Personal Information

Born in Voghera (PV), Italy, on February 6, 1980
Affiliation: Department of Economics and Management,
University of Pavia
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Education

UniversitÃ Commerciale "L. Bocconi", Milan

* Ph.D. in Statistics, May 19, 2011
  - Dissertation title: *Multivariate Dependence Measures through Lorenz Curves and their Generalization*
  - Dissertation topic: development of innovative measures of dependence and model selection techniques
  - Supervisor: Prof. Paolo Giudici
  - Field of study: dependence analysis and model selection methods

University of Pavia

* International Second-Level Master's Degree in *"Methods for Management of Complex Systems"* at the Institute for Advanced Study of Pavia (IUSS), December 13, 2006
  - Internship at FMR (Financial and Mathematical Research) Consulting, Voghera (PV), Italy
  - Thesis title: *A Description of Delta-Vega-Gamma Methodology*
  - Thesis topic: development of approaches for the analysis and management of specific financial instruments
  - Supervisor: Prof. Paolo Giudici
  - Field of study: statistics and mathematical finance

* Degree in Business Administration (Major in Finance), graduated with full marks (110/110), July 18, 2005
  - Thesis title: *Bayesian Statistical Methods for the Evaluation of Healthcare Projects*
  - Thesis topic: development of Bayesian methodologies for assessing the effectiveness of healthcare projects through cost-benefit analysis
  - Supervisor: Prof. Guido Consonni
  - Field of study: Bayesian Statistics

Academic Positions

* **Tenure-Track Researcher (RTT) (Scientific Disciplinary Sector SECS-S/01 â Statistics, Academic Recruitment Field 13/D1 â Statistics)** at the Department of Economics and Management, University of Pavia (from ***May 1, 2024*** to present)

* **Fixed-Term Researcher, Type A (Scientific Disciplinary Sector SECS-S/01 â Statistics, Academic Recruitment Field 13/D1 â Statistics)** at the Department of Economics and Management, University of Pavia (from ***October 1, 2021***)

* **Research Fellow** at the Department of Economics and Management, University of Pavia (from ***January 1, 2021*** to ***September 30, 2021***)
  - Research Topic: *"Statistical Analysis of the Socio-Economic Impacts of the Coronavirus Pandemic" â European Project PERISCOPE: Pan-European Response to the ImpactS of COVID-19 and Future Pandemics and Epidemics (2020â2023)*
  - Principal Investigator: Prof. Paolo Giudici

* **Fixed-Term Researcher, Type A (Scientific Disciplinary Sector SECS-S/01 â Statistics, Academic Recruitment Field 13/D1 â Statistics)** at the Department of Economics, Management and Quantitative Methods, University of Milan (from ***December 1, 2017*** to ***November 30, 2020***)

* **Research Fellow, Type A (Art. 22, Law No. 240/2010)** at the Department of Economics, Management and Quantitative Methods, University of Milan (from ***January 1, 2012*** to ***December 31, 2015***). The contract was extended until ***August 31, 2016*** to compensate for maternity leave periods (see the section "***Suspension of Research and Teaching Activities***" below for detailed information on maternity and parental leave periods).
  - Project co-funded by the Lombardy Region and the University of Milan (2012â2015)
  - Research Topic: *"Multivariate Models and Methods for the Analysis of Categorical Data and Latent Phenomena (Assessing Dependence Relationships and Model Performance in a Qualitative-Quantitative Framework: the Case of Categorical Data)"*
  - Scientific Supervisor: Prof. Pier Alda Ferrari

* **Research Fellow (Art. 51, Paragraph 6, Law No. 449/1997)** at the Department of Applied Statistics and Economics "L. Lenti", University of Pavia (from ***November 1, 2010*** to ***December 31, 2011***)
  - Research Topic: *"Quantitative Models for Measuring Quality and Risk in Finance and Education" â PRIN 2008 Project*
  - Scientific Supervisor: Prof. Paolo Giudici

* **Research Grant Holder** at the Department of Applied Statistics and Economics "L. Lenti", University of Pavia (from ***September 1, 2009*** to ***October 31, 2010***)
  - Research Topic: *"Statistical Methods to Evaluate Risks and Quality" â European Project MUSING: MUlti-Industry, Semantic-based Next Generation Business INtelliGence (2006â2010)*
  - Scientific Supervisor: Prof. Paolo Giudici

Academic Qualifications

* **Italian National Scientific Qualification (Abilitazione Scientifica Nazionale) for Associate Professor (Second Level) in Competition Sector 13/D1 - Statistics (from 19/06/2020 to 19/06/2032).**
* **Italian National Scientific Qualification (Abilitazione Scientifica Nazionale) for Full Professor (First Level) in Competition Sector 13/D1 - Statistics (from 03/11/2025 to 03/11/2037).**

Suspension of Research and Teaching Activities

- From 02/08/2015 to 02/01/2016: maternity leave.
- From 03/01/2016 to 02/02/2016: parental leave following maternity leave.
- From 03/02/2016 to 02/03/2016: parental leave following maternity leave.
- From 03/03/2016 to 02/04/2016: parental leave following maternity leave.

Research Interests

Development of novel metrics and approaches for assessing the robustness, predictive accuracy, fairness, and explainability of Artificial Intelligence methods; model validation and selection techniques for Machine Learning; operational and cyber risk assessment; analysis of dependence structures; measures of dependence, discordance, and concordance; treatment of ordinal variables; models for ordinal data; inferential issues in the analysis of high-dimensional datasets; sub-sampling methods; inequality measures with particular reference to income distributions; quality assessment and customer satisfaction measurement; evaluation of school and higher education systems.

Principal Investigator of Research Projects

- "PE GRINS - GRINS - GROWING RESILIENT, INCLUSIVE AND SUSTAINABLE" (PNRR Project - Cascade Call "Secure, Accurate, Fair and Explainable Machine Learning in Economics" (SAFE-MLE) - CUP J33C22002910001, aimed at developing innovative approaches for assessing the reliability of Artificial Intelligence systems.

Participation in National and International Research Projects

- European Project "Explainable Artificial Intelligence in Healthcare Management" (xAIM), aimed at developing a Master's programme dedicated to the use of Explainable Artificial Intelligence in healthcare management (project INEA/CEF/ICT/A2020/2276680).
- European Project "Pan-European Response to the Impacts of COVID-19 and Future Pandemics and Epidemics" (PERISCOPE), 2020-2023.

- Project "Report on the School System in Lombardy", supported by the Lombardy Regional Government and carried out in collaboration with the Department of Management Engineering of the Politecnico di Milano, the University of Milano-Bicocca, and the National Institute for the Evaluation of the Education and Training System (INVALSI), 2011.
- National PRIN Project (2008 Call): "Multivariate Methods for Quality and Risk Assessment in Academic Settings".
- European Project "MUlti-Industry, Semantic-based Next Generation Business INtelliGence" (MUSING), 2006-2010.

Teaching Activities

- In Academic Year 2025-2026, lecturer of the course *Financial Data Science* (taught in English) for the Master's Degree Programme in Computer Engineering - Data Science Track, University of Pavia (23-hour module).
- Since Academic Year 2024-2025, course instructor for *Statistics* (students with surnames A-D) in the Bachelor's Degree Programmes in Business Administration, Accounting and Corporate Finance; Economics; and Management, University of Pavia (66 hours).
- From Academic Year 2023-2024 to Academic Year 2024-2025, course instructor for *Statistical Learning* (taught in English) in the Master's Degree Programme in Finance, University of Pavia (*Financial Learning* module, 22 hours).
- In Academic Year 2024-2025, lecturer of the course *Artificial Intelligence Risk Management* for the Specialisation School in Biostatistics and the PhD Programme in Electronic, Computer and Electrical Engineering, University of Pavia (12-hour module).
- In Academic Year 2023-2024, lecturer of the course *Statistics* (students with surnames E-N) in the Bachelor's Degree Programmes in Business Administration, Accounting and Corporate Finance; Economics; and Management, University of Pavia (22-hour module).
- From Academic Year 2022-2023 to Academic Year 2024-2025, lecturer of the course *Trustworthy AI* (taught in English) within the xAIM Master Programme (*eXplainable Artificial Intelligence in Healthcare Management*) (17.5-hour module).
- In Academic Year 2022-2023, lecturer of the course *Statistics* (advanced course) in the Bachelor's Degree Programme in Economics, University of Pavia (22-hour module).
- In Academic Year 2021-2022, course instructor for *Financial Data Science* (taught in English) in the Master's Degree Programme in Computer Engineering - Data Science Track, University of Pavia (45 hours).
- In Academic Year 2019-2020, lecturer of the course *Statistics for Business Decision-Making* in the Bachelor's Degree Programme in Economics and Management (EMA), University of Milan (40 hours).

- In Academic Years 2019-2020 and 2018-2019, course instructor for *Economic Statistics* in the Bachelor's Degree Programme in Economics and Management (EMA), University of Milan (40 hours).
- In Academic Year 2017-2018, lecturer of the course *Applied Data Science for Marketing Lab* in the Master's Programme in Data Science for Economics, Business and Finance, University of Milan (25 hours).
- In Academic Year 2017-2018, course instructor for *Statistics for Big Data* in the Bachelor's Degree Programme in Economics and Management (EMA), University of Milan (40 hours).
- In Academic Year 2017-2018, teaching assistant for the course *Statistics* (taught in English) in the Bachelor's Degree Programme in Political Science (SPO), University of Milan.
- In Academic Year 2017-2018, teaching assistant for the course *Data Analysis* (taught in English) in the Bachelor's Degree Programme in Public and Corporate Communication (COM), University of Milan.
- In Academic Year 2017-2018, teaching assistant for the course *Data Analysis* in the Bachelor's Degree Programme in Public and Corporate Communication (COM), University of Milan.
- In Academic Year 2017-2018, tutor for the course *Data Analysis* (taught in English) in the Bachelor's Degree Programme in Public and Corporate Communication (COM), University of Milan.
- In Academic Year 2017-2018, tutor for the course *Data Analysis* in the Bachelor's Degree Programme in Public and Corporate Communication (COM), University of Milan.
- In Academic Year 2016-2017, tutor for the course *Statistics* in the Bachelor's Degree Programme in Economics and Management (EMA), University of Milan.
- In Academic Year 2016-2017, tutor for the course *Statistics* in the Bachelor's Degree Programme in Public and Corporate Communication (COM), University of Milan.
- In Academic Years 2014-2015, 2013-2014, and 2012-2013, tutor for the course *Data Analysis* in the Bachelor's Degree Programme in Public Administration and Policy (APP), University of Milan.
- In Academic Year 2014-2015, teaching assistant for the course *Economic Statistics* in the Bachelor's Degree Programmes in European Economics and Economics and Management (ECE-EMA), University of Milan.
- In Academic Year 2013-2014, tutor for the course *Data Analysis* in the Bachelor's Degree Programme in Social Sciences for Globalisation (GLO), University of Milan.
- From Academic Year 2012-2013 to Academic Year 2013-2014, teaching assistant for the course *Economic Statistics* in the Bachelor's Degree Programme in European Economics (ECE), University of Milan.

- In Academic Year 2010-2011, lecturer of remedial classes in Statistics, Logic and Mathematics for first-year Bachelor's students, Faculty of Political Science, University of Pavia.
- From Academic Year 2008-2009 to Academic Year 2009-2010, lecturer of educational seminars on *Elements of Mathematics* for first-year Bachelor's students, Faculty of Political Science, University of Pavia.
- In Academic Year 2008-2009, academic support activities in Statistics for the IAPR PhD Programme (*Institutions, Administrations and Regional Policies*), University of Pavia.
- In Academic Year 2008-2009, teaching assistant for the course *Statistics*, Faculty of Political Science, University of Pavia.
- In Academic Year 2008-2009, lecturer of the course *Statistics* for working students, Faculty of Political Science, University of Pavia.
- In Academic Year 2005-2006, tutor for the course *Data Mining*, Faculty of Economics, University of Pavia.
- In Academic Year 2004-2005, instructor for the *WinBUGS Laboratory* within the course *Bayesian Statistics*, Faculty of Economics, University of Pavia.

Bachelor's Thesis Supervisor

- In Academic Year 2019–2020, supervisor of 3 Bachelor's theses in the Bachelor's Degree Programme in Economics and Management (EMA).
- In Academic Year 2018–2019, supervisor of 6 Bachelor's theses in the Bachelor's Degree Programme in Economics and Management (EMA).

PhD Thesis Reviewer

- In Academic Year 2024–2025, reviewer of the PhD dissertation entitled "Essays on Statistical Learning Models for Environmental Applications with a Focus on Explainability" – Author: Luca Patelli; Supervisors: Prof. Michela Cameletti and Dr. Natalia Golini – PhD Programme in Applied Economics and Management (University of Pavia and University of Bergamo).
- In Academic Year 2020–2021, reviewer of the PhD dissertation entitled "Network Connectedness and Financial Technologies: from Systemic Risk to Investment Management" – Author: Paolo Pagnottoni; Supervisor: Prof. Paolo Giudici; Tutor: Prof. Paola Cerchiello – PhD Programme in Applied Economics and Management (University of Pavia and University of Bergamo).
- In Academic Year 2019–2020, reviewer of the PhD dissertation entitled "Measuring Financial Risks: The Application of Network Theory in Fintech Risk Management" – Author: Branka Hadji-Misheva; Supervisor: Prof. Paolo Giudici – PhD Programme in Economics and Management of Technology (University of Pavia).

Third Mission and Public Engagement Activities

- Speaker on Machine Learning model validation (E. Raffinetti: "Machine Learning Model Validation") at the AIFIRM (Italian Association of Financial Industry Risk Managers) event entitled "Artificial Intelligence in Risk Management". The presentation focused on standard Machine Learning model validation procedures and on novel validation and predictive accuracy tools developed within the author's research activities. The event was primarily addressed to professionals from the banking and corporate sectors (Milan, 11 April 2019).
- Speaker of the talk "Explainable Artificial Intelligence: New Perspectives and Applications in Finance" at the conference "Science and the Future: Artificial Intelligence". The event was addressed to final-year high school students (Voghera, Pavia, 23 November 2021).
- Collaboration with the FinTech Milano Hub (Research and Development Centre of the Bank of Italy) on the project "SAFE-FAI: Safe, Accurate, Fair and Explainable Financial Artificial Intelligence" (2022).
- Since Academic Year 2024–2025, Department Coordinator for PCTO activities (School-to-Work Transition Programmes) within the Department of Economics and Management. Organisation of the project "Entrepreneurship and Digital Transformation: Technology, Artificial Intelligence and Innovation for Sustainable Business", consisting of a cycle of four lectures on digital innovation, entrepreneurship and Artificial Intelligence addressed to upper-secondary school students.
- Organisation of the seminar "The Impact of Artificial Intelligence on Decision-Making Processes: The S.A.F.E. Approach as a Risk Assessment Tool".

Professional Memberships and Institutional Activities

- Since 2016, Full Member of the Italian Statistical Society (SIS).
- From 2014 to 2016, Corresponding Member of the Italian Statistical Society (SIS).
- From 2009 to 2014, Junior Member of the Italian Statistical Society (SIS).
- Member of the Italian Econometric Association (SIdE) in 2022.
- Member of the Italian Association of Financial Industry Risk Managers (AIFIRM) from 2019 to 2022.

National and International Training Courses

- ABS10-2010 Applied Bayesian Statistics School: "Bayesian Machine Learning with Biomedical Applications", organized by DEPMQ, University of Pavia and CNR IMATI Milan, in collaboration with the European Academy Bozen/Bolzano (EURAC), Institute of Genetic Medicine, Bolzano, 11–15 June 2010. During this course, the research contribution "Lorenz Zonoids and Dependence Measures: A Proposal" was presented by the undersigned.

- Course "Interdisciplinary Approach to Assessment", organized by the Nova Universitas Inter-University Consortium. Coordinator: Prof. Piergiorgio Lovaglio (University of Milano-Bicocca), Supervisors: Prof. Giorgio Vittadini (University of Milano-Bicocca) and Prof. Carlo Natale Lauro (University of Naples Federico II), Milan, 14–18 December 2009.
- Summer School in Statistics and Probability: "Lévy Processes, Theory and Applications", taught by Prof. Gennady Samorodnitsky, School of Operations Research and Industrial Engineering, Cornell University, Ithaca (USA), and Dr. Souvik Ghosh, School of Operations Research and Industrial Engineering, Cornell University, Ithaca (USA), Torgnon (Aosta Valley), 2–21 July 2007.

Awards

- DEMM Research Award 2014 (Department of Economics, Management and Quantitative Methods, University of Milan) – Young Researchers category – for the paper: Ferrari P.A., Raffinetti E.: *A Different Approach to Dependence Analysis.* Multivariate Behavioral Research, 50(2), pp. 248–264 (2015).
- "Best Prize Italian Statistical Society", for the paper "Combining the SAFE Principles of AI Systems: the $SAFE\text{ty}_{value}$ indicator", Satellite Conference on Safe Machine Learning, 19 June 2025.

Editorial Board Membership

- Since 2023, Associate Editor of the journal *Statistics.*
- Since 2019, Associate Editor of the journal *Frontiers in Artificial Intelligence – Artificial Intelligence in Finance.*

Peer Review Activities

- Reviewer for the journal *Statistics and Computing.*
- Reviewer for the journal *Statistical Methods and Applications.*
- Reviewer for the journal *The Econometrics Journal.*
- Reviewer for the journal *IEEE Computational Intelligence Magazine.*
- Reviewer for the journal *International Journal of Forecasting.*
- Reviewer for the journal *Expert Systems with Applications.*
- Reviewer for the journal *Quality and Reliability Engineering International.*
- Reviewer for the journal *PLOS ONE.*
- Reviewer for the journal *Frontiers in Cardiovascular Medicine.*
- Reviewer for the journal *Mathematical Economics.*

Special Issue Topic Editor

- Special Issue: “Explainable Artificial Intelligence Models and Methods in Finance and Healthcare” (August 2022)
  - Topic Editors: Brian Scott Caffo, Fabio Aurelio D’Asaro, Artur Garcez, Emanuela Raffinetti
  - Journal: *Frontiers in Artificial Intelligence*, Section: Artificial Intelligence in Finance
  - DOI: 10.3389/frai.2022.970246

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Giudici P., Ghidini V., Raffinetti E.: *Xi-Lorenz eXplainable Artificial Intelligence*, Applied Stochastic Models in Business and Industry, Volume 42, Issue 3, e70087, pp. 1–16, ISSN: 1524-1904 (Print)/1526-4025 (Online), DOI: 10.1002/asmb.70087 (2026) – **ANVUR A-ranked journal**.

Ghosh I., Chaudhuri T.D., Babaei G., Giudici P., Raffinetti E.: *Predicting BRICS NIFTY50 returns using XAI and S.A.F.E AI lens*, Frontiers in Artificial Intelligence, Section AI in Finance, Volume 8, 1668700, ISSN: 2624-8212, DOI: 10.3389/frai.2025.1668700 (2025).

Ruggeri F., Banks D., Cleveland W.S., Fisher N.I., Escobar-Anel M., Giudici P., Raffinetti E., Hoerl R.W., Kenett R.S., Li W.K., Yu P.L.H., Poggi J.M., Reis M.S., Saporta G., Secchi P., Sen R., Steland A., Zhang Z.: *Is There a Future for Stochastic Modeling in Business and Industry in the Era of Machine Learning and Artificial Intelligence?*, Applied Stochastic Models in Business and Industry, Volume 41, Issue 2, e70004, pp. 1–27, ISSN: 1524-1904 (Print)/1526-4025 (Online), DOI: 10.1002/asmb.70004 (2025) – **ANVUR A-ranked journal**.

Giudici P., Raffinetti E.: *RGA: a unified measure of predictive accuracy*, Advances in Data Analysis and Classification, Volume 19, pp. 67–93, ISSN: 1862-5347 (Print)/1862-5355 (Online), DOI: 10.1007/s11634-023-00574-2 (2025) – **ANVUR A-ranked journal**.

Giudici P., Raffinetti E., Toscani G.: *Measuring multidimensional inequality: a new proposal based on the Fourier transform*, Statistics, Volume 59, Issue 2, pp. 330–353, ISSN: 0233-1888 (Print)/1029-4910 (Online), DOI: 10.1080/02331888.2024.2434904 (2025) – **ANVUR A-ranked journal**.

Babaei G., Giudici P., Raffinetti E.: *A Rank Graduation Box for SAFE AI*, Expert Systems With Applications, Volume 259, 125239, ISSN: 0957-4174, DOI: 10.1016/j.eswa.2024.125239 (2025) – **ANVUR A-ranked journal**.

Giudici P., Piergallini A., Recchioni M.C., Raffinetti E.: *Explainable artificial intelligence methods for financial time series*, Physica A: Statistical Mechanics and its Applications, Volume 655, 130176, ISSN: 0378-4371, DOI: 10.1016/j.physa.2024.130176 (2024) – **ANVUR A-ranked journal**.

Spelta A., Raffinetti E.: *Evaluating SAFE AI Principles using Wasserstein Distance: A Comparative Study of Machine Learning Models*, Statistics, Volume 259, pp. 1283–1303, ISSN: 0233-1888 (Print)/1029-4910 (Online), DOI: 10.1080/02331888.2024.2419420 (2024) – **ANVUR A-ranked journal**.

Chen Y., Giudici P., Liu K., Raffinetti E.: *Measuring fairness in credit ratings*, Expert Systems With Applications, Volume 258, 125184, ISSN: 0957-4174, DOI: 10.1016/j.eswa.2024.125184 (2024) – **ANVUR A-ranked journal**.

Giudici P., Raffinetti E., Riani M.: *Robust machine learning models: linear and nonlinear*, International Journal of Data Science and Analytics, ISSN: 2364-415X (Print)/2364-4168 (Online), DOI: 10.1007/s41060-024-00512-1 (2024).

Giudici P., Raffinetti E.: *Lorenz Zonoids for Trustworthy AI*, in: Longo L. (ed.) Explainable Artificial Intelligence. xAI 2023. Communications in Computer and Information Science, Vol. 1901. Springer, Cham. DOI: 10.1007/978-3-031-44064-9_27 (2023).

Giudici P., Raffinetti E.: *SAFE Artificial Intelligence in Finance*, Finance Research Letters, Volume 56, 104088, ISSN: 1544-6123 (Print)/1544-6131 (Online), DOI: 10.1016/j.frl.2023.104088 (2023) – **ANVUR A-ranked journal**.

Babaei G., Giudici P., Raffinetti E.: *Explainable FinTech lending*, Journal of Economics and Business, ISSN: 0148-6195 (Print)/1879-1735 (Online), DOI: 10.1016/j.jeconbus.2023.106126 (2023).

Bussmann N., Enzmann R., Giudici P., Raffinetti E. (2023). *Shapley-Lorenz Values for Credit Risk Management.* In: Statistical Models and Methods for Data Science (CLADAG 2021), Studies in Classification, Data Analysis, and Knowledge Organization, pp. 121–132, Springer, Cham. DOI: 10.1007/978-3-031-30164-3_10.

Giudici P., Gramegna A., Raffinetti E.: *Machine learning classification model comparison*, Socio-Economic Planning Sciences, Volume 87, Part B, 101560, ISSN: 0038-0121 (Print)/1873-6041 (Online), DOI: 10.1016/j.seps.2023.101560 (2023) – **ANVUR A-ranked journal**.

Raffinetti E.: *A Rank Graduation Accuracy measure to mitigate Artificial Intelligence risks*, Quality & Quantity, Volume 57, Suppl 2, pp. 131–150, ISSN: 0033-5177 (Print)/1573-7845 (Online), DOI: 10.1007/s11135-023-01613-y (2023) – **ANVUR A-ranked journal**.

Babaei G., Giudici P., Raffinetti E.: *Explainable artificial intelligence for crypto asset allocation*, Finance Research Letters, Volume 47, Part B, pp. 1–7, ISSN: 1544-6123 (Print)/1544-6131 (Online), DOI: 10.1016/j.frl.2022.102941 (2022) – **ANVUR A-ranked journal**.

Giudici P., Raffinetti E.: *Explainable AI methods in cyber risk management*, Quality and Reliability Engineering International, Volume 38, Issue 3, pp. 1318–1326, ISSN: 0748-8017 (Print)/1099-1638 (Online), DOI: 10.1002/qre.2939 (2022).

Giudici P., Raffinetti E.: *Cyber risk ordering with rank-based statistical models*, AStA Advances in Statistical Analysis, Volume 105, Issue 3, pp. 469–484, ISSN: 1863-8171 (Print)/1863-818X (Online), DOI: 10.1007/s10182-020-00387-0 (2021) – **ANVUR A-ranked journal**.

Giudici P., Raffinetti E.: *Shapley-Lorenz eXplainable Artificial Intelligence*, Expert Systems With Applications, Volume 167, 114104, ISSN: 0957-4174, DOI: 10.1016/j.eswa.2020.114104 (2021) – **ANVUR A-ranked journal**.

Raffinetti E., Ferrari P.A.: *A dependence measure flow tree through Monte Carlo simulations*, Quality & Quantity, Volume 55, Issue 2, pp. 467–496, ISSN: 0033-5177 (Print)/1573-7845 (Online), DOI: 10.1007/s11135-020-01010-9 (2021) – **ANVUR A-ranked journal**.

Giudici P., Raffinetti E.: *Monitoring Covid-19 policy interventions*, Frontiers in Public Health, Volume 8, Article 438, pp. 1–6, ISSN: 2296-2565, DOI: 10.3389/fpubh.2020.00438 (2020).

Raffinetti E.: *An extended study to measure dependence with grouped-ordinal variables generated by unobserved non-normal variables*, Communications in Statistics: Case Studies, Data Analysis and Applications, Volume 6, Issue 4, pp. 448–472, ISSN: 2373-7484, DOI: 10.1080/23737484.2020.1789902 (2020).

Giudici P., Raffinetti E.: *Lorenz Model Selection*, Journal of Classification, Volume 37, Issue 3, pp. 754–768, ISSN: 0176-4268 (Print)/1432-1343 (Online), DOI: 10.1007/s00357-019-09358-w (2020) – **ANVUR A-ranked journal**.

Raffinetti E.: *A Note on the Dependence Measurement for Ordinal-Continuous Data*, Biostatistics and Biometrics Open Access Journal, Volume 9, Issue 5, pp. 129–134, ISSN: 2573-2633, DOI: 10.19080/BBOAJ.2019.09.555775 (2019).

Agosto A., Raffinetti E.: *Validation of PARX Models for Default Count Prediction*, Frontiers in Artificial Intelligence, Volume 2, Article 9, pp. 1–7, ISSN: 2624-8212, DOI: 10.3389/frai.2019.00009 (2019).

Raffinetti E., Aimar F.: *MDC_{go} takes up the association/correlation challenge for grouped ordinal data*, AStA Advances in Statistical Analysis, Volume 103, Issue 4, pp. 527–561, ISSN: 1863-8171 (Print)/1863-818X (Online), DOI: 10.1007/s10182-018-00341-1 (2019) – **ANVUR A-ranked journal**.

Raffinetti E., Siletti E., Vernizzi A.: *Analyzing the effects of negative and non-negative values on income inequality: evidence from the Survey of Household Income and Wealth of the Bank of Italy (2012)*, Social Indicators Research, Volume 133, Issue 1, pp. 185–207, ISSN: 0303-8300 (Print)/1573-0921 (Online), DOI: 10.1007/s11205-016-1354-x (2017) – **ANVUR A-ranked journal**.

Raffinetti E., Romeo I.: *Dealing with the biased effects issue when handling huge datasets: the case of INVALSI data*, Journal of Applied Statistics, Volume 42, Issue 12, pp. 2554–2570, ISSN: 0266-4763 (Print)/1360-0532 (Online), DOI: 10.1080/02664763.2015.1043867 (2015).

Raffinetti E., Romeo I.: *Evaluating social tracking in the primary school: evidence from the Lombardy region (Italy)*, Journal of Applied Quantitative Methods, Volume 10, Issue 1, pp. 1–14, ISSN: 1842-4562 (2015).

Ferrari P.A., Raffinetti E.: *A Different Approach to Dependence Analysis*, Multivariate Behavioral Research, Volume 50, Issue 2, pp. 248–264, ISSN: 0027-3171 (Print)/1532-7906 (Online), DOI: 10.1080/00273171.2014.973099 (2015) – **ANVUR A-ranked journal**.

Raffinetti E., Ferrari P.A.: *New Perspectives for the MDC Index in Social Research Fields*, in: Morlini I., Minerva T., Vichi M. (eds.) Advances in Statistical Models for Data Analysis. Studies in Classification, Data Analysis, and Knowledge Organization, pp. 211–219, Springer, Cham. DOI: 10.1007/978-3-319-17377-1_22 (2015).

Raffinetti E., Siletti E., Vernizzi A.: *On the Gini coefficient normalization when attributes with negative values are considered*, Statistical Methods & Applications, Volume 24, Issue 3, pp. 507–521, ISSN: 1618-2510 (Print)/1613-981X (Online), DOI: 10.1007/s10260-014-0293-4 (2015) – **ANVUR A-ranked journal**.

Raffinetti E., Ferrari P.A.: *The RCI as a measure of monotonic dependence*, in: Vicari D., Okada A., Ragozini G., Weihs C. (eds.) Analysis and Modelling of Complex Data in Behavioural and Social Sciences. Studies in Classification, Data Analysis, and Knowledge Organization, pp. 231–242, Springer, Cham. DOI: 10.1007/978-3-319-06692-9_25 (2014).

Raffinetti E.: *The combined median rank-based Gini index for customer satisfaction analysis*, in: Giudici P., Ingrassia S., Vichi M. (eds.) Statistical Models for Data Analysis. Studies in Classification, Data Analysis, and Knowledge Organization, pp. 289–296, Springer, Cham. DOI: 10.1007/978-3-319-00032-9_33 (2013).

Raffinetti E., Giudici P.: *Lorenz Zonoids and Dependence Measures: A Proposal*, in: Torelli N., Pesarin F., Bar-Hen A. (eds.) Advances in Theoretical and Applied Statistics. Studies in Theoretical and Applied Statistics, pp. 51–60, Springer, Berlin Heidelberg. DOI: 10.1007/978-3-642-35588-2_6 (2013).

Raffinetti E.: *Chapter 5 – The Lombardy school system in the Italian framework: a cross-regional analysis*, in: Agasisti T., Catalano G., Vittadini G. (eds.) Report on the School System in Lombardy. Guerini e Associati, ISBN: 978-88-6250-468-3 (2013).

Raffinetti E., Romeo I.: *Chapter 8 – A statistical analysis of the determinants of student and school performance in Lombardy*, in: Agasisti T., Catalano G., Vittadini G. (eds.) Report on the School System in Lombardy. Guerini e Associati, ISBN: 978-88-6250-468-3 (2013).

Raffinetti E., Giudici P.: *Multivariate Ranks-Based Concordance Indexes*, Advanced Statistical Methods for the Analysis of Large Data-Sets, Series: Studies in Theoretical and Applied Statistics, Editors: Di Ciaccio A., Coli M., Ibanez J.M.A., pp 465-473, ISBN: 978-3-642-21036-5 (Print)/978-3-642-21037-2 (Online), DOI: 10.1007/978-3-642-21037-2_42, Springer-Verlag Berlin Heidelberg (2012).

Giudici P., Raffinetti E.: *On the Gini measure decomposition*, Statistics & Probability Letters, Volume 81, Issue 1, pp. 133–139, ISSN: 0167-7152, DOI: 10.1016/j.spl.2010.10.005 (2011).

Position Papers

Raffinetti E. (coordinator), Billio M., Cosentini A., De Meo E., Giudici P., Riani M.: *Chapter 7 – AI Model Risk Assessment*, Position Paper No. 35, AIFIRM (Italian Association of Financial Industry Risk Managers), "Big Data & Advanced Analytics for Risk Management", ISBN 979-12-80245-15-1, DOI: 10.47473/2016ppa00035 (April 2022).

Giudici P., Raffinetti E.: *Section 4.1 – Possible comparison criteria between traditional models and AI models*, Position Paper No. 33, AIFIRM (Italian Association of Financial Industry Risk Managers), "Artificial Intelligence and Credit Risk – Possible Uses of Alternative Methodologies and Data in Internal Rating Systems", ISBN 979-12-80245-13-7, DOI: 10.47473/2016ppa00033 (January 2022).

Organization of Scientific Conferences

Member of the Local Organizing Committee, FINTECH2026 (International Fintech Research Conference), 29–30 January 2026, Pavia.

Member of the Scientific Programme Committee, CMStatistics 2023 (16th International Conference of the ERCIM Working Group on Computational and Methodological Statistics), 16–18 December 2023, Berlin (Germany).

Member of the Local Organizing Committee, SDS 2023 (Statistics and Data Science Conference), 27–28 April 2023, Pavia.

Member of the Programme Committee, SIS 2022 (Italian Statistical Society Conference), 22–24 June 2022, Caserta (proposer of the special session: "Explainable Artificial Intelligence Methods").

Organization of Conference Sessions

Session: "Fostering SAFE AI Practices for Decision Making in Economics and Finance", organized with Prof. Maria Elena De Giuli, CFE-CMStatistics 2025 Conference (Computational and Financial Econometrics – Computational and Methodological Statistics), 13–15 December 2025, London (UK).

Session: "New Frontiers in Artificial Intelligence Applications", CFE-CMStatistics 2024 Conference (Computational and Financial Econometrics – Computational and Methodological Statistics), 14–16 December 2024, London (UK) (hybrid).

Session: "Measuring Fairness, Explainability and Safety of Machine Learning Models", CFE-CMStatistics 2023 Conference (Computational and Financial Econometrics – Computational and Methodological Statistics), 16–18 December 2023, Berlin (Germany) (hybrid).

Session: "Explainable Artificial Intelligence", CFE-CMStatistics 2022 Conference (Computational and Financial Econometrics – Computational and Methodological Statistics), 17–19 December 2022, London (UK) (hybrid).

Invited Keynote Presentations at Conferences

Giudici P., Raffinetti E.: *Artificial intelligence risks*, invited presentation at the International Conference on Risk Analysis (9th International Conference on Risk Analysis – ICRA9), 25–27 May 2022, Perugia.

Invited Presentations at Conferences

Raffinetti E.: *An Holistic Trustworthiness Assessment of AI Systems: the SAFEtyvalue*, CLADAG 2025 Conference (Classification and Data Analysis Group of the Italian Statistical Society), ***invited talk in the session "Safe Machine Learning" organized by Prof. P. Giudici***, 8–10 September 2025, Naples (Italy).

Raffinetti E., Spelta A.: *Assessing the SAFEty of Machine Learning Models*, IES Conference (Innovation & Society: Statistics and Data Science for Evaluation and Quality), ***invited talk in the session "Well-being: Humans and Algorithms" organized by Prof. F. Ruggeri***, 25–27 June 2025, Brixen (Italy).

Babaei G., Giudici P., Raffinetti E.: *RGB: a unified approach for safe and trustworthy AI*, SDS Conference (Statistics and Data Science), ***invited talk in the session "Sustainable Artificial Intelligence in Finance" organized by Prof. P. Cerchiello***, 11–12 April 2024, Palermo (Italy).

Giudici P., Raffinetti E.: *A new proposal to assess robustness of Artificial Intelligence methods*, CFE-CMStatistics 2023 Conference (Computational and Financial Econometrics – Computational and Methodological Statistics), ***invited talk in the session "Explainability in Machine Learning" organized by Prof. R. Ignaccolo and Prof. N. Golini***, Book of Abstracts: "16th International Conference of the ERCIM Working Group on Computational and Methodological Statistics (CMStatistics 2023) and 17th International Conference on Computational and Financial Econometrics (CFE 2023)", ISBN: 978-9925-7812-7-0, 16–18 December 2023, Berlin (Germany) (hybrid).

Giudici P., Raffinetti E.: *From accuracy to robustness of AI systems*, CLADAG 2023 Conference (Classification and Data Analysis Group of the Italian Statistical Society), ***invited talk in the session "Explainable Artificial Intelligence" organized by Prof. M. La Rocca and Prof. L. Grilli***, 11–13 September 2023, Salerno (Italy).

Giudici P., Raffinetti E.: *Sustainable, Accurate, Fair and Explainable Machine Learning Models*, SIS 2023 Conference (Italian Statistical Society), ***invited talk in the session "Explainable Machine Learning Models" organized by Prof. M. Ciommi and Prof. F. Mariani***, 21–23 June 2023, Ancona (Italy).

Giudici P., Raffinetti E.: *A SAFE Artificial Intelligence approach*, CFE-CMStatistics 2022 Conference (Computational and Financial Econometrics – Computational and Methodological Statistics), ***invited talk in the session "Explainable Artificial Intelligence"***, Book of Abstracts: "16th International Conference on Computational and Financial Econometrics (CFE 2022) and 15th International Conference of the ERCIM Working Group on Computational and Methodological Statistics (CMStatistics 2022)", ISBN: 978-9925-7812-6-3, 17–19 December 2022, London (UK) (hybrid).

Bussmann N., Enzmann R., Giudici P., Raffinetti E.: *Shapley-Lorenz methods for explainable artificial intelligence*, CLADAG 2021 Conference (Classification and Data Analysis Group of the Italian Statistical Society), ***invited talk in the session "Penalized Techniques for Data Analysis"***, 9–11 September 2021, Florence (Italy) (online), Book of Abstracts and Short Papers: "CLADAG 2021 Book of Abstracts and Short Papers", ISSN 2704-601X (Print)/2704-5846 (Online), DOI: 10.36253/978-88-5518-340-6.

Raffinetti E., Giudici P.: *A rank graduation measure to assess predictive accuracy*, CFE-CMStatistics 2019 Conference (Computational and Financial Econometrics – Computational and Methodological Statistics), ***invited talk in the session "Predictive Accuracy Methods" organized by Prof. P. Giudici***, Book of Abstracts: "13th International Conference on Computational and Financial Econometrics (CFE 2019) and 12th International Conference of the ERCIM Working Group on Computational and Methodological Statistics (CMStatistics 2019)", ISBN: 978-9963-2227-8-0, 14–16 December 2019, London (UK).

Giudici P., Raffinetti E.: *A rank graduation index to prioritise cyber risks*, SIS 2019 Conference (Italian Statistical Society), ***invited talk in the session "Statistical Methods for Cyber Risk" organized by Prof. S.A. Osmetti***, Book of Short Papers: "Smart Statistics for Smart Applications", ISBN: 978-88-9191-510-8, 19–21 June 2019, Milan (Italy).

Raffinetti E., Ferrari P.A.: *New perspectives for the RDI index in social research fields*, CLADAG 2013 Conference (Classification and Data Analysis Group of the Italian Statistical Society), ***invited talk in the session "Statistical strategies for assessing and measuring differential behavioural patterns: a new outlook" organized by Prof. F. Crippa***, Book of Abstracts "CLADAG 2013. 9th Meeting of the Classification and Data Analysis Group", Cleup-Padua, ISBN: 9788867871179, 18–20 September 2013, Modena (Italy).

Conference Participation as Presenting Author

Raffinetti E., Giudici P., Ghidini V.: *A Dual View into the Black Box: Pre-hoc and Post-hoc Explainability with Xi-Lorenz*, SIS-FENStatS 2026 Conference (Italian Statistical Society & Federation of European National Statistical Societies), 22–25 June 2026, Rome (Italy).

De Giuli M.E., Raffinetti E.: *Focused SAFE-driven AI approach for volatility prediction in EU ETS*, CFE-CMStatistics 2025 Conference (Computational and Financial Econometrics – Computational and Methodological Statistics), 13–15 December 2025, London (UK) (virtual).

Raffinetti E.: *Combining the SAFE principles of AI systems: the* $SAFE_{ty}$ *value as a unified indicator*, AFE-ML Program (Pavia Satellite Event, 19 June 2025), SIS 2025 Conference (Italian Statistical Society), 16–18 June 2025, Genoa (Italy).

Babaei G., Giudici P., Raffinetti E.: *Investigating the RGB approach for safe AI*, CFE-CMStatistics 2024 Conference (Computational and Financial Econometrics – Computational and Methodological Statistics), 14–16 December 2024, London (UK) (hybrid).

Giudici P., Raffinetti E.: *Sustainable, Accurate, Fair and Explainable Artificial Intelligence in Finance*, EFCG Conference – Diversity Challenges for a Sustainable FinTech, 13–14 April 2023, Pavia (Italy).

Raffinetti E.: *Measuring Fairness in Credit Scoring*, International Fintech Research Conference – Finance, Technology, Methodologies, 26–27 October 2022, Milan (Italy).

Giudici P., Raffinetti E.: *Shapley-Lorenz trustworthy AI*, IASC-ARS 2022 Conference (Asian Regional Section of the International Association for Statistical Computing), 21–24 February 2022, Kyoto (Japan) (online).

Giudici P., Raffinetti E.: *A Generalised ROC Curve*, IWEEE 2022 Conference (3rd Italian Workshop of Econometrics and Empirical Economics: High-Dimensional and Multivariate Econometrics – Theory and Practice), 20–21 January 2022, Rimini (Italy) (online).

Bussmann N., Enzmann R., Giudici P., Raffinetti E.: *A new explainable artificial intelligence approach for risk management*, itAIS 2021 Conference (Italian Association for Information Systems), 15–16 October 2021, Trento (Italy) (online).

Giudici P., Raffinetti E.: *The Shapley-Lorenz decomposition approach to mitigate cyber risks*, SIS 2021 Conference (Italian Statistical Society), 21–25 June 2021, Pisa (Italy), Book of Short Papers: "Book of Short Papers – SIS 2021", Pearson, ISBN: 9788891927361 (online).

Bussmann N., Enzmann R., Giudici P., Raffinetti E.: *An extension of the Shapley-Lorenz decomposition to risk management*, Big Data and Machine Learning in Finance Conference, 10–11 June 2021, Milan (Italy) (online).

Agosto A., Giudici P., Raffinetti E.: *A new proposal to improve credit scoring model predictive accuracy*, Data Analytics 2020 Conference, Proceedings: "The Ninth International Conference on Data Analytics", ISSN: 2308-4464, ISBN: 978-1-61208-816-7, 25–29 October 2020, Nice (France) (online).

Giudici P., Raffinetti E.: *Lorenz zonoid measures to compare predictive accuracy*, IFABS 2019 Conference (International Finance and Banking Society), 27–29 June 2019, Angers (France).

Giudici P., Raffinetti E.: *A rank-based measure to prioritise cyber risks* (abstract), EURO 2019 Conference (European Conference on Operational Research), 24–26 June 2019, Dublin (Ireland).

Raffinetti E., Aimar F.: *Latest frontiers in grouped-ordinal data dependence analysis* (abstract and paper), ASMDA 2019 Conference (Applied Stochastic Models and Data Analysis), 11–14 June 2019, Florence (Italy), ISAST: International Society for the Advancement of Science and Technology, ISBN: 978-618-5180-32-4.

Raffinetti E., Siletti E., Vernizzi A.: *Inequality measures and the issue of negative income*, SIS 2014 Conference (Italian Statistical Society), 11–13 June 2014, Cagliari (Italy), Book of Short Papers: "SIS 2014, 47th Scientific Meeting of the Italian Statistical Society", CUEC, ISBN: 978-88-8467-874-4.

Ferrari P.A., Raffinetti E.: *An extension and a new interpretation of the rank-based concordance index*, JSC-CLADAG 2012 Conference (Japanese Classification Society – Classification and Data Analysis Group), 3–4 September 2012, Anacapri (Italy), Book of Short Papers: "Analysis and Modeling of Complex Data in Behavioural and Social Sciences", Cleup-Padova, ISBN: 978-88-6129-916-0.

Raffinetti E.: *Ordinal Lorenz regression with application in customer satisfaction surveys*, SIS 2012 Conference (Italian Statistical Society), 20–22 June 2012, Rome (Italy), Book of Short Papers: "SIS 2012 Proceedings of the 46th Scientific Meeting", ISBN: 979-88-6129-882-8.

Raffinetti E., Romeo I.: *The significance effects problem for administrative data: a novel statistical approach*, SMTDA 2012 Conference (Stochastic Modeling Techniques and Data Analysis), 5–9 June 2012, Chania (Crete, Greece), Proceedings: "2nd Stochastic Modeling Techniques and Data Analysis International Conference".

Raffinetti E.: *Multivariate concordance measures: a proposal*, CLADAG 2011 Conference (Classification and Data Analysis Group of the Italian Statistical Society), 7–9 September 2011, Pavia (Italy), Book of Short Papers: "CLADAG 2011 Classification and Data Analysis", Pavia University Press, ISBN: 978-88-906639.

Giudici P., Raffinetti E.: *Model selection based on Lorenz zonoids*, ASMDA 2011 Conference (Applied Stochastic Models and Data Analysis), 7–10 June 2011, Rome (Italy), Proceedings: "ASMDA 2011", Edizioni ETS, ISBN: 9788846730459.

Giudici P., Raffinetti E.: *A new proposal to assess evaluation models*, IES 2011 Conference (Innovation and Society), 30 May–1 June 2011, Florence (Italy), Book of Abstracts: "Statistical Methods for Service Evaluation".

Giudici P., Raffinetti E.: *Gini measure: its decomposition proposal*, CLADAG 2010 Conference (Classification and Data Analysis Group of the Italian Statistical Society), 8–10 September 2010, Florence (Italy), Book of Abstracts: "GfKI-CLADAG 2010".

Giudici P., Raffinetti E.: *Lorenz zonoids and dependence measures: a proposal*, SIS 2010 Conference (Italian Statistical Society), 16–18 June 2010, Padua (Italy), Book of Short Papers: "Proceedings of the 45th Scientific Meeting of the Italian Statistical Society", ISBN: 978-88-6129-566-7.

Raffinetti E., Giudici P.: *Multivariate ranks-based concordance indexes*, SIS 2009 Conference (Italian Statistical Society), 23–25 September 2009, Pescara (Italy), Book of Short Papers: "Statistical Methods for the Analysis of Large Data Sets", Cleup-Padova, ISBN: 978-88-6129-425-7.

Giudici P., Raffinetti E.: *On dependence measures in a multivariate context*, CLADAG 2009 Conference (Classification and Data Analysis Group of the Italian Statistical Society), 9–11 September 2009, Catania (Italy), Book of Short Papers: "CLADAG 2009 Classification and Data Analysis", Cleup-Padova, ISBN: 978-88-6129-406-6.

Participation in Conferences

Giudici P., Raffinetti E.: *Lorenz Zonoids for Trustworthy AI*, XAI Conference (The World Conference on eXplainable Artificial Intelligence), July 26â28, 2023, Lisbon (Portugal).

Giudici P., Raffinetti E.: *Sustainable, Accurate, Fair and Explainable Machine Learning Models in Economics and Finance*, SEM Conference (Society of Economics Measurement), June 29âJuly 1, 2023, Milan.

Raffinetti E., Giudici P.: *A S.A.F.E. approach for Sustainable, Accurate, Fair and Explainable Machine Learning Models*, SDS Conference (Statistics and Data Science), April 27â28, 2023, Pavia.

Raffinetti E., Giudici P.: *SAFE-AI: Sustainable, Accurate, Fair and Explainable Artificial Intelligence*, CESS Conference (Conference of European Statistics Stakeholders), October 20â21, 2022.

Babaei G., Giudici P., Raffinetti E.: *Explainable AI in preprocessing*, ENBIS 2021 Conference (European Network for Business and Industrial Statistics), September 13â15, 2021 (online).

Babaei G., Giudici P., Raffinetti E.: *Explainable AI in preprocessing*, Conference âNetwork Models for Financial Contagion and Systemic Riskâ, May 28, 2021 (online).

Giudici P., Raffinetti E.: *A novel approach for Artificial Intelligence through Lorenz zonoids and Shapley Values*, SIS 2020 Conference (Italian Statistical Society), June 22â24, 2020, Pisa, Book of Short Papers, ISBN: 978-88-9191-077-6.

Agosto A., Raffinetti E.: *Application and validation of dynamic Poisson models to measure credit contagion*, SIS 2019 Conference (Italian Statistical Society), June 19â21, 2019, Milan, Book of Short Papers: âSmart Statistics for Smart Applicationsâ, ISBN: 978-88-9191-510-8.

Bastianin A., Raffinetti E.: *Revised survival analysis-based models in the field of medical device innovation* (Abstract), ASMDA 2019 Conference (Applied Stochastic Models and Data Analysis), June 11â14, 2019, Florence, ISAST: International Society for the Advancement of Science and Technology, ISBN: 978-618-5180-32-4.

Raffinetti E., Siletti E., Vernizzi A.: *How to deal with negative values in the calculation of the Gini coefficient* (Abstract), Conference âStatistics for the analysis of judicial, forensic and educational phenomenaâ, September 8, 2015, Padua.

Vernizzi A., Monti M.G., Raffinetti E., Siletti E.: *Decomposition of family incomes by income sources, geographical areas and the issue of negative income values*, ERCIM Conference (ERCIM WG on Computational and Methodological Statistics), ***Invited talk in the session âRecent developments in inference based on the Lorenz and Gini index of inequalityâ organized by Prof. F. Greselin***, December 6â8, 2014, Pisa, Book of Abstracts, ISBN: 978-84-937822-4-5.

Romeo I., Raffinetti E.: *School tracking and equality of opportunity in a multilevel perspective*, SIS 2012 Conference (Italian Statistical Society), June 20â22, 2012, Rome, Book of Short Papers: âSIS 2012, Proceedings of the XLVI Scientific Meetingâ, ISBN: 979-88-6129-882-8.

Giudici P., Raffinetti E.: *Goodness of fit based on Lorenz curves: a proposal* (Abstract), ASMDA 2011 Conference (Applied Stochastic Models and Data Analysis), June 7â10, 2011, Rome, Proceedings: âASMDA 2011â, Edizioni ETS, ISBN: 97888467-3045-9.

Chairing of Conference Sessions

Session "SAFE AI for decision-making in economics and finance", CFE-CMStatistics 2025 Conference (Computational and Financial Econometrics â Computational and Methodological Statistics), December 13â15, 2025, London (UK) (virtual).

Session "New frontiers in artificial intelligence applications", CFE-CMStatistics 2024 Conference (Computational and Financial Econometrics â Computational and Methodological Statistics), December 14â16, 2024, London (UK) (hybrid).

Session "Measuring Fairness, Explainability and Safety of Machine Learning Models", CMStatistics 2023 Conference (Computational and Methodological Statistics), December 16â18, 2023, Berlin (Germany) (hybrid).

Session "Machine Learning approaches I", SDS 2023 Conference (Statistics and Data Science), April 27â28, 2023, Pavia.

Session “Explainable Artificial Intelligence”, CMStatistics 2022 Conference (Computational and Methodological Statistics), December 17â19, 2022, London (UK) (hybrid).

Session “Statistical models for high dimensional data”, SIS 2021 Conference (Italian Statistical Society), June 21â25, 2021, Pisa (online).

Session “Statistical models for high dimensional data”, SIS 2021 Conference (Italian Statistical Society), June 21â25, 2021, Pisa (online).

Session “Predictive accuracy methods”, CFE-CMStatistics 2019 Conference (Computational and Financial Econometrics â Computational and Methodological Statistics), December 14â16, 2019, London (UK).

Session “AI, Blockchain and other tech innovations in Economics and Finance â Stream: Blockchain and Cryptocurrencies: Economic and Financial Challenges”, EURO 2019 Conference (European Conference on Operational Research), June 23â26, 2019, Dublin.

Contributed Session “Data Analysis - Cluster, Dependence Analysis”, ASMDA 2019 Conference (Applied Stochastic Models and Data Analysis), June 11â14, 2019, Florence.

Contributed Session “Stochastic Models 5”, ASMDA 2011 Conference (Applied Stochastic Models and Data Analysis), June 7â10, 2011, Rome.

Participation in Workshops as Speaker

Giudici P., Raffinetti E.: *The Shapley-Lorenz decomposition approach to mitigate cyber risks*, EU Fin-Tech Horizon2020 FINAL WORKSHOP: Risk Management of Financial Technologies, June 18, 2021 (online).

Giudici P., Raffinetti E.: *Cyber risk analysis including Explainable AI*, Cyber Risk Analysis, Explainable AI and Crypto Financial Risk Meter, SupTech â Session 3, June 16, 2021 (online).

Raffinetti E.: *Cyber risk management with rank-based models and explainable AI*, Dublin De-Fi and Digital Finance and Financial Services Workshop and Mini-Conference (D^3FSC), April 29â30, 2021 (online).

Giudici P., Raffinetti E.: *Cyber risk management with rank-based models and explainable AI*, Blockchain RegTech Paris, April 1, 2021 (online).

Giudici P., Raffinetti E.: *Cyber risk management with rank-based models and explainable AI*, European Conference on Blockchain in Finance, FinTech Horizon 2020 project, March 25, 2021 (online).

Giudici P., Raffinetti E.: *Use Case 4: Cyber risk management with rank-based models and explainable AI*, FSA Webinar on Blockchain and Cybersecurity, March 9â10, 2021 (online).

Giudici P., Raffinetti E.: *Explainable machine learning in credit risk management*, Bank of Italy, March 1, 2021 (online).

Giudici P., Raffinetti E.: *Use Case B - Explainable machine learning in credit risk management*, Bank of Italy, February 15, 2021 (online).

Giudici P., Raffinetti E.: *Explainable machine learning in credit risk management*, SupTech Workshop II â Big Data Analytics Artificial Intelligence, January 27, 2021 (online).

Giudici P., Raffinetti E.: *Cyber Risk Management with Rank-based Statistical Models and Explainable AI â FIN-TECH Project*, Online Training Workshop on Finance Sector Security âRecent Advances in Security for the Finance Sector: Cost-Effective Resilience for the Connected Digital Finance Ecosystemâ, Session 3: Artificial Intelligence for Security in Finance, January 14, 2021 (online).

Giudici P., Raffinetti E.: *Explainable machine learning in credit risk management*, SupTech Workshop I â Big Data Analytics Artificial Intelligence, November 25, 2020 (online).

Giudici P., Raffinetti E.: *Global eXplainable Artificial Intelligence measures*, MLDM.IT 2020 Workshop, November 25â27, 2020 (online).

Giudici P., Raffinetti E.: *Shapley-Lorenz decompositions in eXplainable Artificial Intelligence*, TAILOR â Foundations of Trustworthy AI: Integrating Learning, Optimization and Reasoning, September 4â5, 2020, Santiago de Compostela (Spain) (online).

Raffinetti E.: *Rank-based measures to improve FinTech model selection*, invited talk at Special SupTech I Workshop on Fintech Challenges, November 18, 2019, Pavia.

Giudici P., Raffinetti E.: *Bayesian statistics, categorical data and data science*, Categorical Data Analysis Friends: Celebrating Alan Agrestiâs Italian citizenship, September 18, 2019, Florence.

Raffinetti E.: *A decision-theoretic approach for model selection* (poster), 3rd IMS-ISBA Joint Meeting: MCMski, Markov Chain Monte Carlo in Theory and Practice, January 9â11, 2008, Bormio (Italy).

Lectures at Training Schools and PhD Summer Schools

Raffinetti E.: *Explainability of Artificial Intelligence Methods: New Perspectives.* PhD Summer School: âComplex Networks and Telecommunicationsâ, July 3â7, 2023, Como.

Giudici P., Raffinetti E.: *AI in the institutional context.* XXXIX Annual Bioengineering School: âAI-enabled healthcare: from decision support to autonomous robots”, September 7-10, 2020, Bressanone (online).

Seminars as Speaker

Giudici P., Raffinetti E.: *Explainable AI methods in Cyber Risk Management*, invited by the Working Group on Risk - CREAR, with the support of IDS dept., Institut des Actuaires, LabEx MME-DII and the BFA-SFdS group, Paris (France), December 9, 2021 (online).

Raffinetti E.: *A Rank Graduation Measure to assess Predictive Accuracy*, Department of Economics and Business Administration, University of Pavia, May 29, 2019.

Raffinetti E.: *New Statistical Perspectives in Customer Satisfaction Surveys*, Department of Economics, Management and Statistics, University of Milan, January 24, 2012.

Raffinetti E.: *A novel statistical approach for quality evaluation*, CRISP Seminar Series (Interuniversity Research Center for Public Services), University of Milan-Bicocca, October 5, 2011.

Raffinetti E.: *Model selection based on Lorenz zonoids*, Department of Economics, Statistics and Law, University of Pavia, May 5, 2011.

Raffinetti E.: *Measures associated with concordance and dependence: a multivariate extension*, Department of Applied Statistics and Economics âL. Lentiâ, University of Pavia, May 14, 2009.

Raffinetti E.: *A decision-theoretic approach for model selection*, Department of Applied Statistics and Economics âL. Lentiâ, University of Pavia, December 12, 2007.

Departmental Responsibilities

Monitoring of the Department VQR (Research Quality Assessment) for the scientific disciplinary sector SECS-S/01-Statistics, Competition Sector 13/D1-Statistics - Department of Economics and Management, University of Pavia.

From AY 2024â2025, PCTO coordinator of the Department of Economics and Management (SchoolâWork Alternation programs).

Computer Skills

- R
- Matlab
- SPSS
- Microsoft Office Suite â European Computer Driving Licence obtained on February 14, 2002. In particular, use of Excel for statistical analysis

Foreign Languages

- ENGLISH
- FRENCH (basic level)

The statements contained in this curriculum are declared pursuant to Articles 46 and 47 of Presidential Decree 445/2000.