

Emanuele Taufer

Department of Economics and Management
University of Trento
Via Inama 5, 38100 Trento - Italy

Education

Academic degrees

<i>Cardiff University, School of Mathematics</i> <i>Ph.D. in Statistics</i> (with Distinction), Dissertation: Statistical methods for long memory processes Supervisor: N.N.Leonenko	2004
<i>G.Washington University, Washington, DC</i> <i>Master of Science in Mathematical Statistics</i> (GPA 3.96/4),	1998
<i>University of Trento, Trento</i> <i>Laurea in Economics and Commerce</i> (110/110),	1992

Short courses

<i>Instructional Workshop on Empirical Process Techniques for Dependent Data</i> Copenhagen, various instructors.	2000
<i>Non parametric methods based on the empirical processes</i> Torgnon, Summer course in Statistics and Probability - Prof. Y. Nikitin (University of S. Petersburg).	1999

Academic positions

Teaching and research

<i>University of Trento, Department of Economics and Management</i> (up to 2012 Department of Computer and Management Sciences)	
Full Professor of Statistics (SECS S/01)	2018 – Pres.
Associate Professor of Statistics (SECS S/01)	2003 – 2018
Assistant Professor of Statistics (SECS S/01)	1995 – 2002
<i>University of California at Santa Barbara, Department of Statistics and Applied Probability</i>	
Visiting Associate Professor	Sep-Dec 2012 Jan-Jun 2016
<i>University of Bolzano</i>	
Contract professor (Faculty of Economics)	2005 – 2012
Contract professor (Faculty of Computer Science)	2022 – Pres.
<i>H-Farm College</i>	
Contract professor	2022 – 2024

Administrative and elective

University of Trento,

<i>Dept. of Economics and Management: Coordinator of the LM in Management</i>	2020 – Pres.
Member of the board of the Doctoral Program in Economics and Management	2009 – Pres.
University of Trento Representative in the “Statistical Committee of the Province of Bolzano”	2008 – Pres.
<i>Dept. of Economics and Management: Director’s Representative for International Activities</i>	2012 – 2020
<i>Faculty of Economics: Dean’s Representative for International Activities</i>	2004 – 2012
<i>Department of Computer and Management Sciences: Deputy-Director</i>	2003 – 2012
<i>Faculty of Economics: Dean’s representative for students recruitment activity</i>	2002 – 2003

Honours and awards

The paper “A Test of Exponentiality based on the Mean Residual Life Characterization” has been indicated among the most original and innovative contributions by the Scientific Committee of the Annual Meeting of the Italian Statistical Society “SIS2002”, Milan, 2002.

Teaching

The main courses taught are listed below by institution and reverse chronological order:

University of Trento

- Statistics and Regression (*in English*) 2010 – Pres.
Ph.D. in Economics. Intermediate to advanced level course for students of the Ph.D. in Economics. Along with some topics selected from Hogg, McKean and Craig (*Introduction to Mathematical Statistics*) numerical techniques for ML and Bayes estimation, bootstrap, Monte Carlo integration and MCMC methods are discussed and implemented with R.
Since 2020 the course is in the groups of Ph.D. courses jointly offered by Trento (Ph.D. in Economics) and Bolzano (Ph.D. in Economics and Finance).
- Quantitative tools for management 2006 – Pres.
M.Sc. in Management (approx. 120 students). An R-based course dealing with statistical learning techniques, the book of James, Witten, Hastie and Tibshirani (*An Introduction to Statistical Learning*) is used and students are asked to work at a group project. A previous version of the course had a more traditional approach to modeling for business and economics.
- Quantitative methods for Market Analysis (*in English*) 2016 – 2019
M.Sc. in International Management (approx. 30 students). An R-based data mining course. Particular attention is devoted to graphical techniques for exploratory data analysis, cluster analysis, association analysis and classification techniques. Group projects are the core of the course; students are challenged with Kaggle competitions.
- Statistics and data analysis 2008 – Pres.
Bachelor in Economics/Management (approx. 150 students) I have been teaching in this kind of courses since many years; basic techniques of descriptive statistics, statistical inference and regression are being touched. Recently I introduced the use of R by placing particular attention on basic techniques of data retrieval, manipulation, description and representation.
- Methods and Concepts in International Studies (*in English*) 2011 – 2012
Ph.D. in International Studies. Introductory statistics course on probability and statistics for Ph.D. students with little quantitative background.
- Advanced Econometrics and Statistics (*in English*) 2008 – 2011
Ph.D. in Local Development and Global Dynamics. Course especially targeted on applications for panel and longitudinal data. Based on the book of Frees: *Longitudinal and Panel data*, Cambridge University Press.
- Mathematical Statistics 1998 – 2005

Laurea degree in Economics. Intermediate course in statistics and probability. Selected topics from the classical book of Hogg, McKean and Craig: Introduction to Mathematical Statistics, Prentice Hall (various editions).

- Sampling theory 2001 – 2004
Laurea degree in Economics. In this course selected topics from the book of Cochran: Sampling techniques, Wiley were presented and discussed.
- Data analysis 1996 – 2008
Bachelor in Economics/Management (approx. 50 students) and Bachelor in Economics/Management, Part-Time section

University of California at Santa Barbara

- PStat5A (*in English*) Fall 2012 and Winter 2016
Inter-departmental course at UC in Santa Barbara providing the basic techniques of probability and inference (approx. 300 students).
- Pstat 131/231 Data Mining (*in English*) Spring quarter 2016
R-based data mining courses at Undergraduate and Master level based on Tan, Steinbach and Kumar:
Introduction to data mining

University of Bolzano

- Fundamentals of Statistics (in English) 2024 – Pres.
Core techniques of data analysis and statistical inference (*Laurea in Ingegneria elettronica e dei Sistemi ciberfisici*)
- Advanced Statistics (in English) 2022 – Pres.
Course discussing theory and computational techniques for statistical inference and time series analysis (*Master in Computational data Science*)
- Statistics A 2005 – 2012
Bachelor in Economics/Management (approx. 150 students). Basic techniques of descriptive statistics, statistical inference and regression are being touched. Applications through Excel and group project.

H-Farm College – Treviso

- Business research methods (in English) 2022 – 2024
Master level course discussing qualitative and quantitative research approaches. During the course, students are asked to work at an individual research proposal.

Ph.D. thesis supervision

- A. Fulci, ongoing. Sparsity-constrained estimation methods for graphical models.
- D. Bernardini 2022, *Regularization methods for estimation of sparse networks with applications*.
- E. Totolo, 2015, *Essays on the demand and supply of small business finance in Kenya* (main advisor G. Folloni)
- M. Jia, 2014, *Heavy-tailed Phenomena and Tail Index Inference*.

M.Sc. thesis supervision

Sample titles in recent years for the thesis I was the main advisor are:

- (2024) Divergenza tra punteggi ESG e performance di sostenibilità d'impresa: il caso Refinitiv.
- (2024) Board diversity e performance aziendale: un'analisi empirica comparativa tra Belgio e Italia
- (2023) La network analysis applicata alla rete di scambio internazionale di materie prime energetiche
- (2023) INSURTECH: l'innovazione nel mercato assicurativo e il caso ITAS
- (2022) La regressione logistica per un approccio dinamico alla previsione del fallimento
- (2021) E-mobility: impatto sul settore automotive e indagine sul mercato italiano
- (2021) Modelli quantitativi per la previsione della probabilità di fallimento delle imprese
- (2020) Green consumer: la scelta sostenibile nella provincia autonoma di Trento

- (2020) Solving the marketing attribution problem with heuristic and analytic models: a case study comparison
- (2019) Attribution models in digital marketing: how to enhance bidding models performance
- (2019) Classification using penalized fisher's linear discriminant analysis: a business intelligence application
- (2018) The role of statistics in the new digital marketing dynamics: attribution models as key to success
- (2018) Sentiment analysis and shrinkage methods: a customer-centric business intelligence application

Funded research projects

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| – Prediction and causal inference on the tail index for policy decisions | 2023-2024 |
| Role: <u>Investigator</u> . MIUR– PRIN | |
| – Modelli ad Agenti e Network Analysis per la valutazione dell’impatto della pandemia sui supply-chain networks. | 2021-2022 |
| Role: <u>Investigator</u> . UNITN. | |
| – Emerging methods and models for high-dimensional and geo-coded data with applications in finance and economics. | 2020 - 2021 |
| Role: <u>Principal investigator</u> . DEM | |
| – Impact of social networks and ICT on marketing strategies | 2013 - 2014 |
| Role: <u>Investigator</u> . Nive Dive. Milan | |
| – β -convergence analysis at micro-area level. | 2011 |
| Role: <u>Principal Investigator</u> . ISTAT Trento (Italian Statistical Institute) | |
| – Disaggregation and convergence at micro-area level. | 2008 – 2009 |
| Role: <u>site Principal investigator</u> . MIUR – PRIN. | |
| – Determining probability densities from fractional moments: theoretical aspects, statistical properties and applications. | 2004 – 2005 |
| Role: <u>Investigator</u> . MIUR– PRIN. | |
| – Fractional moments for risk evaluation and financial portfolio optimization. | 2002 – 2003 |
| Role: <u>Investigator</u> . MIUR– PRIN. | |
| – Mortgage-risk analysis by correspondence analysis. | 2002 |
| Role: <u>Investigator</u> . Intesa bank - Milan | |
| – Effects of monetary policy and bank monitoring on volatility of financial markets. | 1998 – 1999 |
| Role: <u>Investigator</u> . MIUR– PRIN. | |
| – Estimation of latent variables in a LISREL model for human capital and applications. | 1997 – 1998 |
| Role: <u>Investigator</u> . MIUR– PRIN. | |

Professional activity

Intellegit srl: shareholder (since 2016, with a quota of 0.5% of the share capital)

- Intellegit srl is a start-up company of the University of Trento specialized in the field of corporate security, geostrategic analysis, geopolitical risks, public administration and security risks urban. (<http://intellegit.it/>)

Istituto Musicale Vivaldi – Bolzano

- Supervising a survey on customer satisfaction. (2000)

Library – University of Trento

- Supervising statistical procedures in the ISO EN UNI 9000 certification of the library. (1998)

UPIPA – (Unione Provinciale Istituzioni per l'Assistenza) – Trento

- Developing tools for analysis and monitoring of time-consuming activities in houses for elderly people. (1997)

Publications in refereed journals

1. D. Bernardini, S. Paterlini, E. Taufer (2025). New estimation approaches for graphical models with elastic net penalty. *Econometrics and Statistics* 33, 258-281.
2. E. Taufer, G. Terdik (2025). MultiStatM: Multivariate Statistical Methods in R. To appear in *R- Journal*.
3. M. Benuzzi, K. Bax, S. Paterlini and E. Taufer (2025). Chasing ESG performance: How Methodologies Shape Outcomes. *International Review of Financial Analysis* 104, 104239.
4. D. Bernardini, S. Paterlini, E. Taufer (2023). A 2-stage elastic net algorithm for estimation of sparse networks with heavy-tailed data. *Journal of Statistical Computation and Simulation* 93 (7), 1031-1059.
5. M. Andreaus, E. Costa, C. Pesci, E. Taufer (2022). When a sector-specific standard for non-financial reporting is not enough: evidence from microfinance institutions in Italy. *Sustainability Accounting, Management and Policy Journal* Vol. 13 No. 6, 1334-1360.
6. E. Taufer, F. Santi, G. Espa, M.M. Dickson (2021). Graphical representations and associated goodness-of-fit tests for Pareto and Log-normal distributions based on inequality curves. *Journal of Nonparametric Statistics* 33 (3-4), 464-481.
7. S.R. Jammalamadaka, E. Taufer, G. Terdik (2021). Asymptotic theory for statistics based on cumulant vectors with applications. *Scandinavian Journal of Statistics* 48 (2), 708-728.
8. N. Neumeyer, M. A. Delgado, L. Horváth, S. Meintanis, E. Taufer, L. Zhu (2021). 4th Workshop on Goodness-of-Fit, Change-Point, and Related Problems, Trento, 2019. *Scandinavian Journal of Statistics* 48 (2), 371-374.
9. S. R. Jammalamadaka, E. Taufer, G. Terdik (2021). On multivariate skewness and kurtosis. *Sankhya- A* 83(2) 607-644.
10. S. R. Jammalamadaka, E. Taufer, G. Terdik (2021). Cumulants of Multivariate Symmetric and Skew Symmetric Distributions. *Symmetry* 13, 1383.
11. M.M. Dickson, G. Espa, F. Santi, E. Taufer, (2021). Handling spatial dependence under unknown unit locations. *Spatial Economic Analysis*, 16(2), 194-216.
12. M.M. Dickson, G. Espa, F. Santi, E. Taufer. (2021) A mixed sampling strategy for populations affected by locational errors. *Spatial Statistics* 41, 100477.
13. E. Taufer, F. Santi, P.L. Novi Inverardi, G. Espa, M.M. Dickson. (2020). Extreme value index estimation by means of an inequality curve. *Mathematics* 8, 1834.
14. P. L. Novi Inverardi, E. Taufer (2020). Outlier detection through mixtures with an improper component. *Electronic Journal of Applied Statistical Analysis* 13, 146--163.
15. E. Costa, C. Pesci, M. Andreaus, E. Taufer (2019). An analysis of the indicators and the use of sectorial standard in Corporate Social Reporting. *Accounting, Auditing & Accountability Journal*, 32(1), 224-254.
16. E. Taufer, S. R. Jammalamadaka (2019). Semi-parametric estimation of the auto-regression parameter in non-gaussian Ornstein-Uhlenbeck-processes. *Communications in statistics – Simulation and computation* 48, 2791-2811.
17. M. Jia, E. Taufer, M.M. Dickson (2018). Semi-parametric regression estimation of the tail index. *Electronic Journal of Statistics* 12, 224-248.
18. M.M. Dickson, D. Giuliani, G. Espa, M. Bee, E. Taufer, F. Santi (2018). Design-based estimation in environmental surveys with positional errors. *Environmental and Ecological Statistics* 25, 155-169.
19. R. Benedetti, G. Espa, E. Taufer. (2017). Model-based variance estimation in spatial surveys. *Journal of Statistical Planning and Inference* 181, 52-61.
20. G. Espa, D. Giuliani, F. Santi, E. Taufer (2017). Model-based variance estimation in two-dimensional systematic sampling. *Metron* 75, 265-275.
21. E. Taufer (2016). Estimation of marginal parameters of Sup-OU processes with long range dependence. *International Journal of Advanced Statistics and Probability* 4, 102-108.

22. E. Taufer, D. Giuliani, G. Espa, M. M. Dickson (2016). Spatial models the analysis of β -convergence at micro-territorial level. *Bulletin of Mathematics and Statistics Research*.
23. E. Taufer (2016). Comments: A review of testing procedures based on the empirical characteristic function. *South African Statistical Journal* 50, 29-30.
24. M. Bee, M. M. Dickson, D. Giuliani, D. Piacentino, F. Santi, E. Taufer (2016). La sopravvivenza immediata delle start-up italiane del settore manifatturiero sanitario: un'analisi multilevel. *Rivista di Economia e Statistica del territorio* 3/2016, 49-59.
25. M. M. Dickson, G. Espa, D. Giuliani, E. Taufer (2016). Metodi di campionamento spaziale per la selezione di campioni rappresentativi di imprese. *Rivista di Economia e Statistica del territorio* 3/2016, 89-99.
26. S.G. Meintanis, J. Ngatchou-Wandji, E. Taufer (2015). Goodness-of-fit tests for multivariate stable distributions based on the empirical characteristic function. *Journal of multivariate Analysis* 140, 171-192.
27. E. Taufer (2015). On the empirical process of strongly dependent stable random variables: asymptotic properties, simulation and applications. *Statistics and Probability Letters* 106, 262-271.
28. D. Grahovac, M. Jia, N. Leonenko, E. Taufer (2015). Asymptotic properties of the empirical structure function for heavy-tailed data and tail index estimation. *Statistics* 49, 1221-1242.
29. N. Leonenko, E. Taufer (2013). Disaggregation of spatial autoregressive processes. *Spatial Statistics* 3, 1-20.
30. N. Leonenko, S. Petherick, E. Taufer (2013). Multi-fractal models via products of geometric Ornstein-Uhlenbeck-processes: Review and applications. *Physica A* 392, 7-16.
31. S. Meintanis, E. Taufer (2012). Inference procedures for stable-Paretian stochastic volatility models. *Mathematical and Computer Modelling* 55, 1199-1212.
32. E. Taufer, N. Leonenko, M. Bee (2011). Characteristic function estimation of Stochastic volatility models. *Computational Statistics & Data Analysis* 55, 2525-2539.
33. V. V. Anh, N. Leonenko, N. R. Shieh, E. Taufer (2010). Simulation of Multifractal Ornstein-Uhlenbeck processes. *Nonlinearity* 23, 823-843.
34. E. Taufer (2009). Wilcoxon-signed rank test for long-memory sequences. *Comm. Stat. Theory and Methods* 38, 3240-3248.
35. E. Taufer, N. Leonenko (2009). Characteristic function estimation of non-Gaussian Ornstein-Uhlenbeck processes. *Journal of Statistical Planning and Inference* 139, 3050-3063.
36. E. Taufer, S. Bose, A. Tagliani (2009). Optimal predictive densities and fractional moments. *Applied Stochastic Models in Business and Industry* 25, 57-71.
37. E. Taufer, N. Leonenko (2009). Simulation of Lévy-driven Ornstein-Uhlenbeck processes with given marginal distribution. *Computational Statistics & Data Analysis*, 53, 2427-2437.
38. E. Taufer (2007). Modelling stylized features of default rates. *Applied Stochastic Models in Business and Industry* 23, 73-82.
39. S. Rao Jammalamadaka, E. Taufer (2006). The use of Mean Residual Life to test departures from Exponentiality. *Journal of Nonparametric Statistics* 18, 277-292.
40. N. Leonenko, E. Taufer (2006). Asymptotic properties of quadratic functionals of stationary processes with long memory with applications to regression. *Journal of Statistical Planning and Inference* 136, 1220-1236.
41. N. Leonenko, E. Taufer (2005). Convergence of integrated superpositions of Ornstein Uhlenbeck processes to fractional Brownian motion. *Stochastics: an International Journal of Probability and Stochastic Processes* 77, 477-499.
42. S. Rao Jammalamadaka, E. Taufer (2003). Testing Exponentiality by comparing the Empirical Distribution Function of the Normalized Spacings with that of the Original Data. *Journal of Nonparametric Statistics* 15, pp.719-729.
43. N. Leonenko, E. Taufer (2003) On the rate of convergence to the Normal law of LSE in regression with long range dependence. *Statistica* 63, pp.53-69.

44. N. Leonenko, L. Sakhno, E. Taufer (2002). Product limit estimator for long and short range dependent sequences under gamma type subordination. *Random Operators and Stochastic Equations* 10, 301-320.
45. E. Taufer (2002). On entropy based tests for exponentiality. *Communications in Statistics, Simulation and Computation* 31, 189-200.
46. N. Leonenko, E. Taufer (2001). Asymptotic properties of the LSE in multivariate continuous regression with long memory stationary errors. *Metron* 59, pp.55-72.
47. E. Taufer (2000). A new test for Exponentiality against omnibus alternatives. *Stochastic Modelling and Applications* 3 (2), pp. 23-36.
48. E. Taufer (1999). Minimax Posterior Regret Actions for Exponential Families of Distributions and Weighted Squared Error Loss. *Random Operators and Stochastic Equations*, 7, 359-366.
49. P. L. Novi Inverardi, E. Taufer (1999). Interpreting asymmetrical displays in Correspondence Analysis and Non Symmetric Correspondence Analysis. *Statistica Applicata* 11, 49-58.
50. P. L. Novi Inverardi, E. Taufer (1997). Test di autovalutazione linguistica: un'interpretazione geometrica dei risultati basata su un modello di analisi delle corrispondenze. *Quaderni di Statistica e Matematica Applicata alle Scienze Economico Sociali* 19 (1-2), 91-107.
51. E. Taufer (1992). Studio sulla validità empirica di un modello di analisi fattoriale con osservazioni ripetute. *Quaderni di Statistica e Matematica Applicata alle Scienze Economico Sociali* 16 (1-2), 127-140.

Books and contributions

52. A. Fulci, S. Paterlini, E. Taufer (2024). The Sparsity-Constrained Graphical Lasso. In *Mathematical and Statistical Methods for Actuarial Sciences and Finance*, MAF 2024 conference proceedings. Springer, p. 172-178. ISBN 978-3-031-64272-2; <https://doi.org/10.1007/978-3-031-64273-9>
53. D. Bernardini, S. Paterlini and E. Taufer (2021). Network estimation via elastic-net penalty for heavy-tailed data. *Book of short papers – SIS 2021*. Pearson, ISBN 9788891927361
54. M. M. Dickson, G. Espa, D. Giuliani, E. Taufer (2015). L'interpolazione areale: una soluzione al problema del confronto fra dati riferiti a sistemi spaziali differenti. In C. A. Bollino, G. Espa (eds.), *Analisi e modelli di efficienza e produttività a livello micro-territoriale*, Milano: Franco Angeli, p. 9-61. ISBN 9788856848113.
55. M. M. Dickson, G. Espa, D. Giuliani, E. Taufer (2015). Modelli econometrici per l'analisi della β -convergenza a livello micro-territoriale. In C. A. Bollino, G. Espa (eds.), *Analisi e modelli di efficienza e produttività a livello micro-territoriale*, Milano: Franco Angeli, 2015, p. 127-145. ISBN 9788856848113.
56. P. L. Novi Inverardi, E. Taufer (2002). *Elementi di Statistica Descrittiva per le Discipline Aziendali*. Carocci, Roma, 175 pp.. ISBN 9788843024186.
57. E. Taufer (1998). Inserimento professionale dei laureati. In *Statistiche Ragionate sugli Studenti. Dal 1980 al 1995*. University of Trento, Trento.

Other

58. N. Leonenko, Y. Sun, E. Taufer (2024). Varentropy Estimation via Nearest Neighbor Graphs. arXiv:2402.09374v1
59. E. Taufer, F. Santi, G. Espa, M.M. Dickson (2018). Tail analysis of a distribution by means of an inequality curve. *Book of Short Papers SIS 2018*, Pearson, pp. 1351-1356. ISBN:9788891910233
60. S. Meintanis; J. Ngatchou Wandji; E. Taufer (2014). Goodness-of-fit test for multivariate stable distributions based on the ECF. CFE-ERCIM 2014 - ISBN:9788493782245
61. E. Taufer, S. Meintanis (2013). Characterizations and goodness-of-fit tests for multivariate normal and Cauchy distributions. In CFE-ERCIM 2013 - ISBN:9788493782238.
62. N. Leonenko, E. Taufer (2012). Mixture density estimation in aggregated random fields. DOI:10.1063/1.4772173. pp.1322-1322. In AIP Conference Proceedings - ISBN:9780735411227 (1504)

63. N. Leonenko, E. Taufer (2010). Disaggregation of Spatial Autoregressive processes. *Proceedings of the International Conference on Economics, Business and Management (ICEBM 2010)*, Manila, IEEE, pp.197-199. ISBN 978-1-4244-9202-2.
64. S. Meintanis, E. Taufer (2009). Inference Procedures for Stable-Paretian Stochastic Volatility Models. *Proceedings of the 6th St. Petersburg Workshop on Simulation*. St. Petersburg, Volume II. Ed. By S.M.Ermakov, V.B. Melas and A.N.Pepelyshev. VVM com. Ltd.St. Petersburg, pp.743-747. ISBN 978-5-9651-0354-6.
65. S. Bose, E. Taufer (2006). Optimal predictive densities and fractional moments. *Prague Stochastics 2006* – ISBN 80-86732-76-2.
66. S. Rao Jammalamadaka, E. Taufer (2002). A Test of Exponentiality based on the Mean Residual Life Characterization. Conference proceedings "SIS2002", Milano, 2002, pp. 511-514.
67. S. Bose, E. Taufer (1998). Minimax Posterior Regret and Weighted Squared Error Loss. *Trento 98 Proceedings*, Trento.
68. M. N. Gorla, E. Taufer (1997). On some aspects of Fisher's exact test and its extensions. *Contributed Papers of the 51st Session of the International Statistical Institute*, Istanbul, Tomo LVII, pp.389-390.

Work in progress

69. G. Torri, G. Terdik., E. Taufer. R. Giacometti, S. Paterlini (2024). Generalized precision matrices to capture financial dependence. Submitted.
70. A. Fulci, S. Paterlini, E.Taufer. (2025). Sparsity-constrained estimation methods for graphical models. Submitted.
71. A. Fulci, K. Bax, S. Paterlini, E.Taufer (2025) Generalized Precision Matrices for Non-Gaussian Distributions: Theory and Portfolio Applications. Submitted.
72. D. Belomestny, G.L. Grobler, S.G. Meintanis, E. Taufer (2025). Specification tests for jump-diffusion models based on the characteristic function. Submitted.
73. E. Costa, B. Korca, E.Taufer, (2025). Standardization of accounting standards.
74. M. Bee, E. Taufer, L. Trapin (2025). Tail index random forests.

Software

Terdik G., Taufer E. (2022). *MultiStatM: Multivariate Statistical Methods*. R package version 1.2.0, URL <https://CRAN.R-project.org/package=MultiStatM>.

Referee activity

Refereed papers for Algorithms, Applied Mathematical Modelling, Bernoulli, Communications in Statistics – (Theory and Methods, and Simulation and Computation), Computational Statistics, Computational Statistics and Data Analysis, Entropy, IEEE Transactions on Reliability, Journal of Applied Statistics, Journal of Computational Finance, Journal of Multivariate Analysis, Journal of Nonparametric Statistics, Journal of Statistical Computation and Simulation, Mathematics, Mathematics and Computers in Simulation, Methodology and Computing in Applied Probability, Metron, Quantitative Finance, Revstat, Scandinavian Journal of Statistics, Statistical Methods and Applications, Statistics and its Interface, Statistics and Probability Letters, South African Statistical Journal, Statistical Inference for Stochastic Processes, Stochastic Analysis and Applications, Symmetry, Test, Wind and Structures.

Reviewer for the American Mathematical Society until 2024: 136 reviews appearing on Mathematical Reviews on the Web (MathSciNet).

(2019) Guest editor of the Scandinavian Journal of Statistics for the special issue on the 4th Workshop on Goodness of Fit, Change Point and related problems, 6-8 Sept 2019, Trento.

Conference participation

In scientific or organizing committee

(2020) 14th International Conference on Computational and Financial Econometrics (virtual CFE 2020). Organizer of the session on Regularization and network approaches in financial applications

(2019) 4th Workshop on Goodness of Fit, Change Point and related problems. Trento, Italy. Chair of scientific and organizing committees.

(2013) European Young Statistician Meeting, Osijek, Croatia. Member of the scientific committee.

(2009) Trento 2009, 5th international workshop on Preferences and Decisions. Trento, Italy. Member of the organizing committee.

Talks in invited or organized sessions

(2021) CFE 2021 – London. Dependency in non-Gaussian settings: The generalized precision matrix and its financial applications.

(2021) CFE 2021 – London. A generalized precision matrix for t-Student distributions.

(2020) CFE 2020 – London. Networks: Sparse penalized estimation methods using elastic-net penalty

(2019) GOFCP 2019, Trento, Italy. On tests for Multivariate Skewness and Kurtosis. S. Rao Jammalamadaka, E. Taufer, G. Terdik.

(2018) Goodness of fit tests for Pareto and Log-normal distributions. ISNPS2018, 4th Conference of the international society for nonparametric statistics, Salerno. Invited session on: Goodness-of-fit Methods and Related Problems.

(2017) Joint Statistical Meetings - Baltimore, Maryland (JSM2017). Estimation of the Tail Index using semi-parametric regression. Topic contributed session.

(2017) ITACOSM 2017 – the 5th ITALian CONference on Survey Methodology. Bologna. Estimating the variance in spatial designs.

(2017) Workshop on Advances in Sampling Methods, Trento, Italy. Variance estimation in spatial surveys.

(2016) International Workshop on “Statistical inference for assessing and monitoring natural resources”, Siena, I. Sampling and modelling spatial data with locational errors.

(2014) 8th CSDA International Conference on Computational and Financial Econometrics and 7th International Conference on Computational and Methodological Statistics (CFE-ERCIM2014), Pisa, I. Goodness-of-fit tests for multivariate stable distributions based on the empirical characteristic function.

(2013) 7th CSDA International Conference on Computational and Financial Econometrics and 6th International Conference on Computational and Methodological Statistics (CFE-ERCIM2013), London, UK. Characterizations and goodness-of-fit tests for multivariate normal and Cauchy distributions.

(2012) 1st Conference of the International Society for NonParametric Statistics, Chalkidiki, Greece. Regression estimation of the index of regular variation

(2009) VI Petersburg Workshop on Simulation, St. Petersburg, Russia. Inference Procedures for Stable-Paretian Stochastic Volatility Models.

- (2008) International Indian Statistical Association (IISA) Conference, Storrs, USA. Estimation of non-Gaussian Ornstein-Uhlenbeck processes.
- (2008) International Conference on Interdisciplinary Mathematical and Statistical Techniques - IMST 2008/ FIM XVI, Memphis. On Bayesian robustness based on posterior regret.
- (2007). Quality management during transition to a two cycle system in higher education, Minsk. Implementation of the Bologna process and its impact on International Exchange programs: the experience of the Faculty of Economics of the University of Trento.
- (2002) ICAAF 2002, Hong Kong. Testing exponentiality by comparing the EDF of normalized spacings against that of the original data.
- (2001) Characterizations, Modelling and Applications 2001, Antalya (Turkey). Tests of exponentiality based on normalized spacings.
- (1998) Trento 98, 2nd Workshop on Preferences and Decisions, Trento. Minimax Posterior Regret and Weighted Squared Error Loss.

Talks in contributed sessions

- (2024) EFMA2024, Lisbon. Chasing ESG Performance: Revealing the Impact of Refinitiv's Scoring System.
- (2024) MAF 2024, Le Havre. The Sparsity-constrained Graphical Lasso.
- (2023) EFA 2023, Amsterdam. A generalized precision matrix for multivariate t-Student and skew distributions in portfolio optimization.
- (2022) MAF2022. Salerno. A generalized precision matrix for t-Student distributions in portfolio optimization
- (2021) SIS 2021, Pisa. Network estimation via elastic net penalty for heavy-tailed data.
- (2018) SIS 2018 - 49th Scientific meeting of the Italian Statistical Society, Palermo. Tail analysis of a distribution by means of an inequality curve.
- (2017) Spatial Statistics 2017: One World: One Health. Lancaster (UK). Spatial modeling of data with positional errors.
- (2013) 8th Conference on Extreme Value Analysis (EVA2013), Shanghai, China. Asymptotic properties of the empirical structure function of heavy-tailed data and tail index estimation.
- (2010) International Conference on Economics, Business and Management (ICEBM), Manila, Philippines. Disaggregation of Spatial Autoregressive processes.
- (2010) 8th International Conference of Numerical Analysis and Applied Mathematics (ICNAAM), Rhodes, Greece. Mixture density estimation in aggregated random fields.
- (2008) 2nd International Workshop on Computational and Financial Econometrics (CFE'08), Neuchtel, Switzerland. Characteristic function estimation of stochastic volatility models.
- (2006). Prague Stochastics 2006, Prague. Optimal predictive densities and fractional moments.
- (2005) HICStatistics 2005, Honolulu. Convergence of integrated superpositions of Ornstein Uhlenbeck processes to fractional Brownian motion.
- (2002) SIS2002, Milan. A Test of Exponentiality based on the Mean Residual Life Characterization.
- (1999) WEHIA'99 - IV Workshop on Economics with Heterogeneous Interacting Agents, Genova. Diffusion of Technologies via Economic Agents with Heterogeneous Decision Rules.
- (1997) International Statistical Institute Sessions, Istanbul. On some aspects of Fisher's exact test and its extensions.
- (1996) American Statistical Association Meeting, Chicago. Optimal Actions for Uncertain Loss.