Alessio Pollice Curriculum Vitae (27 August, 2018)

RESEARCH INTERESTS

His research activities are mainly devoted to spatial and spatio-temporal data analyses of environmental processes, with particular focus on Bayesian hierarchical modeling of air quality data, environmental-epidemiological applications and ecological processes (including fishery data modeling, biodiversity and ecosystem status assessments).

H-INDEX AND CITATIONS

Google scholar:

- Total citations: 894 (all), 409 (from 2013)

- h-index: 11 (all), 9 (from 2013)

- i10-index: 12 (all), 8 (from 2013)

Scopus:

- h-index: 8

PRESENT POSITION

Associate professor of Statistics at the Department of Economics and Finance, University of Bari, since 1998.

Full Professorship National Scientific Qualification in Statistics, 2016.

EDUCATION

Ph.D. in Statistics at University of Bari.

Degree in Statistics and Economics, University of Bari.

PAST POSITION

1993 – 1998, University Researcher in Statistics, University of Bari.

RECENT INVITED TALKS

2017, TIES-GRASPA 2017 on climate and environment, Bergamo, Modelling fish fauna assemblages to detect factors affecting differences between coral and non-coral habitats (with C. Calculli, G. D'Onghia, L. Sion).

2017, TIES-GRASPA 2017 on climate and environment, Bergamo, Assessing the role of the spatial scale in the analysis of lagoon biodiversity. A case-study on the microbenthic fauna of the Po river delta (with G. Jona Lasinio, E. Marcon, E.A. Fano).

2016, 48e Journées de Statistique de la Société Française de Statistique. Montpellier, Assessment of site-specific wind predictions by a hidden Markov model for multivariate circular-linear data (with G. Mastrantonio, F. Fedele).

2014, XXIV Conference of the Italian Ecological Society, Ferrara, Biodiversity partitioning for transitional water ecosystems (with G. Jona Lasinio, A. Basset, S. Arima, I. Rosati, A. Fano).

2013, XXIII Conference of Italian Ecological Society, Ancona, A model-based approach to lagoon ecosystem classification (with G. Jona Lasinio, S. Arima, A. Basset, I. Rosati).

2013, Advances in latent variables: methods, models and applications - Conference of the Italian Statistical Society, Brescia, Bayesian analysis of the multivariate dependence of three transitional water ecosystem classifications (with S. Arima, G. Jona Lasinio, A. Basset, I. Rosati).

2012, Energy, Air Quality and Sustainability: Models and Evidence, Bergamo, Air quality in Taranto: statistical and modelling issues arising with the analysis of monitoring network data.

2012, XXII Conference of the Italian Ecological Society, Alessandria, Analysis of environmental/anthropogenic effects on the spatio-temporal distribution of population parameters in deep-sea shrimps from the North-Western Ionian Sea by Generalized Additive Models (with S. Arcuti, C. Calculli, N. Ribecco, A. Tursi, G. D'Onghia, M.T. Minerva, P. Maiorano).

2012, PM 2012 – 5th National Conference on Particulate Matter, Perugia, Statistical models and analyses of air quality monitoring data (with G. Jona Lasinio).

2010, TIES 2010 – the 21st Annual Conference of The International Environmetrics Society, Isla Margarita (VE), Identifying sources of PM10 pollution in the Taranto area (with G. Jona Lasinio).

SERVICES IN SCIENTIFIC SOCIETIES

2016 – 2018 Member of the Executive Council of the Italian Statistical Society.

2015 – 2018 President of GRASPA-SIS, research group for statistical applications to environmental problems, permanent working group of the Italian Statistical Society.

2013 – 2015 Vice-president of GRASPA-SIS.

SCIENTIFIC SOCIETIES MEMBERSHIP

2014 – 2018 Member of the International Society for Bayesian Analysis (and EnviBayes section)

2013 – 2018 Member of GRASPA-SIS, research group for statistical applications to environmental problems, permanent working group of the Italian Statistical Society

2006 – 2013 Member of GRASPA, the Italian Research Group for Environmental Statistics

2006 – 2018 Member of The International Environmetrics Society

1993 – 2018 Member of the Italian Statistical Society

RECENT SERVICES IN SCIENTIFIC CONFERENCES ORGANIZATION

2018, Member of the Scientific Committee, METMA IX Conference, Montpellier

2017, Member of the Scientific Committee, Session organizer and Chairman, TIES-GRASPA 2017 Conference on climate and environment, Bergamo

2017, Discussant, Conference SIS2017 – Statistics and Data Science: new challenges, new generations, Firenze

2016, Member of the Scientific Committee and Chairman, Workshop Statistical inference for assessing and monitoring natural resources, Siena

2016, Session organizer, TIES 2016 - The 26th Annual Conference of the International Environmetrics Society, Edinburgh

2015, Member of the Scientific Committee and Chair of the Organizing Committee, GRASPA 2015 Conference, Bari

2014, Member of the Scientific Committee and Chairman, Conference DUST 2014 – International Conference on Atmospheric Dust, Castellaneta Marina (TA)

2014, Chairman, XLVII Scientific Conference of the Italian Statistical Society, Cagliari

2014, Member of the Scientific Committee and Chairman, METMA VII - GRASPA 14 Conference, Torino

SERVICES IN SCIENTIFIC JOURNALS AND BOOKS

2014 - 2018, Associate editor, Journal of Statistical Computation and Simulation (JSCS).

2016, Guest editor (with G. Jona Lasinio), Journal of Statistical Computation and Simulation, vol. 86.

2013, Guest editor (with A. Fassò and B. Cafarelli), AStA - Advances in Statistical Analysis, n. 2, vol. 97.

2008, Guest editor (with D. Cocchi and B. Cafarelli), Environmetrics n. 7, vol. 19.

REFEREE FOR THE FOLLOWING SCIENTIFIC JOURNALS

Advances in Statistical Analyses, Applied Stochastic Models in Businnes and Industry, Atmospheric Environment, Computational Statistics and Data Analysis, Environmetrics, Environmental and Ecological Statistics, Environmental Modeling and Asssessment, Environmental Monitoring and Asssessment, Environmental Science and Technology, iForest, International Series, Nature Conservation, Statistical Methods and Applications, Stochastic Environmental Research and Risk Assessment, Studies in Theoretical and Applied Statistics.

SERVICES IN EVALUATION OF RESEARCH AND SELECTION OF RESEARCH STAFF

Research evaluator for MIUR-FIRB (2012 and 2013).

Member of the board of examiners for positions of associate professor and researcher in Statistics at University of Venice, Bologna, Bergamo and Water Research Institute (National Research Council).

Member of the board of examiners of PhD's at University of Palermo, Rome and Salento.

Member of the board of examiners for the best PhD thesis in Statistics prize of the Italian Statistical Society.

RESEARCH GRANTS AND CONSULTANCIES

Head of research unit for the National Interest Research Program PRIN 2015, Environmental processes and human activities: capturing their interactions via statistical methods (EPHASTAT).

Member of a research unit for the National Interest Research Program PRIN 2006, Statistical Modeling and Analysis of the Risk for Environmental Spatial-Temporal Systems.

Head of research unit for the National Interest Research Program COFIN 1999, Statistical Mehods and Techniques for the Analysis of Spatial and Spatial-Temporal Data.

Principal investigator for six local research projects on Spatial and Environmental Statistics, Università di Bari (1998 - 2013).

Principal statistical research consultant for the Agronomic Experimental Institute, National Ministry of Agricultural and Forestry Policies (1999 – 2006).

Scientific coordinator of an research agreement between Università di Bari and the regional environmental protection agency ARPA Puglia (2006 – 2013).

Principal statistical research consultant for the research unit in Ecology at the Department of Biology, Università di Bari.

STATISTICAL LITERACY PROMOTION

Member of the Organizing staff of the Italian Statistics Olympics for the Italian Statistical Society (2017 – 2018).

Member of the working group of the project Statistical Lab for Information and Knowledge, within a project for the promotion of scientific degrees financed by the Italian Ministry of Education (since 2010).

SUPERVISION OF MASTER AND PHD THESIS (last 10 years)

2014 – 2015 S. Sirressi, Doctorate School in Economics, Businnes and Statistics, Università di Bari.

2013 - 2016 F. Fedele, Models for predicting meteo-chemical parameters over the Taranto area at Doctorate School in Physics, Università di Bari (with R. Bellotti, A. Guarnieri Calò Carducci).

2013 C. Calculli, Multivariate hierarchical models for mapping regional air quality data using the ReCaS INFN high performance grid computing infrastructure, Master in Development and management of data centers for high performance scientific computing, Università di Bari.

2013 A. Turnone, Definition and application of a spatio-temporal statistical model for monitoring air quality in Apulia (I) using the ReCaS INFN high performance grid computing infrastructure, Master in Development and management of data centers for high performance scientific computing, Università di Bari.

2011 – 2014 S. Arcuti, Space-time modeling of animal population abundances, PhD in Statistics, Università di Bari (with N. Ribecco).

2007 – 2010 C. Calculli, Spatial variation of multiple diseases in relation to an environmental risk source, PhD in Statistics, Università di Bari.

2006 – 2009 A. Nannavecchia, Space-time analysis of air quality in Taranto by a hierarchical Bayesian model, PhD in Statistics, Università di Bari.

SUPERVISION OF POSTGRADUATE POSITIONS (last 10 years)

2018 C. Calculli, Environmental processes and human activities: capturing their interactions via statistical methods, research fellowship, Università di Bari.

2014 C. Calculli and A. Turnone, University master in Development and management of data centers for high performance scientific computing, post-master fellowships, Università di Bari.

2010 - 2012 C. Calculli, Statistical models for the evaluation of the effects of athmospheric pollution on people's health, research fellowship, Università di Bari.

PEER-REVIEWED ARTICLES (last 10 years)

G. Mastrantonio, G. Jona Lasinio, A. Pollice, G. Capotorti, L. Teodonio, G. Genova, C. Blasi (2018) *A hierarchical multivariate spatio-temporal model for clustered climate data with annual cycles.* Annals of Applied Statistics, in press.

R. Rossi, A. Pollice, G. Bitella, R. Labella, R. Bochicchio, M. Amato (2018) *Modelling the non-linear relationship between soil resistivity and alfalfa NDVI: a basis for management zone delineation.* Journal of Applied Geophysics, in press.

G. Jona Lasinio, A. Pollice, E.A. Fano (2018) *Generalized biodiversity assessment by Bayesian nested random effects models with spyke-and-slab priors.* Statistics & Probability Letters, ISSN: 0167-7152, doi:10.1016/j.spl.2018.03.006.

G. Mastrantonio, A. Pollice, F. Fedele (2017) *Distributions-oriented wind forecast verication by a hidden Markov model for multivariate circular-linear data.* Stochastic Environmental Research and Risk Assessment, ISSN: 1436-3240, doi: 10.1007/s00477-017-1416-x.

G. Jona Lasinio, A. Pollice, E. Marcon, E.A. Fano (2017) *Assessing the role of the spatial scale in the analysis of lagoon biodiversity. A case-study on the macrobenthic fauna of the Po River Delta.* Ecological Indicators, vol. 80, p. 303-315, ISSN: 1470-160X, doi: 10.1016/j.ecolind.2017.05.037.

G. D'onghia, C. Calculli, F. Capezzuto, R. Carlucci, A. Indennidate, P. Maiorano, F. Mastrototaro, A. Pollice, T.V. Russo, L. Sion, A.R. Tursi (2016) *Anthropogenic impact in the Santa Maria di Leuca cold-water coral province (Mediterranean Sea): Observations and conservation straits.* Deep-Sea Research. Part 2. Topical Studies in Oceanography, ISSN: 0967-0645, doi: 10.1016/j.dsr2.2016.02.012.

F. Capezzuto, R. Carlucci, A. Carluccio, P. Maiorano A. Pollice, P.A. Ricci, L. Sion, G. D'onghia, C. Calculli (2016) *New records of cold -water coral sites and fish fauna characterization of a potential network existing in the Mediterranean Sea.* Marine Ecology, ISSN: 1439-0485.

A. Pollice, S. Arima, G. Jona Lasinio, A. Basset, I. Rosati (2015). *Bayesian analysis of three indices for lagoons ecological status evaluation.* Stochastic Environmental Research and Risk Assessment, ISSN: 1436-3240, doi: 10.1007/s00477-014-0885-4

G. Jona Lasinio, M.L. Costantini, E. Calizza, A. Pollice, F. Bentivoglio, L. Orlandi, G. Careddu, L. Rossi (2015). *Stable isotope-based statistical tools as ecological indicator of pollution sources in Mediterranean transitional water ecosystems.* Ecological Indicators, 55, pp. 23-31, ISSN: 1470-160X, doi:10.1016/j.ecolind.2015.03.006.

S. Arcuti, A. Pollice, N. Ribecco, G. D'Onghia (2015) *Bayesian spatiotemporal analysis of zero-inflated biological population density data by a delta-normal spatiotemporal additive model.* Biometrical Journal, ISSN:0323-3847, doi:10.1002/bimj.201400123.

C. Calculli, A. Fassò, F. Finazzi, A. Pollice, A. Turnone (2015) *Maximum likelihood estimation of the multivariate hidden dynamic geostatistical model with application to air quality in Apulia, Italy.* Environmetrics, 26 (6), pp. 406-417, ISSN:1180-4009, doi:10.1002/env.2345.

R. Rossi; A. Pollice, G. Bitella, R. Bochicchio, A. D'Antonio, A. Aldin Alromeed, A.M. Stellacci, R. Labella, M. Amato (2015) *Soil bulk electrical resistivity and forage ground cover: nonlinear models in an alfalfa (Medicago sativa L.) case study.* Italian Journal of Agronomy, 10:647, pp. 2015-219, ISSN: 2039-6805, doi: 10.4081/ija.2015.647.

R. Rossi, A. Pollice, M.P. Diago, M. Oliveira, B. Millan, G. Bitella, M. Amato, J. Tardaguila (2013). *Using an Automatic Resistivity Profiler Soil Sensor On-The-Go in Precision Viticulture.* SENSORS, vol. 13, p. 1121-1136, doi:10.3390/s130101121.

A. Fassò, A. Pollice, B. Cafarelli (2013). *Spatial statistics for environmental studies.* AStA - Advances in Statistical Analysis, 97, pp. 89-91, doi: 10.1007/s10182-013-0209-x.

R. Rossi, M. Amato, A. Pollice, G. Bitella, J.J. Gomes, R. Bochicchio, S. Baronti (2013). *Electrical resistivity tomography to detect the effects of tillage in a soil with a variable rock fragment content.* European Journal of Soil Science, 64, pp. 239-248, doi: 10.1111/ejss.12024.

S. Arima, A. Basset, G. Jona Lasinio, A. Pollice, I. Rosati (2013). *A hierarchical Bayesian model for the ecological status classification of lagoons.* Ecological Modelling, 263, pp. 187-195, doi:10.1016/j.ecolmodel.2013.05.006.

S. Arcuti, C. Calculli, A. Pollice, G. D'onghia, P. Maiorano, A. Tursi (2013). *Spatio-temporal modelling of zero-inflated deep-sea shrimp data by Tweedie generalized additive models.* Statistica, 73, pp. 103-122, doi: 10.6092/issn.1973-2201/3987, doi: 10.6092/issn.1973-2201/3987.

S. Arima, L. Cretarola, G. Jona Lasinio, A. Pollice (2012). *Bayesian Univariate Space - Time Hierarchical Model for Mapping Pollutant Concentrations in the Municipal Area of Taranto.* Statistical Methods & Applications, 21; pp. 75-91, doi: 10.1007/s10260-011-0178-8.

G. Jona Lasinio, A. Pollice (2012) *Random Walk.* Encyclopedia of Environmetrics, Second Edition. Editors: A.H. El-Shaarawi, W.W. Piegorsch. John Wiley & Sons, Ltd, doi: 10.1002/9780470057339.vnn074.

G. Jona Lasinio, G. Mastrantonio, A. Pollice (2012). *Discussing the "big n problem"*, Statistical Methods & Applications, 22, pp. 97-112, doi: 10.1007/s10260-012-0207-2.

A. Pollice (2011) *Recent statistical issues in multivariate receptor models.* Environmetrics, 22, pp. 35–41 , doi: 10.1002/env.1021.

A. Pollice, G. Jona Lasinio (2011) *Major PM10 source location by a spatial multivariate receptor model*, Environmental and Ecological Statistics, 19, pp. 57-72 doi: 10.1007/s10651-011-0173-0.

C. Calculli, A. Pollice, M. Serinelli (2011) *Spatial Analysis of the Risk of Multiple Cancers in Relation to a Petrochemical Plant*, Environmetrics, 23, pp. 175-182 doi: 10.1002/env.1138.

A. Pollice, G. Jona Lasinio (2010) *Spatio-temporal analysis of the PM10 concentration over the Taranto area*, Environmental Monitoring and Assessment, 162, pp. 177-190.

A. De Lucia, A. Pollice, V.C. De Nicolò (2010) *General health, psychological well-being and distress of youth immigrants in Italy*, Collegium Antropologicum, 34, 1193-1205.

A. Pollice, G. Jona Lasinio (2010) *A multivariate approach to the analysis of air quality in a high environmental risk area*, Environmetrics, 21, pp. 741–754

L. Bisceglia, R. Giua, A. Morabito, M. Serinelli, C. Calculli, I. Galise, A. Pollice, G. Assennato (2010). *Individuazione e caratterizzazione delle sorgenti di Benzo(a)pirene nel comune di Taranto e stima del rischio cancerogeno associato all'esposizione della popolazione generale.* Giornale Italiano di Medicina del Lavoro ed Ergonomia, XXXII, pp. 355-356.

M. Musti, A. Pollice, D. Cavone, S. Dragonieri, M. Bilancia (2009) *The relationship between malignant mesothelioma and an asbestos cement plant environmental risk: a spatial case–control study in the city of Bari (Italy)*, International Archives of Occupational and Environmental Health, 82 (4), pp. 489-497.

A. Pollice, G. Jona Lasinio (2009) *Two approaches to imputation and adjustment of air quality data from a composite monitoring network*, Journal of Data Science, 7, pp. 43-59.

G. Graziano, M. Bilancia, L. Bisceglia, G. de Nichilo, A. Pollice, G. Assennato (2009) *Analisi statistica dell'incidenza di alcune patologia tumorali nella provincia di Taranto 1999-2001*, Epidemiologia e Prevenzione, 33 (1-2), pp.37-44.

R. Addante, S. Di Gioia, C. Calculli, A. Pollice (2008) *The impact of spiders (Aracneae) on Lobesia botrana (Denis & Schiffermüller) population density*, IOBC/WPRS Bulletin, 36, pp. 221-231.

B. Cafarelli, A. Pollice (2008) *Geoadditive models for the analysis of the spatial distribution of soil salinity in a Sardinia coastal area*, Environmetrics, 19, pp. 742-750.