Luca Bagnato Curriculum Vitae

Current position

Catholic University of the Sacred Heart - Piacenza
From December 2020, Associate professor in Statistics (SECS-S/01)

Research activities

Catholic University of the Sacred Heart - Piacenza
Tenure track Assistant Professor in Statistics, RTD B SECS-S/01 (December 2017 – December 2020)

Catholic University of the Sacred Heart - Milan
Assistant Professor in Econometrics, RTD A SECS-P/05 (November 2012 – November 2017).

The University of Verona
Research Fellow in Statistics (April 2012 - November 2012). Research title: "Likelihood based Monte Carlo techniques on hierarchical models for multivariate and non-Gaussian multivariate data". Supervising Professor: Marco Minozzo.

The University of Milano-Bicocca
Research Fellow in Statistics (January 2008 - December 2011). Research title: "Nonparametric models for volatility analysis in time series". Department of Quantitative Methods for Economics and Business Science. Supervising Professor: Angiola Pollastri.

The University of Milano-Bicocca
PhD in Methodological and Applied Statistics (February 2009).
Thesis Title: 'Nonparametric approach in time series analysis'. Supervising Professor: Aride Mazzali.

Education

The University of Milano-Bicocca
Master Degree in Quantitative models for banking and insurance (December 2004). Supervising Professor: Michele Zenga.

The University of Padova
Laurea in Statistics, (July 2001).
Thesis Title: 'Fellowship programs: economic indicators analysis related to Italian student families'' (Italian). Supervising Professor: Lorenzo Bernardi.

Languages

Italian (native), English (fluent).

Conference Presentations

Mixtures of multivariate leptokurtic normal distributions. ‘The 12th International Meeting of the CLAssification and Data Analysis Group (CLADAG) of the Italian Statistical Society’, Cassino, Italy, September 11-13, 2019 (participation as invited speaker).

Hidden semi-Markov models with multivariate leptokurtic-normal components: Application to daily returns series. ‘11th International Conference of the ERCIM WG on Computational and Methodological Statistics (CMStatistics 2018), University of Pisa, Italy, December 14-16, 2018 (participation as invited speaker).

Generalizing the multivariate normal distribution for accounting excess kurtosis: an application to model-based clustering. COMPSTAT 2014, Geneva, Switzerland, August 19-22, 2014.

A geostatistical latent factor model for skew-normal data. Likelihood, approximate likelihood and nonparametric statistical methods for complex applications, Final workshop PRIN 2008, Ca’ Foscari University, Italy, October 8-9, 2012.

Normal discriminant analysis via the 2-terms eigenvalue decomposition. ‘4th International Conference of the ERCIM Working Group on COMPUTING & Statistics (ERCIM'11)’, London, UK, December 17-19, 2011.

Model-Based clustering and classification via patterned covariance matrix analysis. ‘The 8th International Meeting of the CLAssification and Data Analysis Group (CLADAG) of the Italian Statistical Society’, Pavia, Italy, September 7-9, 2011.

The Autodependogram: A Graphical Device to Detect Serial Dependence. ‘34th Annual Conference of the German Classification Society (GfKl)’, Karlsruhe, Germany, July 21-23, 2010.

*Checking Serial Independence of Residuals from a Nonlinear Mode*l. ‘45th Scientific meeting of the Italian Statistical Society’, Padova, Italy, June 16-18, 2010.

Affiliation

From 2008: Member of the Italian Statistical Society (SIS).

Teaching Activity

2016-2017, 2018-2019, 2019/2020, 2020/2021
Holder of the ‘Statistics’ course for second year undergraduates, Catholic University of the Sacred Heart

2016-2017, 2018/2019, 2019/2020, 2020/2021
Holder of the ‘Business Statistics’ course for second year graduates and for the International postgraduate Master in International Management (MIM), Catholic University of the Sacred Heart (course in English)

2016-2017
Holder of the 'Econometrics' course for the second year students of Ph.D. in Management and Innovation, Catholic University of the Sacred Heart

2015-2016, 2016-2017, 2017-2018
Holder of the 'Applied Econometrics' course for third year undergraduates, Catholic University of the Sacred Heart (course in English)

2015-2016
Holder of the 'Introduction to SPSS' course for the students of Ph.D. in Agro-Food System, Catholic University of the Sacred Heart

2013-2014, 2014-2015, 2015-2016
Holder of the 'Research Methods' course for second year graduates and for the International postgraduate Master in International Management (MIM), Catholic University of the Sacred Heart (course in English)

2014-2015, 2015-2016, 2016-2017
Holder of the 'Applied Econometrics' course for second year graduates, Catholic University of the Sacred Heart

2014-2015, 2015-2016, 2016-2017, 2018/2019, 2019/2020, 2020/2021
Holder of the 'Business Statistics' course for second year graduates, Catholic University of the Sacred Heart

2012-2013, 2013-2014, 2014-2015
Holder of the 'Quantitative Research' course for the International Postgraduate Master in Corporate Communication (MCC), Catholic University of the Sacred Heart (course in English)

2013-2014, 2014-2015, 2015-2016, 2016-2017
Holder of the 'Cluster Analysis' course for the second year students of Ph.D. in Psychology, Catholic University of the Sacred Heart

2013-2014
Holder of the 'Business Statistics' course for third year undergraduates (evening school), Catholic University of the Sacred Heart

2011-2012, 2012-2013
Holder of the 'Statistics of Financial Markets' course for second year graduates, University of Milano-Bicocca

2009/2010, 2010/2011, 2011/2012, 2013/2014
Lecturer of the 'Multivariate analysis' course for master graduates, University of Milano-Bicocca

2008/2009, 2009/2010, 2010/2011, 2011/2012
Lecturer of the 'Statistics' course for third year undergraduates, University of Milano-Bicocca

2008/2009, 2009/2010, 2010/2011

Lecturer of the 'Business Statistics' course for third year undergraduates, University of Milano-Bicocca

2005-2006, 2006-2007, 2007-2008, 2008-2009

Lecturer of the 'Probability, Distributions and Multiple Regression' course for third year undergraduates, University of Milano-Bicocca

2006/2007, 2007/2008, 2008/2009

Lecturer of the 'Multivariate Statistics' course for third year undergraduates, University of Milano-Bicocca

Main Publications

- Vacca, Gianmarco, Zoia, Maria Grazia, Bagnato, Luca (2021). Forecasting in GARCH models with polynomially modified innovations. INTERNATIONAL JOURNAL OF FORECASTING, ISSN: 0169-2070, doi: 10.1016/j.ijforecast.2021.04.005
- Minozzo, Marco, Bagnato, Luca (2021). A unified skew-normal geostatistical factor model. ENVIRONMETRICS, p. e2672, ISSN: 1099-095X, doi: 10.1002/env.2672
- Punzo A., Bagnato L. (2021). Multiple scaled symmetric distributions in allometric studies. THE INTERNATIONAL JOURNAL OF BIOSTATISTICS, p. 20200059, ISSN: 1557-4679, doi: 10.1515/ijb-2020-0059
- Punzo, Antonio, Bagnato, Luca (2021). Modelling the cryptocurrency return distribution via Laplace scale mixtures. PHYSICA. A, p. 125354-125375, ISSN:0378-4371, doi: 10.1016/j.physa.2020.125354
- Bagnato, Luca, Punzo, Antonio (2021). Unconstrained representation of orthogonal matrices with application to common principal components. COMPUTATIONAL STATISTICS, p. 1177-1195, ISSN: 0943-4062, doi: 10.1007/s00180-020-01041-8
- Punzo A., Bagnato L. (2021). The multivariate tail-inflated normal distribution and its application in finance. JOURNAL OF STATISTICAL COMPUTATION AND SIMULATION, p. 1-36, ISSN: 0094-9655, doi: 10.1080/00949655.2020.1805451
- Tomarchio, Salvatore D., Punzo, Antonio, Bagnato, Luca (2020). Two new matrix-variate distributions with application in model-based clustering. COMPUTATIONAL STATISTICS & DATA ANALYSIS, p. 1-22, ISSN: 0167-9473, doi: 10.1016/j.csda.2020.107050
- Punzo A., Bagnato L. (2020). Allometric analysis using the multivariate shifted exponential normal distribution. BIOMETRICAL JOURNAL, p. 1525-1543, ISSN: 0323-3847, doi: 10.1002/bimj.201900248
- Antonello Maruotti, Antonio Punzo, Luca Bagnato (2019). Hidden Markov and Semi-Markov Models with Multivariate Leptokurtic-Normal Components for Robust Modeling of Daily Returns Series. JOURNAL OF FINANCIAL ECONOMETRICS, p. 91-117, ISSN: 1479-8409, doi: 10.1093/jjfinec/nby019
- Punzo, Antonio, Bagnato, Luca, Maruotti, Antonello (2018). Compound unimodal distributions for insurance losses. INSURANCE MATHEMATICS & ECONOMICS, p. 95-107, ISSN: 0167-6687, doi: 10.1016/j.insmatheco.2017.10.007
- Bagnato, Luca, De Capitani, Lucio, Punzo, Antonio (2018). Testing for serial independence: beyond the Portmanteau approach. THE AMERICAN STATISTICIAN, p. 219-238, ISSN: 0003-1305, doi: 10.1080/00031305.2016.1264314

- Bagnato L, Punzo A, Zoia MG (2017). The multivariate leptokurtic-normal distribution and its application in model-based clustering. CANADIAN JOURNAL OF STATISTICS-REVUE CANADIENNE DE STATISTIQUE, p. 95-119, ISSN: 0319-5724, doi: 10.1002/cjs.11308
- Bagnato, Luca, Potì, Valerio, Zoia, Maria (2015). The role of orthogonal polynomials in adjusting hyperpolic secant and logistic distributions to analyse financial asset returns. STATISTICAL PAPERS, p. 1205-1234, ISSN: 0932-5026, doi: 10.1007/s00362-014-0633-3
- Bagnato Luca, De Capitani Lucio, Mazza Angelo, Punzo Antonio (2015). SDD: An R Package for Serial Dependence Diagrams. JOURNAL OF STATISTICAL SOFTWARE, p. 1-19, ISSN: 1548-7660
- Bagnato, Luca, De Capitani, Lucio, Punzo, Antonio (2014). Detecting serial dependencies with the reproducibility probability autodependogram. ASTA ADVANCES IN STATISTICAL ANALYSIS, p. 35-61, ISSN: 1863-8171, doi: 10.1007/s10182-013-0208-y
- Bagnato, Luca, De Capitani, Lucio, Punzo, Antonio (2014). Testing serial independence via density-based measures of divergence. METHODOLOGY AND COMPUTING IN APPLIED PROBABILITY, p. 627-641, ISSN: 1387-5841, doi: 10.1007/s11009-013-9320-4
- Bagnato, Luca, Punzo, Antonio (2013). Finite mixtures of unimodal beta and gamma densities and the k-bumps algorithm. COMPUTATIONAL STATISTICS, p. 1571-1597, ISSN: 0943-4062
- Bagnato, Luca, Punzo, Antonio, Nicolis, Orietta (2012). The autodependogram: a graphical device to investigate serial dependences. JOURNAL OF TIME SERIES ANALYSIS, p. 233-254, ISSN: 0143-9782, doi: 10.1111/j.1467-9892.2011.00754.x