CURRICULUM VITAE
GIADA ADELFIO

Born in Palermo, September 1st, 1980.

Working position:

- Associate Professor in Statistics (SECS\S-01) at the University of Palermo, Dipartimento di Scienze Economiche Aziendali e Statistiche (DSEAS).
- Positive evaluation 'Abilitazione Scientifica Nazionale (ASN) 2016' for the category Full Professor
- Component of the Committee for the 'Quality Management of the Department Research' (DSEAS) since 2014
- Component of the board of the Ph.D. Program in Statistics, University of Palermo, since the XXI course.
- Coordinator of the second level annual Master of the University of Palermo in 'Data Science and Big Data Analytics' since the a.y. 2018-2019
- Component of the 'GEV Disciplinare per l'Area 13a – Scienze Economiche e Statistiche' for the Assessment of the Italian Research Quality (VQR) 2015-19
- Component of the Committee of the Italian Statistical Society for foreign relations since 2021

Education:

- Ph. D. in Statistics, (April 2, 2007) at the department of Statistical and Mathematical Sciences of Palermo, with the dissertation: Residual analysis for point processes: an approach based on weighted second-order statistics.
- Master degree (110/110 cum Laude) in Statistical and Economical Sciences (September 22, 2003): Statistical methods and models for the assessment of seismic risk.

Research Projects:

- PI of the research project 'Trasformazione Digitale e Big Data' area INNOVAZIONE - PON "Ricerca e Innovazione" 2014-2020, Asse IV
- PI of the project: Complex space-time modeling and functional analysis for probabilistic forecast of seismic events, as a funded project of the Programmi di Ricerca Scientifica di Rilevante Interesse Nazionale (PRIN) 2015.Decreto Direttoriale del 20 settembre 2016 prot. n. 1827 http://attiministeriali.miur.it/anno-2016/settembre.aspx
- In chief for the post-doc position (12 months): Extensions to estimation approaches for complex space-time point processes funded by the project PRIN, titled*:* Complex space-time modeling and functional analysis for probabilistic forecast of seismic events
- In chief for the visiting of Jonathan Romero, PhD student at the Department of Hydraulic Engineering and Environment Research Group of Hydrological and Environmental Modeling Universitat Politècnica de València.
- Research assignment from the National Institute of Geophysics and Volcanology (INGV) for the statistical analysis of Italian seismicity (2017-today).
- Component of the agreement research project between the University of Palermo and the Meyer Hospital of Firenze (EURO-HIT-HLH European cooperative pilot study for testing Hybrid ImmunoTherapy for Hemophagocytic LymphoHistiocytosis, 2011-2013).
- PI of the 'Research Project of the University of Palermo' 2007 (ex 60%) 'Sviluppo di metodi di stima e diagnostica nei processi di punto spazio-temporali'
- Component of national research projects PRIN since 2005

Editorial board:

- Associate Editor Environmetrics Online ISSN:1099-095X
- Associate Editor Journal of Agricultural, Biological and Environmental Statistics ISSN 1085-7117 (print) 1537-2693 (web)
- Editorial Board Spatial Statistics, ISSN: 2211-6753
- Editorial Board Mathematics, ISSN 2227-7390
- Associate Editor per la rivista dSEAS Working Papers ISSN 2611-0172 http://swps.unipa.it/index.php/swps/about/editorialTeam
- Guest Editor of Special Issue "Statistical Models in the Era of Big Data" for Mathematics (MPDI)

Scientific and organizing committee:

- Component of the Organizational Scientific Committee for the GRASPA-SIS group 2016-2020
- Component of the Scientific Committee of the Meeting GRASPA 2019, Pescara July 15-16, 2019.
- Organizing Committee of the SIS 2018, 49th Meeting of the Italian Statistical Society Palermo 20-22 June 2018.
- Organizing Committee of the 28th International Workshop on Statistical Modeling IWSM - Palermo 8-12, July 2013.

Organization of sessions in conferences:

- 'Complex spatio-temporal processes and functional data' at the SIS 2018 the 49th Meeting of the Italian Statistical Society will be held in Palermo in 2018, June 20-22.
- 'Complex space-time modeling and functional analysis for probabilistic forecast of seismic events' at the 27th Annual TIES Conference joint with GRASPA 2017, Bergamo, Italy, 24-27 July, 2017.
- 'Advanced space-time models and functional analysis for seismic monitoring' at the SIS 2017- STATISTICS AND DATA SCIENCE: NEW CHALLENGES, NEW GENERATIONS, University of Florence, 28-30 June 2017
- 'Uncertainty, risk and forecasting: perspectives and new methods for complex processes' at the Meeting of the Italian Statistical Society, "Smart Statistical Methods for Smart Applications", Milano 2019, June 19-21.
- 'Complex space-time processes and probabilistic forecast of seismic events' Meeting GASPA, Pescara 2019, July 15-16.
- 'Extremes and Rare Events in Complex Systems' 50th Meeting of the Italian Statistical Society, University Of Pisa June 21, 2021 – June 25, 2021

External Reviewer for projects and PhD thesis

- PhD committee of the program in 'Statistica e Matematica per la Finanza Curriculum Statistica' XXX course, University Milano Bicocca a.y.2017/2018.
- External Reviewer for the PhD in Statistics of the Universitat de València, student Adina Alexandra Iftimi, tutors Ottmar Cronie, Francisco Martinez Ruiz and Francisco Montes Suay, a.y. 2017-2018.
- External Reviewer for a project of the 2019 FONDECYT Regular Competition, for National Fund for Scientific and Technological Development (FONDECYT) of the Chilean National Commission for Scientific and Technological Research (CONICYT).
- Evaluation Committee for the PhD thesis titled 'Analysis of Structural Characteristics and Extremal Behavior of Transformed Spatio-temporal Processes' by José Romero (tutor José Angulo) for the Doctoral Program in Mathematical and Applied Statistics at the University of Granada, July 2020.
- External Reviewer and Evaluation Committee for the PhD thesis 'Modèles De Processus Ponctuels Pour Des Données Spatio-Temporelles Complexes' by RAEISI Morteza for the Doctorat in Mathématiques Appliquées à l'Université d'Avignon, September 2021.

Invited Talks:

- "Space-time Point Processes semi-parametric estimation with predictive measure information" at the Joint METMA VII and GRASPA14 Workshop, Torino (10-12 September 2014)
- "ETAS model estimation with predictive measure" at DAMES 2014, Milano (6-8 October 2014).
- "Full nonparametric estimate of space-time ETAS model" at the 9th Workshop on Statistical Seismology, Potsdam (Germany, 14-19 June 2015).
- 'Space-time FPCA Algorithm for clustering of multidimensional curves' at the 48th Scientific Meeting of the Italian Statistical Society, Salerno, 8-10 June, 2016.
- 'Some extensions in space-time LGCP: application to earthquake data' at the 17th Conference of the Applied Stochastic Models and Data Analysis International Society, London (UK), 6-9 June 2017.
- "Default contagious risk assessment though space-time point processes" for the session Invited - Financial Risk modeling at the Royal Statistical Society 2017, Glasgow (UK), 4-7 September, 2017
- Default-contagion risk assessment through Space-time Point Processes (May 22, 2017). Department of Economics and Management, University of Pavia
- 'A new method for curves clustering in general dependence models' (Sottile G, Adelfio G) at the 1st CRoNoS Workshop on Multivariate Data and Software, Limassol, Cyprus, 3-5 April 2018
- 'Weighted local second-order statistics for complex spatiotemporal point processes' (Adelfio G, Siino M, Mateu J, Rodríguez-Cortés F) at the 32nd Edition of the European Meeting of Statisticians, Palermo, 22-26 July 2019
- Some properties of local weighted second-order statistics for spatio-temporal point processes (March 23, 2021). Dipartimento di Scienze Ambientali, Informatica e Statistica - DAIS Università Ca' Foscari Venezia

International research:

- Visiting (January-July, 2006) at the Department of Statistics at the University of California Los Angeles (UCLA) to carry out a research activity under collaborating with prof. Frederic Paik Schoenberg.
- Invited to visit (February-March, 2007) the Institute of Statistical Mathematics (ISM) in Tokyo Japan, to carry out a post-doc research activity working with prof. Yoshiko Ogata.
- Invited for visiting (January-April, 2009) the School of Mathematics, Statistics and Operations Research of Victoria University in Wellington – New Zealand, working with prof. David Vere- Jones and staff of the School of Geography, Environment and Earth Sciences.

Main Teaching activity:

- Statistics for the degree courses in Engineering and in Mathematics at the University of Palermo.
- Stochastic processes for the master course in Statistics and Data Science at the University of Palermo.
- Probability and Stochastic processes for the master course in Economic and Financial Sciences at the University of Palermo.
- Informatics and Statistics for a master course in Geo-resources, environment and archaeometric applications at the University of Palermo.
- Geostatistics for a master course of the Faculty of Sciences at the University of Palermo.
- Statistics applied to ecological systems for a master course of the Faculty of Sciences at the University of Palermo.
- Introduction to Space-time Point Processes for the Ph.D. course in Statistics at the University of Palermo
- Using software R for research in statistics of the School of the Italian Statistical Society (SIS) 2009.
- Data analysis in R: introduction and application of the School of the Italian Statistical Society (SIS) 2012.

Memberships:

SIS (Italian Statistical Society), CLADAG (CLAssification and Data Analysis Group), TIES (The International Environmetrics Society), GRASPA (Research Group for Statistical Applications in environmental Problems)

List of main papers:

- Adelfio, G., Chiodi, M., De Luca, L., Luzio, D., Vitale, M. (2006) Southern-Tyrrhenian seismicity in space-time-magnitude domain. Annals of Geophysics, vol. 49, n. 6, pp.1245-1257 ISSN: 1593-5213
- Adelfio, G., Chiodi, M. (2009) Second-order diagnostics for space-time point processes with application to seismic events, Environmetrics, vol. 20, pp. 895–911. ISSN 1180-4009. DOI: 10.1002/env.961
- Adelfio, G., Schoenberg, F. P. (2009) Point process diagnostics based on weighted second-order statistics and their asymptotic properties. Annals of the Institute of Statistical Mathematics, vol. 61 (4) pp. 929-948. ISSN 0020-3157. DOI: 10.1007/s10463-008-0177-1
- Giunta, G., Luzio, D., Agosta, F., Calò, M., Di Trapani, F., Giorgianni, A., Oliveti, E., Orioli, S., Perniciaro, M., Vitale, M., Chiodi, M., Adelfio, G. (2009). An integrated approach to the relationships between tectonics and seismicity in northern Sicily and southern Tyrrhenian. Tectonophysics vol. 476, pp. 13–21 ISSN 0040-1951.
- Adelfio, G., Ogata, Y. (2010) Hybrid kernel estimates of space-time earthquake occurrence rates using the Etas model. Annals of the Institute of Statistical Mathematics 62, 1, pp.127-143. ISSN 0020-3157.
- Adelfio, G., Chiodi, M. (2010) Diagnostics for nonparametric estimation in space-time seismic processes. Journal of Environmental Statistics, vol. 1 (2). ISSN 1945-1296 http://www.jenvstat.org/v01/i02/paper
- Adelfio, G. (2010). Kernel estimation and display of a five-dimensional conditional intensity function. Nonlinear Processes in Geophysics, vol. 17, pp. 237-244. ISSN: 1023-5809
- Muggeo, V. M. R. and Adelfio, G. (2011). Efficient change point detection for genomic sequences of continuous measurements. Bioinformatics, vol. 27, pp. 161-166. ISSN 1367-4803 doi: 10.1093/bioinformatics/btq647
- Marcon, G., Adelfio, G., Chiodi, M. (2011) Gamma kernel intensity estimation in temporal point processes. Communication in Statistics- Simulation and Computation, 40, 8, pp. 1146-1162. ISSN: 0361-0918. DOI: 10.1080/03610918.2011.563158
- Chiodi, M., Adelfio, G., (2011) Forward Likelihood-based predictive approach for space-time processes. Environmetrics, vol. 22 (6), pp. 749–757.
- Adelfio, G., Chiodi, M., D'Alessandro, A. and Luzio, D. (2011) FPCA algorithm for waveform clustering. Journal of Communication and Computer, vol. 8(6):494-502. ISSN 1548-7709
- Adelfio, G. (2012) Change-points detection for variance piecewise constant models. Communications in Statistics - Simulation and Computation, 41:4, 437-448. ISSN 0361-0918. DOI: 10.1080/03610918.2011.592248
- Adelfio, G., Chiodi, M., D'Alessandro, A., Luzio, D., D'Anna, G., Mangano, G. (2012) Simultaneous seismic wave clustering and registration. Computers & Geosciences 44, 60–69. ISSN: 0098-3004. DOI: 10.1016/j.cageo.2012.02.017
- Di Leonardo, R., Adelfio G, Bellanca A; Chiodi M, Mazzola S (2014). Analysis and assessment of trace element contamination in offshore sediments of the Augusta Bay (SE Sicily): A multivariate statistical approach based on canonical correlation analysis and mixture density estimation approach. Journal of Sea Research 85, 428-442
- Adelfio G, Boscaino G, Capursi V (2014) A new indicator for higher education student Performance. Higher education 68, 653–668 DOI 10.1007/s10734-014-9737-x
- Adelfio, G., Chiodi, M. (2015) Alternated estimation in semi-parametric space-time branching-type point processes with application to seismic catalogs. Stochastic Environmental Research and Risk Assessment: Volume 29, Issue 2, 443-450

- Nicolis, O., Chiodi, M, Adelfio, G. (2015) Windowed Etas Models with Application to The Chilean Seismic Catalogs. Spatial Statistics, 14, 151-165 DOI:10.1016/j.spasta.2015.05.006
- Adelfio, G. Chiodi, M, (2015) FLP estimation of semi-parametric models for space-time Point Processes and diagnostic tools. Spatial Statistics, 14, 119–132 DOI: 0.1016/j.spasta.2015.06.004
- Adelfio G, Boscaino G (2016) Degree course change and student performance: a mixed-effect model approach. Journal of Applied Statistics, 43 (1), 3-15. DOI: 0.1080/02664763.2015.1018673
- Siino, M, Adelfio, G, Mateu, J, Chiodi, M, D'Alesandro, A. (2017). Spatial pattern analysis using hybrid models: an application to the Hellenic seismicity. Stochastic Environmental Research and Risk Assessment, 31 (7), 1633-1648
- Chiodi, M., Adelfio, G. (2017). Mixed Non-Parametric and Parametric Estimation Techniques in R Package etasFLP for Earthquakes' Description. Journal of Statistical Software, Volume 76, Issue 3. doi: 10.18637/jss.v076.i03
- Siino M, Rodríguez-Cortés FJ, Mateu J, Adelfio G. Testing for local structure in spatiotemporal point pattern data. Environmetrics. 2017; e2463.
- Siino, M, D'Alessandro, A, Adelfio, G, Scudero, S, Chiodi, M (2018) Multiscale processes to describe the Eastern Sicily Seismic Sequences. ANNALS OF GEOPHYSICS, 61, 2, SE228, 2018; doi: 10.441/ag-7711. ISSN 2037-416X
- Sottile, G., Adelfio, G. (2019) Clusters of effects curves in quantile regression models. *Computational Statistics* **34,** 551–569
- Siino, M, Adelfio, G, Mateu, J. (2018) Joint second-order parameter estimation for spatio-temporal log-Gaussian Cox processes. Stochastic Environmental Research and Risk Assessment. 32, (12), pp 3525–3539
- Boscaino, G., Adelfio, G. (2018). Hints of latent drivers investigating university student performance. JOURNAL OF ENVIRONMENTAL STATISTICS, vol. 8. ISSN 1945-1296
- Romero-Cuellar, J., Abbruzzo, A., Adelfio, G, Francés, F. (2019) Hydrological post-processing based on approximate Bayesian computation (ABC). Stochastic Environmental Research and Risk Assessment, 33(7), 1361-1373, doi: 10.1007/s00477-019-01694-y
- Siino, M, Rodríguez-Cortés, F.J, Mateu, J, Adelfio, G. (2019). Spatio-temporal classification in point patterns under the presence of clutter. Environmetrics. e2599. https://doi.org/10.1002/env.2599
- Adelfio, G., Siino, M, Mateu, J, Rodríguez-Cortés, FJ, (2019) Some properties of local weighted second-order statistics for spatio-temporal point processes Stochastic Environmental Research and Risk Assessment DOI: 10.1007/00477-019-01748-1
- Adelfio, G., August, A., Chiodi, M., Giudici, P. (2020) Financial contagion through space-time point processes. Statistical Methods & Applications DOI: 10.1007/s10260-020-00538-2
- Adelfio, G., Chiodi, M. (2020). Including covariates in a space-time point process with application to seismicity. Statistical Methods & Applications DOI: 10.1007/s10260-020-00543-5
- Boscaino, G., Sottile, G, Adelfio, G. (2020) Migration and Students' Performance: detecting geographical differences following a curves clustering approach. Journal of Applied Statistics. 10.1080/02664763.2020.1845624
- Rodríguez, F., Rodríguez-Cortés, F. J., Mateu, J., Adelfio, G. (2020). On Some Statistical Properties of the Spatio-Temporal Product Density. Revista Colombiana de Estadística. 44 (1)
- Sottile G., Francipane A., Adelfio G, Noto L. (2021). A PCA-based clustering algorithm for the identification of stratiform and convective precipitation at the event scale: an application to the sub-hourly precipitation of Sicily, Italy. Stochastic Environmental Research and Risk Assessment. 10.1007/s00477-021-02028-7.
- D'Angelo N, Adelfio G, Abbruzzo A and Mateu J (2021). Inhomogeneous spatio-temporal point processes on linear networks for visitors' stop data. The Annals of Applied Statistics. In press
- D'Angelo N, Adelfio G and Mateu J (2021). Assessing local differences between the spatio-temporal second-order structure of two point patterns occurring on the same linear network. Spatial Statistics, 45, 100534
- Chiodi M, Nicolis O, Adelfio G, D'Angelo N, Gonzàlez A. (2021) ETAS Space–Time Modeling of Chile Triggered Seismicity Using Covariates: Some Preliminary Results. Applied. Sciences, 11, 9143. https:// doi.org/10.3390/app11199143
- D'Angelo, N.; Abbruzzo, A.; Adelfio, G. (2021) Spatio-Temporal Spread Pattern of COVID-19 in Italy. Mathematics, 9, 2454. https:// doi.org/10.3390/math9192454
- D'Angelo N, Siino M, D'Alessandro A, Adelfio G. (2022) Local Spatial Log-Gaussian Cox Processes for seismic data. Advances in Statistical Analysis. In press
- D'Angelo N, Di Benedetto A, Adelfio G, D'Alessandro A, Chiodi M(2022). A new picking algorithm based on the variance piecewise constant models. Stochastic Environmental Research and Risk Assessment. In press