the Czech Republic (1990)
2. Complutense University of Madrid, Spain (1996, 2000, 2001, 2003, 2006, 2007, 2009, 2010, 2011, 2014, 2015, 2016, 2019a, b)
3. Complutense University of Madrid, Escuela Universitaria de Estadística, Spain (November, 2006).
4. University of Elche, Spain (2006).
5. McMaster University, Hamilton, Ontario, Canada (Summer 2007)
6. University of Cyprus (2007)
7. Polytechnic University of Madrid, Spain (2010)
8. Carlos III University of Madrid, Spain (2013)
9. University of Reims, France (2016)
10. University of Piraeus, Greece (2017)
11. Friedrich-Alexander University Erlangen-Nurnberg, Department of Mathematics (FAU Erlangen). (2017).
12. Friedrich-Alexander University Erlangen-Nurnberg, School of Business and Econometric (FAU Nurnberg) (2017).

Visiting Associate Professor:

13. University of Cyprus, Department of Mathematics and Statistics (January-June 2006).

10. Conferences/Workshops

10a. Invited Conference Talks

- *Symposium on Information Theory with Applications to Statistical Inference*, Complutense University of Madrid, December 2, 2019.
- SMSA 2019, *Stochastic Models, Statistics and their Application*, March 6-8, 2019, Technische Universität Dresden. Invited Session: *Distance-based Statistical Methods*.
- *GOF DAYS 2015: 2nd Workshop on Goodness-of-fit and Change-Point Problems*, University of Athens, Greece, Sept. 4-6, 2015.
- Fifth Brazilian Conference on Statistical Modeling in Insurance and Finance (SMIF), April 10-15, 2011, Maresia, Brazil.
- The Pyrenees International Workshop on Statistics, Probability and Operations Research, SPO 2007, September 12-15, 2007, Jaca, Spain. *Plenary Talk*.
- International Conference on Statistical Models for Biomedical and Technical Systems. May 29-31, 2006, Limassol, Cyprus. Invited Session: *Divergence, Model Selection, Survival Models*.
- 2nd International Conference on Soft Methods in Probability and Statistics (SMPS' 2004), Oviedo, Spain, September 2-4, 2004. Special Invited Session: *Statistical Information Theory II*.
- 24th European Meeting of Statisticians & 14th Prague Conference on Information Theory, Statistical Decision Functions and Random Processes. Prague, August 19-23, 2002. Invited Session: *Statistical Information Theory*.

10b. Conference Talks

- 6th World Congress of the Bernoulli Society for Mathematical Statistics and Probability and 67th Annual Meeting of the Institute of Mathematical Statistics, Barcelona, July 25-31, 2004. Session: Data Analysis and Classification.
- 25th European Meeting of Statisticians, Oslo, Norway, July 24-28, 2005. Session: Classification and Categorical Data.
- The 12th International Conference on Applied Stochastic Models and Data Analysis (ASMDA 2007). Chania, Greece, May 29 - June 1, 2007. Session: Multivariate Distributions/Models and Modelling.
- The Pyrenees International Workshop on Statistics, Probability and Operations Research, SPO 2009, September 15-18, 2009, Jaca, Spain.
- Prague Stochastics 2010, Prague, August 30-September 3, 2010.
- The Pyrenees International Workshop on Statistics, Probability and Operations Research, SPO 2011, September 13-16, 2011, Jaca, Spain.
- The Second International Symposium on Stochastic Models in Reliability Engineering, Life Science and Operations Management, February 15-18, 2016, Beer Sheva, Israel.
- XXXVI National Conference in Statistics and Operational Research SEIO 2016, University of Castilla-La Mancha, Toledo, Spain, September 5-7, 2016.

- JMVA 50th Jubilee Virtual Meeting, April 20, 2022.
- Active participation in thirteen (13) national conferences in statistics, organized by the Greek Statistical Institute.

10c. Organizer of Invited Sessions

- Invited Session: *Information Theory and Statistical Applications*. The 12th International Conference on Applied Stochastic Models and Data Analysis (ASMDA 2007). Chania, Greece, May 29 - June 1, 2007.
- Invited Session (jointly with Prof. Filia Vonta): *Recent Developments of Divergence Measures*. The Second International Symposium on Stochastic Models in Reliability Engineering, Life Science and Operations Management, February 15-18, 2016, Beer Sheva, Israel.
- Two Invited Sessions in Probability and Statistics (jointly with Prof. M. Loulakis and G. Afendras): *Second Congress of Greek Mathematicians (SCGM-2022)* July 4 - 8, 2022, HMS, Athens.

11. Seminars/Short Courses given at Universities and Research Centers

Invited speaker for seminar talks worldwide:

1. Czechoslovak Academy of Sciences, Institute of Information Theory and Automation, November 1990. Title of Talk: *Asymptotic properties of Φ -divergence statistic and its applications in contingency tables*.
2. Complutense University of Madrid, Department of Statistics and Operational Research, November 1996. Title of Talk: *Fisher's information matrix and ϕ -divergence for finite and optimal partitions of the sample space*.
3. Complutense University of Madrid, Department of Statistics and Operational Research, June 2000. Title of Talk: *Measures of Multivariate Statistical Dependence*.
4. Complutense University of Madrid, Department of Statistics and Operational Research, May 2001. Title of Talk: *Selection of the best population: An information theoretic approach*.
5. Complutense University of Madrid, Department of Statistics and Operational Research, October 2003. Title of Talk: *Measures of Statistical Information in topics of Multivariate Analysis*.
6. University of Cyprus, Department of Mathematics and Statistics. April 2006. Title of Talk: *Elliptic family of multivariate distributions and monotone missing data: Some inferential and classification procedures*.
7. Complutense University of Madrid, Department of Statistics and Operational Research, June 2006. Title of Talk: *Elliptic family of multivariate distributions and monotone missing data: Some inferential and classification procedures*.
8. Universidad Miguel-Hernandez, Elche, Centro de Investigacion Operativa, Spain, June 2006. Title of Talk: *Elliptic family of multivariate distributions and monotone missing data: Some inferential and classification procedures*.
9. Complutense University of Madrid, Escuela Universitaria de Estadística, Spain, November, 2006. Title of Talk: *Entropy and divergence measures for mixed continuous and categorical variables: Applications in testing statistical hypotheses, measuring joint variability and dependence*.
10. University of Cyprus, Department of Mathematics and Statistics. April 2007. Title of Talk: *Generalized measures of multivariate association and dependence*.
11. McMaster University, Hamilton, Ontario, Canada, July 2007. Mini-Conference on Statistics, *Generalized measures of multivariate association and dependence*.

12. Carlos III University of Madrid, Department of Statistics, December 2013. Title of Talk: *Shannon Entropy: An omnipresent quantity and its applications in goodness of fit tests for generalized families of distributions.*
13. Complutense University of Madrid, Department of Statistics and Operational Research, September 2014. Title of Talk: *On Statistical Distances and their Applications in a local setting.*
14. Complutense University of Madrid, Department of Statistics and Operational Research, September 2015. Title of Talk: *Phi-divergence test statistics based on composite likelihood.*
15. Complutense University of Madrid, Department of Statistics and Operational Research, September 2016. Title of Talk: *Divergence measures and their applications in testing hypotheses, in a local setting.*
16. University of Reims, Laboratory of Mathematics, Reims, France, November 2016. Title of Talk: *On the notion of local divergence and its applications in the two sample problem.*
17. University of Piraeus, Department of Statistics and Insurance Science, October 2017. Executive Seminar: Actuarial Science – Risk Measures. Talk: *Divergence of probability measures, some properties and applications: The case of local divergence.*
18. Friedrich-Alexander University Erlangen-Nurnberg, Department of Mathematics (FAU Erlangen). December 2017. Title of Talk: *On Local divergence between probability measures and applications in testing local hypotheses for the one sample problem.*
19. Friedrich-Alexander University Erlangen-Nurnberg, School of Business and Econometric (FAU Nurnberg) December 2017. Title of Talk: *Local divergence between distributions and applications in testing local hypotheses.*
20. Complutense University of Madrid, Department of Statistics and Operational Research, February 2019. Title of Talk: *Discrimination among bivariate beta-generated distributions.*

12. Research Grants

I. Main Researcher

- *New procedures of multivariate analysis based on statistical information theory.* Grant of the Greek Ministry for Development (General Secretariat for Research and Technology) and the Spanish Foreign Office, 1999-2001. (Main Researchers: K. Zografos and L. Pardo).
- *Measures of multivariate association and dependence.* Research Committee, University of Ioannina, Feb. 2002 - Feb. 2003. (Main Researcher: K. Zografos).
- *Topics of Multivariate Analysis with elliptic distributions and monotone missing data.* This research was co-funded by the European Union in the framework of the program “Heraklitos” of the “Operational Program for Education and Initial Vocational Training” of the 3rd Community Support Framework of the Hellenic Ministry of Education, funded by 25% from national sources and by 75% from the European Social Fund (ESF). (Main Researcher: K. Zografos).
- *Statistical information theory methods in bioinformatics.* Grant of the Greek Ministry for Development (General Secretariat for Research and Technology) and the Spanish Foreign Office, 2005-2007. (Main Researchers: K. Zografos and L. Pardo).

II. Partner

- *Ridge, pretest and James-Stein estimators on the basis of phi-divergence measures in the generalized linear model with binary or multinomial data.* This research is funded by the Ministerio de Educacion Y Ciencia, 2006-2009. DGI MTM 2006-06872 (Main Researcher: Prof. L. Pardo, Complutense University of Madrid).
- *Statistical inference based on divergence for loglinear models subject to inequality constraints: Application in Clinical Trials.* This research is funded by the Ministerio de Ciencia E Innovacion, 2009-2011. MTM 2009-10072 (Main Researcher: Prof. L. Pardo, Complutense University of Madrid).

- *Empirical likelihood and some generalized tests of hypotheses based on phi-divergence measures.* This research is funded by the Ministerio de Economía Y Competitividad, 2012-2015. MTM 2012-33740. (Main Researcher: Prof. L. Pardo, Complutense University of Madrid).
- *Robust estimation and testing based on divergences in one-shot devices modeling.* This research is funded by the Ministerio de Economía Y Competitividad, 2015-2018. MTM 2015-67057-P (Main Researcher: Prof. L. Pardo, Complutense University of Madrid).
- "*Statistical Information Theory*". Research Committee-University of Ioannina, Noe. 1991-Febr. 1993. (Main Researcher: Prof. T. Papaioannou).

13. Editorial Responsibilities and Services

I. Associate Editor

- *TEST* (2005 –) Five Terms.
- *Journal of Multivariate Analysis* (2006 –) Three Terms.
- *Journal of Statistical Computation and Simulation* (2012 –)
- *International Statistical Review* (2022 –)
- *Mathematica Montisnigri*, Department of Mathematics, University of Montenegro, Montenegro, (2022 –)
- *Applied Mathematics & Information Sciences* (2007 – 2017)

II. Refereed for

Advances in Data Analysis and Classification – Annals of Statistics – Annals of the Brazilian Academy of Sciences – Annals of the Institute of Statistical Mathematics – Applied Mathematics-A Journal of Chinese Universities – Applied Mathematics and Computation – Applied Mathematics Letters – Applied Mathematical Modelling – Applied Mathematics & Information Sciences – Biometrical Journal – Brazilian Journal of Probability and Statistics – Bulletin of the Malaysian Mathematical Sciences Society – Colombian Journal of Statistics – Communications in Statistics (Theory and Methods) – Communications in Statistics (Computation and Simulation) – Computational Statistics and Data Analysis – Discrete Mathematics – Entropy – Heliyon – IEEE Transactions of Information Theory – Information Sciences – International Journal of Applied Mathematics & Statistics – International Journal of Computer Mathematics - Journal of Applied Probability/Advances in Applied Probability – Journal of Applied Statistics – Journal of Computational and Applied Mathematics – Journal of Mathematical Analysis and Applications - Journal of Multivariate Analysis – Journal of Probability and Statistics - Journal of Statistical Computation and Simulation – Journal of Statistical Distributions and Applications – Journal of Statistical Planning and Inference – Journal of Statistical Theory and Applications - Journal of the American Statistical Association (JASA) - Journal of the Franklin Institute – Kybernetika – Mathematical Communications – Mathematica Applicanda – Mathematica Slovaca – Mathematics – Methodology and Computing in Applied Probability – Metrika – Metron – Naval Research Logistics – Pakistan Journal of Statistics and Operation Research – Pattern Recognition Letters – PHYSICA A - Publicationes Mathematicae Debrecen – Reliability Engineering and System Safety – Research Letters in Signal Processing – Revista Matematica UCM – REVSTAT - Sarajevo Journal of Mathematics – SORT – STATISTICA – Statistical Methodology – Statistical Methods and Applications – Statistica Neerlandica - Statistical Papers - Statistics – Statistics and Probability Letters – Stochastics and Quality Control (EQC) – Studia Sci. Math. Hungarica – TEST.

- I provided reports numerous times, for most of the above journals.
- Done Book Reviews for Springer.

III. Grant Reviewing

- Reviewer for NATO Collaborative Research Grant (1997).
- Reviewer for Natural Sciences and Engineering Research Council of Canada (2000).
- Reviewer for Academy of Sciences of the Czech Republic (2007).

14. Professional Service

- External Reviewer of candidate's research project for awarding the title of Distinguished Professor. Sheldon B. Lubar School of Business, *University of Wisconsin-Milwaukee*, Milwaukee, USA (2010).
- External member of the committee entrusted with evaluating the research work submitted by a faculty member of the *Department of Mathematics, University of Jordan* for promotion to the rank of Associate Professor (2011).
- Reviewer and member of the committee of the *Department of Mathematics, University of Reims, France* for the evaluation and participation in the defence of "*Habilitation à Diriger des Recherches HDR*". Reims, France (2016).
- External member of the Recommendation Committee and/or the Electoral Body entrusted with evaluating the research work submitted by faculty members for hiring, tenure and promotion, numerous times in almost all Universities in Greece. Examples include:
 - National and Kapodistrian University of Athens, Department of Mathematics.
 - National and Kapodistrian University of Athens, Faculty of Medicine.
 - National Technical University of Athens, School of Applied Mathematical and Physical Science.
 - Athens University of Economics and Business, Department of Statistics.
 - University of Pireaus, Department of Statistics and Insurance Science.
 - Aristotle University of Thessaloniki, Department of Mathematics.
 - Aristotle University of Thessaloniki, Faculty of Engineering, Department of Electrical and Computer Engineering.
 - University of Patras, Department of Mathematics.
 - University of Patras, School of Engineering, Department of Civil Engineering.
 - University of Patras, Department of Economics.
 - University of Aegean, Department of Statistics and Actuarial-Financial Mathematics.
 - Democritus University of Thrace, Department of Social Administration and Political Science.
 - Democritus University of Thrace, School of Medicine.
 - Harokopio University, Department of Nutrition and Dietetics.
 - Panteion University, Department of Sociology.
 - Frederick University, Nicosia, Cyprus.
- Member of the Scientific Committee of Annual Conferences of the Greek Statistical Institute (2004, 2005, 2006, 2008, 2009, 2010, 2012, 2013, 2014, 2015, 2016, 2017, 2019, 2021).
- Member of the Scientific Committee of 33th Conference of the Greek Mathematical Society, November 4-6, 2016, Chania, Greece.
- Member of the International Scientific Committees for the Conferences:

- *XIII International Conference, Applied Stochastic Models and Data Analysis*, ASMDA 2009, June 30 - July 3, 2009, Vilnius, Lithuania.
- *1st Stochastic Modeling Techniques and Data Analysis*, SMTDA 2010, June 8-11, 2010, Chania, Greece.
- *2nd Stochastic Modeling Techniques and Data Analysis*, SMTDA 2012, June 5-8, 2012, Chania, Greece.
- *3rd Stochastic Modeling Techniques and Data Analysis*, SMTDA 2014, June 11-14, 2014, Lisbon, Portugal.
- *XVI International Conference, Applied Stochastic Models and Data Analysis*, ASMDA 2015, June 30 - July 4, 2015, Piraeus, Greece.
- *4th Stochastic Modeling Techniques and Data Analysis*, SMTDA 2016, June 1-4, 2016, Valletta, Malta.
- *XVII International Conference, Applied Stochastic Models and Data Analysis*, ASMDA 2015, June 6-9, 2017, London, UK.
- *5th Stochastic Modeling Techniques and Data Analysis*, SMTDA 2018, June 12-15, 2018, Chania, Greece.
- *XVIII International Conference, Applied Stochastic Models and Data Analysis*, ASMDA 2019, June 11-14, 2019, Florence, Italy.
- *6th Stochastic Modeling Techniques and Data Analysis*, SMTDA 2020, June 2-5, 2020, Barcelona, Spain.
- *19th International Conference, Applied Stochastic Models and Data Analysis*, ASMDA 2021, June 1-4, 2021, Athens, Greece.

15. Courses Taught

- Introduction to Probability
- Introduction to Statistics
- Statistical Inference
- Regression and Analysis of Variance
- Categorical Data Analysis
- Multivariate Analysis
- Multivariate Analysis (Postgraduate)
- Sampling Theory (Postgraduate)
- Introductory courses in Probability and Statistics for students in the Department of Physics, Computer Sciences, Pre-School Education, Psychology.

16.1 Books (in greek)

K. Ferentinos, K. Zografos and T. Papaioannou (2020). *Estimation and Tests of Hypotheses: Exercises with concise theory*. Athens, A. Stamoulis Publications, ISBN: 978-960-618-031-6, p. 663.

16.2 Class Notes (in greek)

1. K. Zografos (1993). *Statistics and Probability Lessons*. University of Ioannina. (Improved Reprint, 2002, p. 260).
2. K. Zografos (2008). *Probability*. University of Ioannina, p. 262.
3. K. Zografos (2007). *Multivariate Analysis*. University of Ioannina, p. 242.
4. K. Zografos (2009). *Categorical Data*. University of Ioannina, p. 97.

16. Students Supervision

I. Ph.D. Students

- Batsidis, A. (2005). *Aspects of Multivariate Analysis with Elliptical Distributions and Monotone Missing Data*. Ph.D. Thesis, University of Ioannina, Department of Mathematics, Greece. *This Thesis was funded by the research program "Heraclitus"*.
- Avlogiaris, G. (2017). *Local ϕ -Divergence in Statistical Information Theory with Applications to Hypothesis Testing and Model Selection*. Ph.D. Thesis, University of Ioannina, Department of Mathematics, Greece. (Main Advisor. Co-advisor: A. Micheas, University of Missouri).

External Examiner of Ph.D Thesis:

- *Estimation par minimum de ϕ -divergences*. Universite Pierre et Marie Curie (Paris VI), France, 2010.
- *Multivariate Poisson models based on comonotonic and counter- monotonic shocks*. McGill University, Montreal, Canada, 2018.
- *Conditions of Monge, Optimal Transport and Relational Bridge Properties, applications and extension of indeterminacy coupling*, Sorbonne Université, France, 2021.

Thesis Advisory Committee:

- Participation in four (4) advisory committees for the preparation of Ph.D. Thesis.

II. MSc. Students

Supervision of thirteen (13) MSc. Theses.

17. Service/Departmental Activities (the most interesting)

- Chair of the Committee for the Strategic Plan and Development of the Department of Mathematics (2008/2009).
- Chair of the Internal Evaluation Committee of the Department of Mathematics, University of Ioannina (2009-2011).
- Member of the Postgraduate Operating Committee, Department of Mathematics, University of Ioannina (2007-2009).
- Chair of the Postgraduate Operating Committee, Department of Mathematics, University of Ioannina (2012-2016, Two Terms).
- Member of the Postgraduate Operating Committee, Inter-university postgraduate program in *Biostatistics*, University of Ioannina and National and Kapodistrian University of Athens (Faculty of Medicine & Department of Mathematics) (2009 - 2014).
- Chair of the Committee of Student's Issues (1993-2009).
- Representative of the Associate Professors in the Senate of the University (2003/04, 2006/07).
- Ex Officio member of the Senate of the University (2009-2011 and 2017-2020), as a Chair of the Department.