

## CURRICULUM VITAE

### PROF. GIUSEPPE ARBIA

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#### **Current position:**

Full Professor of Economic Statistics, Faculty of Economics, Department of Statistical Sciences and Department of Public Health, Università Cattolica del Sacro Cuore, since December 2011.

#### **Other current contract appointments:**

Adjunct Professor of Statistics, University of Italian Switzerland at Lugano (Ticino, Switzerland), since 1996.

Research Professor, ITPIR, The College of William & Mary, Williamsburg, Virginia (US), since 2014.

#### **Previous positions:**

Full Professor of Statistics and of Economic Statistics, University “G. D’Annunzio” of Chieti (Italy, 1995-2011). Full Professor of Economic Statistics (Faculty of Statistics, University of Padua, Italy, 1994-1995); Associate Professor of Statistics (Faculty of Economics, University of Trento, Italy, 1992-1994); Associate Researcher (Faculty of Statistics, University “La Sapienza”, of Rome, Italy, 1983-1992).

#### **Previous temporary contract positions:**

Professor of Spatial Econometrics, Department of Economics, University of Illinois at Urbana-Champaign, Spring 2015. Professor of Statistics, Department of Economics, New York University (US). Spring 2012. Adjunct Professor of Econometrics, (Faculty of Economics, LUISS “Guido Carli” University, Rome 2003-2012). Professor of Social Statistics, (Faculty of Economics, Universitas Mercatorum, Roma, 2008-2009), Professor of Statistics (Faculty of Political Sciences, University “La Sapienza” of Rome, 2003-2006), Professor of Statistics and Quality control (University of San Marino, 1997-2004), Professor of Statistics (Faculty of Economics, University Tor Vergata, of Rome, Italy, 1992-1994); Visiting Professor (University of California at Santa Barbara, US, 1988-1989).

#### **Academic degrees:**

1984- 1987: *Doctor of Philosophy* - University of Cambridge (UK),

1977-1981: *BA in Statistics*, University “La Sapienza”, Rome (Italy)

#### **Visiting scholar/professor:**

- Centre for Entrepreneurship and Spatial Economics, Jönköping International Business School, Jönköping University, Jönköping, Sweden, March 2019.
- Stellenbosch University, Department of Economics, Stellenbosch, South Africa, November 2017.
- National Research University, Higher School of Economics, Moskov, Russia, September 2017.
- Department of Statistics, Tohoku University, Sendai, Japan, September 2017
- Tsukuba University, Tsukuba, Japan, September 2016

- University of Cambridge, Social Sciences Research Methods Centre (SSRMC), Cambridge, UK, February 2016.
- University of Illinois at Urbana-Champaign, Department of Economics, April-May 2015.
- New York University, Robert F. Wagner Graduate School of Public Service, New York, May 2014.
- Université Panthéon Assas, Paris II; cEnter of Research on Markets, Employment and Simulation (ERMES), Professeur invité, Paris II ERMES, Paris, June, 2013.
- New York University, Stern Business School, New York, April 2013.
- New York University, Department of Economics, New York, January-May 2012.
- New York University, Stern Business School, New York, March-April 2011.
- Universidade Federal do Ceara; Faculdade de Economia, Fortaleza, CE, Brasil, February 2011
- University of Illinois at Urbana-Champaign, Regional Economic Application Laboratory (REAL), February 2008.
- University of Texas at Dallas; School of Economics Political and Policy Sciences, Dallas, USA, January 2008.
- University of Illinois at Urbana-Champaign, Regional Economic Application Laboratory (REAL), January-February 2007.
- University of Cambridge, Department of Geography, Cambridge, UK, August 2005.
- University of Sheffield, Department of Geography, Sheffield, UK, September 1991.
- University of California at Santa Barbara, National Center for Geographical Information and Analysis, September-November 1989.

#### **Academic tasks:**

Member of the Board of the Doctorate in Statistics and mathematical finance, University “Bicocca” of Milan, since 2015.

Coordinator of the Steering committee for an English-taught Master Program in Health Management, Catholic University of the Sacred Heart, Rome, since 2015.

Chair of the Doctorate in “Economics”, University “G. d’Annunzio”, May 2011-December 2011.

Chair of the Doctorate in “Innovation”, University “G. d’Annunzio”, November 2010-May 2011.

Member of the Administration Council, University “G. d’Annunzio” of Chieti (Italy). 2006 – 2009.

Director of the Department of Business, Statistical, Technological and Environmental Sciences, University “G. d’Annunzio” of Chieti (Italy). 2003 – 2006.

Member of the Evaluation Committee (Nucleo di Valutazione) of the University “G. d’Annunzio” of Chieti (Italy). 2000-2003.

Chair of the BA program in Environmental Economics, Faculty of Economics, University “G. d’Annunzio” of Chieti (Italy), From November 1999 to March 2004.

Chair of the Doctorate in Economics and Management, 2004, 2005, University “G. d’Annunzio”.

Member of the board of the Doctorate in Applied Econometrics, Tor Vergata University, Roma, 2002 -2007.

#### **Main Scientific Societies memberships:**

International Statistical Institute, American Statistical Association, Royal Statistical Society, Regional Science Association, Spatial Econometrics Association, Società Italiana di Statistica.

#### **Chair and positions of Scientific Associations:**

Chairman of the Spatial Econometrics Association, 2006-present.

Member of the Directory Board, Società Italiana di Statistica, 2016- present.

#### **Prizes, fundings and awards:**

Best paper award of the Regional Studies Association, for *Spatial Economic Analysis*, 2012.

Swiss National Science Foundation, International Exploratory Workshop, (co-applicant Roberto Patuelli), 2011  
N.A.T.O. Award, 1988  
N.A.T.O. Award, 1987  
N.A.T.O. Award, 1986  
Fitzwilliam Trust Research Fund, Fitzwilliam College (Cambridge), 1987  
Borsa C.N.R., 1987  
Borsa C.N.R., 1985  
British Council Advanced Fellowship, 1985-1986.

**Institutional tasks:**

Member of the working group on “Corruption risk indices and measures of prevention and contrast to the corruption in the PA”, Italian National Authority anti-corruption, ANAC, 2015-2016.

Member of the working group on “Environmental Information” of the Authority for Statistical Information, President of the Italian Council of Ministry, 2003 - 2004.

Coordinator of the Statistical Bureau of San Marino Republic, Office of Economic planning and Center of data elaboration and statistics (UPECEDS), Department of Finance of the Republic of San Marino, 1998-2007

President of the “Observatory of Job and Professions” of San Marino Republic, 1996 - 1998.  
Committee for the revision of electoral boundaries for the election of Italian Senate and Chamber representatives, 1994-1997.

**Research projects coordinated:**

**Current:**

- Scientific Coordinator, “Quality crowdsourced food prices”, Project founded by the Joint Research Center, Directorate D – Sustainable Resources, Unit D.4, Economics of Agriculture, 2018-2019.
- Principal investigator, “Statistical solutions for regressions-type models with big spatial data”, (co-investigator Antonietta Mira), InterDisciplinary Institute of Data Science IDIDS, Università della Svizzera Italiana, funded by the Swiss National Science Foundation (SNSF), 2016 – current.

**Past:**

- Scientific Coordinator, “Quality crowdsourced food prices”, Project founded by the Joint Research Center, Directorate D – Sustainable Resources, Unit D.4, Economics of Agriculture, 2016-2018.
- Participant: MUNROS ‘Health Care Reform: the iMPact on practice, oUtcomes and costs of New roles for health pROfeSsionals’, VII Framework Programme Collaborative project scheme, European Commission, FP7-HEALTH-2012-INNOVATION-1 programme grant agreement No 305467, 2012-2017.
- Scientific Coordinator, Monitoring of the spatial distribution of extreme values in soil pollution through 3-D sampling, MIUR (Italian Ministry of Education, University and Research), 2006-2008.
- Scientific Coordinator, Monitoring the spatial distribution of extreme values in soil and air pollution , MIUR (Italian Ministry of Education, University and Research), 2004-2006
- Scientific Coordinator, Problems of identification of areas at environmental risk: problems of data collection and integration between sources, MIUR (Italian Ministry of Education, University and Research) 2002-2004.
- Scientific Coordinator, Problems related to the collection of environmental data: from spatial sample drawing to analytical techniques for assessing soil, air and water quality and the associated risk, MIUR (Italian Ministry of Education, University and Research) 2000-2002.

- Participant, Problems related to techniques, methods and operating conditions for obtaining analytical data and evaluation of their quality and significance, MIUR (I Italian Ministry of Education, University and Research), 1998-2000.
- Principal Investigator, NATO Collaborative Research Grant, (co-investigators Robert Haining and Daniel Griffith) 1994
- Principal Investigator, NATO Collaborative Research Grant, (co-investigators Robert Haining and Daniel Griffith) 1990
- Principal Investigator, NSF National Science Foundation Research Grant, (co-investigators Robert Haining and Daniel Griffith), 1989

#### **Teaching experience:**

Basic Statistics, Advanced Statistics, Statistics and Big Data, Big Data and Business Analytics, Econometrics, Business Statistics, Economic Statistics, Applied Probability, Spatial Econometrics, Econometric models and time series, Basic Econometrics on Eviews ©, Statistical Quality Control, Multivariate Statistics, Applied Statistics on SPSS ©, Time series analysis, Stochastic processes and their applications, Spatial statistics, Social Statistics.

*At a Bachelor, Master, PhD and Executive level.*

#### **Congresses organized:**

- XIII Annual Meeting of the "Spatial Econometrics Association", Pittsburg (USA), November 2019. (Chair of the Scientific Committee and of the Local Organizing Committee).
- Intermediate Conference of the "Italian Statistical Society: "Smart Statistics for Smart Applications", SIS", Milano, June 2019. (Chair of the Scientific Committee).
- Sixth "Health Econometrics" Workshop, Bergamo, July 2018. (Member of the Scientific Committee).
- XIII National Conference of Statistics, ISTAT, Rome, July 2018 (Member of the Scientific Committee).
- XII Annual Meeting of the "Spatial Econometrics Association", Vienna, June 2018. (Member of the Scientific Committee).
- XI Annual Meeting of the "Spatial Econometrics Association", Singapore, June 2017. (Member of the Scientific Committee).
- X Annual Meeting of the "Spatial Econometrics Association", Rome, June 2016. (Chair of the Scientific Committee).
- Fifth "Health Econometrics" Workshop, Bari, December, 2016. (Member of the scientific committee).
- VIII Annual Meeting of the "Spatial Econometrics Association", Zurich, June 2014. (Member of the scientific committee).
- VII Annual Meeting of the "Spatial Econometrics Association", Washington, DC, July 2013. (Chair of the scientific committee).
- VI Annual Meeting of the "Spatial Econometrics Association", Salvador Bahia, Brazil, July 2012. (Chair of the scientific committee).
- Third "Health Econometrics" Workshop, Siena, December, 2012. (Member of the scientific committee; Invited position paper).
- V Annual Meeting of the "Spatial Econometrics Association", Toulouse, July 2011. (Member of the scientific committee).
- IV Annual Meeting of the "Spatial Econometrics Association", Chicago, June 2010. (Member of the scientific committee).
- Second "Health Econometrics" Workshop, Catholic University of the Sacred Heart, Rome, July, 2010. (Member of the scientific committee).
- III Annual Meeting of the "Spatial Econometrics Association", Barcellona, July, 2009. (Member of the scientific committee)
- First "Health Econometrics" Workshop, Milan, December, 2008. (Member of the scientific committee).
- II Annual Meeting of the "Spatial Econometrics Association", New York, November, 2008. (Chair of the local organizing committee. Member of the scientific committee)

- International Workshop on “Spatial Econometrics”, Roma, 25-27 May, 2006. (Chair of the local organizing committee, Chair of the scientific committee)
- International Workshop on Spatial statistical methods in archaeological and cultural heritage safeguard research ", Pescara, 18-19 July 2000. (Chair of the local organizing committee, Chair of the scientific committee)
- International Workshop on "Advances in spatial statistics: methods and application", Trento, 20-21 October 1994. (Chair of the local organizing committee, Chair of the scientific committee)

#### **Summer schools organized**

- “Spatial Econometrics Advanced Institute”, 4 weeks course with international students and international instructors, Faculty of Economics, University of Rome “La Sapienza”, Rome, Director of the course and instructor of the ‘Spatial Statistics’ course.

*Held yearly in May-June since 2008. 240 students from all 5 continents.*

*12-th edition May 2019.*

(<http://www.spatialeconometricsadvancedinstitute.org>)

**Leading Editor** of the book series “Spatial Statistics and Spatial Econometrics”, Elsevier. Since November 2016, First book published in Fall 2017.

#### **Membership in Boards of Editors of Scientific Journals:**

Empirical Economics (2007-present) Letters in Spatial and Resource Sciences (2010-present)

#### **Past Membership in Boards of Editors of Scientific Journals:**

Papers in Regional Sciences, (2007-2013)

#### **Referee activity (incomplete list):**

Empirical Economics, Economic Modeling, Economic Letters, Papers in Regional Sciences, International Regional Science Review, Spatial Statistics, Spatial Economic Analysis, Urban geography, Journal of Economic Geography; Journal of Urban Economics, Regional Studies, Applied Economics, Journal of Applied Econometrics, Statistical Methods and Applications, Computational Statistics and Data Analysis, Geographical Analysis, Geographical Systems, Regional Studies, China Economic Review, Technometrics, Journal of the Royal Statistical Society series A and C.

#### **Seminars and Conferences:**

More than 140 invited speeches, seminars, conferences in the main universities and institutions all over the world.

#### **Publications:**

6 books published by Kluwer Academic-Dordrecht, Springer-Verlag, Palgrave-McMillan, CEDAM-Padua and CUSL-Padua,

8 Chapters of books published by Chapman & Hall, Edward Elgar Publisher, Taylor & Francis, Phisica-Verlag, Springer-Verlag, Martinus Nijhoff, Franco Angeli, Cacucci.

About 200 articles, working papers, conference proceedings and reviews published on the main International and Italian scientific journals.

#### In brief:

- 53 articles published on impacted journals listed on Thomson ISI Journal Citation Reports.
- 13 articles on refereed books
- 6 books with international publishers
- 2 books with Italian publishers
- 13 edited special issues of ISI Thompson listed journals
- 22 Articles on other refereed journals
- 110 other publications

Bibliometric indices:

**ISI-Thompson**

- Number of impacted papers: 55 (last 5 years 2014-2019: 14)
- Total impact: 65.996 (last 5 years 2014-2019: 13.756)
- Average impact per paper: 1.199 (last 5 years 2014-2019: 1.058)
- Number of Italian "Class A" papers: 16 (last 5 years 2014-2019: 6)

**Publish or Perish**

- Papers: 176
- Number of Citations: 3884
- Citation years: 32 (1986-2018)
- Cites/paper: 20.55
- Papers/author: 104.52
- Cites/year: 113
- Hirsch index (h-index): 28
- hc-index: 18
- g-index: 58
- hl,norm: 23
- hl, annual 0.72
- highest citation 469

**Research Gate**

- Reputation score: 9.24 (ranked 42.5th percentile)
- 185 citation.

**Google scholar**

- Citations: 3884 (1629 since 2014)
- H-index: 30 (21 since 2014)
- I10-index: 62 (40 since 2014)

**Foreign languages:**

English (fluent), German and French (basic).

**Citations on international "Who's who"**

Marquis Who's Who in the World, New providence, NJ, from the 12-th edition, 1995.

## List of publications of Giuseppe Arbia

### 1. Articles on Journals listed on Thomson ISI Journal Citation Reports

[151] Estimation of spatial econometric linear models with large datasets: How big can spatial Big Data be? (with C. Ghiringhelli and A. Mira) to appear on *Regional science and urban economics*, 2019, IF = 1.278, **class A**

[150] Impact measures in spatial autoregressive models (with A. Bera, O. Dogan and S. Taspinar) *International Regional Science Review*, 2019, IF = 1.743  
<https://doi.org/10.1177/0160017619826264>, **class A**

[149] Modelling Inter-country Spatial Financial Interaction with Graphical Lasso: An application to Sovereign co-risk Evaluation (with R. Bramante, S. Facchinetti and D. Zappa) *Regional Science and Urban Economics*, 70, 72-79,  
<https://doi.org/10.1016/j.regsciurbeco.2018.02.006>, 2018, IF = 1.336, **Class A**.

[148] Testing inequality of opportunity in Italy within the ANOVA framework (with M. L. Pace) *Empirical Economics*, 55, 1, 297-322, 2018, IF = 0.614

[147] A frequency domain test for isotropy in spatial data models, (with F. Santi, M. Bee and G. Espa) *Spatial Statistics*, 21, A, 262-278, 2018, IF = 1.605

[146] Fitting spatial regressions to large datasets using unilateral approximations (with M. Bee, G. Espa and F. Santi), *Communications in Statistics, Theory and Methods*, 47, 1, 222-238, <https://doi.org/10.1080/03610926.2017.1301476>, 2018, IF 0.300.

[145] Effects of missing data and locational errors on spatial concentration measures based on Ripley's K-function, (with G. Espa, D. Giuliani and M. Dickson), *Spatial Economic Analysis*, 12, 2-3, 326-346, 2017 <http://dx.doi.org/10.1080/17421772.2017.1297479>, IF = 1.470. **class A**.

[144] Spatial Analysis of Start-up Health and Pharmaceutical Firm Survival (with G. Espa, D. Giuliani and R. Micciolo), *Journal of Applied Statistics*,  
<http://dx.doi.org/10.1080/02664763.2016.1214249>, 44, 9, 2017, IF = 0.417

[143] Dirty Spatial Econometrics, (with G. Espa and D. Giuliani) *The Annals of Regional Science*, January, 56, 1, 177-189, 2016, IF = 0.651

[142] A micro spatial analysis of firm demography: the case of food stores in the area of Trento (Italy) (with R. Cella, G. Espa and D. Giuliani), *Empirical Economics*, 48, 3, 2015, 923-937. IF = 0.614

[141] Spatio-temporal Clustering of Pharmaceutical and Medical Device Manufacturing Industry: A Geographical Micro-level Analysis. (with G. Espa, D. Giuliani and M. Dickson), *Regional Science and Urban Economics*, 49, 298-304, 2014. IF = 0.971, **Class A**.

[140] Weighting Ripley's K-function to account for the firm dimension in the analysis of spatial concentration, (with G. Espa and D. Giuliani), *International Regional Science Review*, 3, 247-268, 2014. IF = 1.257. **Class A**

[139] Advances in Cross-Sectional and Panel Data Spatial Econometric Modeling, (with Christine Thomas), *Geographical Analysis*, 46, 2, 101-103, 2014, IF = 1.5

[138] Pairwise likelihood inference for spatial regressions estimated on very large datasets, *Spatial Statistics*, 7, 21-39, 2014. IF = 1.605

[137] A Gaussian Markov random field approach to convergence analysis (with Luigi Ippoliti and Luca Romagnoli), *Spatial Statistics*, 6, 78-90, 2013. IF = 1.605

- [136] Advances in the Statistical Modeling of Spatial Interaction Data (with Roberto Patuelli) *Journal of Geographical Systems*, 15, 3, 229-231, 2013. IF = 1.366.
- [135] Effects of scale in spatial interaction models (with Francesca Petrarca) *Journal of Geographical Systems*, 15, 3, 249-264, 2013. IF = 1.366
- [134] Testing isotropy in spatial econometric models, (with G. Espa and M. Bee) *Spatial Economic Analysis*, 8, 3, 228-240. 2013. IF = 1.375, **Class A**.
- [133] Conditional vs. unconditional industrial agglomeration: disentangling spatial dependence and spatial heterogeneity in the analysis of ICT firms distribution in Milan (Italy) (with G. Espa and D. Giuliani), *Journal of Geographical Systems*, 15, 31-50, 2013. IF = 1.366
- [132] Frontiers in spatial econometrics modelling (with Enrique Lopez Bazo and Francesco Moscone), *Economic Modelling*, 29, 1, 1-2. 2012. IF = 0.699
- [131] Clusters of firms on an inhomogeneous space: the case of high-tech industries in Milan in 2001 (with G. Espa, D. Giuliani and A. Mazzitelli), *Economic Modelling*, 29, 1, 3-11, 2012. IF 0.699
- [130] A lustrum of SEA: Recent trends following the creation of the Spatial Econometrics Association (2007-2011), *Spatial Economic Analysis*, 6, 4, 377-395, 2011. IF = 1.375, **Class A**.
- [129] Concentration of manufacturing and service sectors in Italy: Accounting for spatial dependence and firm size distribution (with Laura De Dominicis and Henri De Groot) *Regional Studies*, 47, 3, 405-418, 2011. IF = 1.465, **Class A**.
- [128] Aggregation of regional economic time series with different spatial correlation structures (with G. Espa and M. Bee), *Geographical Analysis*, 43, 78-103. 2011, IF 1.5
- [127] Advances in spatial econometrics (with Harry Kelejian), *Regional Science and Urban Economics*, 40, 5, 253-254, 2010, IF 1,628, **Class A**.
- [126] Detecting the existence of space-time clusters of firms (with Giuseppe Espa, Diego Giuliani and Andrea Mazzitelli), *Regional Science and Urban Economics*, 40, 5, 311-323, 2010, IF 1,628, **Class A**.
- [125] Detecting negative spatial autocorrelation in georeferenced random variables (with Dan Griffith), *International Journal of Geographical Information Sciences*, 24, 3, 417-437, 2010, IF 1.613
- [124] Growth and convergence in a multi-regional model with space-time dynamics (with Elhorst JP and Piras G), *Geographical Analysis*, 42, 3, 338-355, 2010, IF 1.5
- [123] A new class of spatial Concentration measures (with G. Piras) *Computational Statistics and Data Analysis*, 53, 4471-4481, 2009, IF 1.304
- [122] Institutions and geography: empirical test of spatial growth models in European regions (with M. Battisti and G. Di Vaio), *Economic Modelling*, 27, 12-21, 2009, IF 0.588
- [121] Spatial dependence in the tails of air pollutant distributions: alternatives to the spatial correlogram (with Copetti, M. and Lafratta, G.), *Environmetrics*, 20, 3, 221 – 345, May 2009. IF 1,096
- [120] New spatial econometric techniques and applications in regional science (with Bernard Fingleton), *Papers in Regional Sciences*, 87, 3, 311-317, 2008. IF 1.541, **Class A**.
- [119]. Does evidence on regional convergence depend on the estimation strategy ? Results

from a sample of NUTS-2 European regions, 1977-2000. (with Le Gallo, J. and Piras, G), *Spatial Economic Analysis*, 3, 2, 209-224, June, 2008. IF 1.375, **Class A**.

[118] A class of spatial econometric methods in the empirical analysis of clusters of firms in space, (with Espa, G. e Quah, D.), *Empirical Economics*, 34, 1, 81-103, 2008. IF 0.614

[117] Introduction to the special issue on spatial econometrics, *Empirical Economics* (2008) 34:1-4 (with B. Baltagi) IF 0.614

[116] Nonlinear Regional Economic Dynamics: Continuous-Time Specification, Estimation and Stability Analysis (with Piras G. and Donaghy K.), *Journal of Geographical Systems*, 9, 4, 311-344, 2007. IF 1.278.

[115]. Spatial Sampling Plans to Monitor the 3-D Spatial Distribution of Extremes in Soil Pollution Surveys (with Lafratta G., Simeoni C), *Computational Statistics and Data Analysis*, 51 ,8, 4069-4082, 2007 IF 1.304

[114] Testing the Stochastic Convergence of Italian Regions using panel data, (with M. Costantini) *Applied Economics Letters*, 2006, 13, 775-783. IF 0.227

[113] "Exploring non linear dependence in the tails of bivariate marginals of a random field" (with G. Lafratta) *Geographical analysis*, 37, (4), 423-437. 2005 IF: 1.5

[112] Economic convergence or divergence? Modeling the interregional dynamics of EU regions, 1985-1999, (with J. H. P. Paelinck) *Geographical Systems*, 5, 291-314, 2004. IF 1.278.

[111]. Spatial econometrics modelling of regional convergence in continuous time, (with J. H. P. Paelinck), *International Regional Science Review*, 26, 3, 342-362, 2003. IF: 1.257, **Class A**.

[110] "Error propagation computing vegetation indices based on Landsat imagery" (with R. Haining and D. Griffith, *Environmental and ecological statistic*,. Vol. 10, 2, 375-396, 2003. IF 0,868, **Class A**.

[109] "Spatial sampling designs optimized under anisotropic superpopulation models" (with G. Lafratta) *Journal of the Royal Statistical Society series c – Applied Statistics*, 51, 2, 2002, 223-234, IF: 1.253, **Class A**.

[108] "The role of spatial effects in the empirical analysis of regional concentration" *International Journal of Geographical Systems*, 3, 3, 271-281, 2001. IF 1.366

[107] "Modelling the geography of economic activities on a continuous space" *Papers in Regional Sciences*, 80, 411-424, 2001; IF: 1.541

[106] "Error propagation in raster GIS: adding and ratioing operations " (con Haining R. P. e Griffith D. A.), *Cartography & Geographical Information Science*, Vol. 26, pp. 297-315, 1999. IF =0.83.

[105] "Contextual classification in image analysis: an assessment of accuracy of ICM" (with R. Benedetti and G. Espa), *Computational Statistics Data Analysis*, 30, 443-455, 1999. IF: 1.304

[104] "Error propagation modeling in raster GIS: overlay operations" (with R. Haining and D. Griffith) *International Journal of Geographical Information Sciences*, Vol. 12, n. 2, 1998. IF: 1.613.

[103] "Evaluating and updating the sample design: the case of the concentration of SO<sub>2</sub> in Padua" (with Lafratta G.) *Journal of Agricultural, Biological and Environmental Statistics*, 2, 4, 1997, 451-466, IF 1,235

[102]. "Effects of MAUP on image classification" (with R. Benedetti e G. Espa) *Journal of Geographical Systems*, 3, 1996, 123-141, IF 1.366

[101] "Heterogeneity of attribute sampling error in spatial data sets" (with D. Griffith e R. Haining), *Geographical Analysis*, vol.26, 4, October 1994, 300-320. IF: 1.5.

[100] "The use of GIS in spatial surveys", *International Statistical Review*, 61, 2, Agosto, 1993, 339-359. IF: 0.718

[99] "Error propagation through map operations" (with R. P. Haining), *Technometrics*, Vol. 35, 3, August, 1993, 293-305. IF: 1.434

[98] "Integrating GIS and spatial data analysis: problems and possibilities", (with Goodchild, Haining, Wise and 11 more authors), *International Journal of Geographical Information Sciences*, 6, 5, 407-423, 1993. IF 1.613

[97] "On second order non-stationarity in two-dimensional lattice processes", *Computational Statistics and Data Analysis*, 9, 147-160, North Holland, 1990. IF: 1.304

**Number of impacted articles: 54**

**Total impact: 64.718**

**Average impact: 1.198**

## 2. Articles on refereed books

[96] *The spatial dimension of health systems*, entry of the *Encyclopedia of big data* (with Moscone, Santos and Tosetti) Laurie A. Schintler and Connie L. McNeely (eds.) Oxford, 2018

[95] *Spatial Econometrics*, entry of the *Encyclopedia of big data*, Laurie A. Schintler and Connie L. McNeely (eds.) Springer Verlag, 2017

[94] Spatial Econometric Interaction Modelling: Where Spatial Econometrics and Spatial Interaction Modelling Meet (with R. Patuelli) in *Spatial Econometric Interaction Modelling* (Arbia, G. and R. Patuelli eds.) Springer-Verlag, Switzerland, 2016, ISBN 978-3-319-30196-9.

[93] The Future of Spatial Interaction Modelling, in *Spatial Econometric Interaction Modelling* (Arbia, G. and R. Patuelli eds.) Springer-Verlag, Switzerland, 2016, ISBN 978-3-319-30196-9.

[92] Spatial concentration and dispersion of economic activities: microeconomic versus mesoeconomic approach (with G. Espa and D. Giuliani), in *Handbook of Research Methods and Applications in Economic Geography*, Charlie Karlsson, Martin Andersson and Therese Norman eds., Edward Elgar Publisher, Cheltenham, 135-157, 2015, ISBN 978 0 85793 266 2 (cased).

[91] A class of spatial statistical methods in the empirical analysis of spatial clusters, (with G. Espa, G. e Quah, D.), in *Spatial Econometrics: methods and applications*, Arbia, G. and Baltagi, B. eds., reprint of the paper appeared on *Empirical Economics*, Springer-Verlag, ISBN 978-3-7908-2070-6, Heidelberg, 2009.

[90] "Modelling individual behaviour of firms in the study of spatial concentration" (with Copetti M. and Diggle P.J.), in U. Fratesi L. and Senn (eds.) *Growth in Interconnected Territories: Innovation Dynamics, Local Factors and Agents*, Springer-Verlag, 297-328, ISBN: 978-3-540-70923-7, 2008.

[89] "Uncertainty and error propagation in map analyses involving arithmetic and overlay operations: inventory and prospect" (with R. Haining e D. Griffith) in *Spatial accuracy assessment*, Kim Lowell and Annick Jaton (eds.), Ann Arbor Press, Chelsea, Michigan, ISBN 1-57504-119-7, 11-25, 1999.

[88] "Aggregation over time space and individuals in economic modelling: a generating mechanism approach", Capitolo 6 del volume *Continuous time econometrics*, G. Gandolfo ed., Chapman and Hall editori, 1992, ISBN 0-412-45020-8, London.

[87] "Statistical effects of spatial data transformations: a proposed general framework", in *Accuracy of spatial databases*, M. Goodchild e S. Gopal (eds.), Taylor & Francis, 249-259, ISBN 0-85066-847-6, London, 1989.

[86] "On the simulation of two-dimensional stationary stochastic processes: a comparison of different approaches", *Proceedings of the Seventh Symposium in Computational Statistics, Short Communications and posters*, De Antoni, Lauro and Rizzi (eds), Physica-Verlag editor, 17 - 18, Roma, 1986.

[85] "Problems in the estimation of the spatial autocorrelation function arising from the form of the weights matrix" in *Transformations through space and time*, D.Griffith and R.P. Haining (eds), Martinus Nijhoff Editore, 294-308, Dordrecht, ISBN 9024733626, 1986.

### **3. Books with international publishers**

[84] Spatial microeconometrics, (with Espa, G. and Giuliani, D.), Rutledge (in preparation, expected 2019)

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#### **e) edited issues**

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[21] "Analisi istruttoria per l'individuazione di indicatori di rischio corruzione e di prevenzione e contrasto nelle amministrazioni pubbliche coinvolte nella politica di coesione, (con Carloni, E., Galli, E. Monteduro, e Vannucci, A.), **Agenzia Nazionale Anti Corruzione ANAC**, Report finale del Gruppo di lavoro per il programma di azione e Coesione Complementare al PON "Governance e Assistenza Tecnica 2007-2013" Obiettivo Operativo I.2, Progetto "Attività esterne di valutazione del PON GAT 2007/2013", 2016.

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#### **f) submitted papers**

Reduced-biased estimation of spatial econometric models with incomplete data, (with F. Santi, M. M. Dickson, G. Espa and D. Giuliani) submitted to *Journal of Geographical Systems*, (IF = 1.324)

Least quartic regression with applications in finance, (with R. Bramanti) submitted to *Journal of quantitative finance* (IF = 0.960)

Measurement error induced by locational uncertainty when estimating discrete choice models with a distance as regressor (with P. Berta and C. Dolan), under revision for *Spatial Economic Analysis*, (IF = 1.282) **class A**

Evaluation health facilities access using using Bayesian spatial models and location analysis methods (with, A. Auricchio, R. Krause, A. Mira, Reinhold, J., and Thierney, N.), under second revision for *PlosOne*, (RG IF = 3.54)

Atypical small acinar proliferation (ASAP) and clinically significant prostate cancer risk: is it the time for an update of clinical management? (with L. Di Gianfrancesco, A. Totaro, F. Pinto, E. Sacco, M. Racioppi, G. Palermo, M. Campetella, A.A. Santoro, and PF Bassi, submitted to *European Urology*, (IF = 17.581)

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#### **g) work in progress**

Estimating spatial microeconomic models in the presence of uncertain individuals' location (with Maria Michela Dickson, Giuseppe Espa, Diego Giuliani and Flavio Santi)

Post-sampling crowdsourced data to allow reliable statistical inference: the case of food price indices in Nigeria (With Gloria Solano-Hermosilla, Fabio Micale, Vincenzo Nardelli and Giampiero Genovese)

Estimation of spatial microeconomic linear models with large datasets: a composite likelihood solution (with C. Ghiringhelli)

Slice-wise two-dimensional spatial correlation measures used as predictors in a pathological complete response logistic model (with Di Napoli, Gatta, Lenkovic and Valentini)

**h) conference proceedings, working papers and other publications:** about 100