

Curriculum vitae

PERSONAL INFORMATION

Family name: Giudici

First name: Paolo Stefano

Researcher unique identifier(s): ORCID: 0000-0002-4198-0127; Research ID: AAA-7773-2021; Scopus Author ID: 23491813000. H index: 45 (Google Scholar); 35 (Scopus); 30 (Web of Science)

Date of birth: 23 march 1965

Nationality: Italian

• EDUCATION

1993 PhD in Statistics, University of Trento. Supervisor Prof. Guido Consonni

1990 Master of Science in Statistics, University of Minnesota. Supervisor Prof. Kinley Larntz

1989 Master of Science in Economics, Bocconi University, Milan. Supervisor Prof. Michele Cifarelli

• CURRENT POSITION(S)

2012 - Full Professor of Statistics, Department of Economics and Management, University of Pavia

2017 - Faculty member, Phd in Computer Engineering, University of Pavia

2024 - Contract Professor of AI and Machine Learning, European University Institute

• PREVIOUS POSITIONS

2007 - 2011 Full Professor of Statistics, Faculty of Political Sciences, University of Pavia

2000 - 2006 Associate Professor of Statistics, Faculty of Economics, University of Pavia

1994 - 1999 Assistant Professor of Statistics, Faculty of Economics, University of Pavia

2013 - 2016 Faculty member, Phd in Economics and Management, University of Pavia

• FELLOWSHIPS AND AWARDS

2022 - Elected Fellow, International Statistical Institute

2021 Qualified as Top Italian Scientists (TIS) in Mathematics and Statistics

2018- Research fellow, University College London Center for Blockchain technologies

2016- 2018 Research fellowship at the Bank for International Settlements, Basel, Switzerland

2016 Best risk management paper of the year, Global Association of Risk Professionals, New York

2001- 2003 European Science Foundation research visits of Roberto Castelo, Anne Philippe, Eva Fronk

2000 Prize for conference on: Statistical models for data mining, Microsoft Research

1999. Research period at the University of Munich, funded by the European Science Foundation

1999 Research fellowship at the Fields Institute for mathematical sciences, Toronto, Canada

1998 Award for best research on consumer habits, AC Nielsen

1997 Research period at the University of Bristol, funded by the Italian National Research Center

1996 Research period at the University of Bristol, funded by the European Science Foundation

• SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS

2000 - More than 200 Master of Science Students in Economics and Finance, University of Pavia

2000 - 22 Phd students supervised, University of Pavia

2022 - 2023 1 Post-doc researcher supervised within the Italian PRIN FIN4GREEN project

2020 - 2023 4 Post-doc researchers supervised within the European H2020 PERISCOPE project

2019 - 2021 3 Post-doc researchers supervised within the European H2020 FIN-TECH project

2013 - 2016 1 Post-doc researcher supervised within the Italian PRIN MISURA project

2006 - 2009 4 Post-doc researchers supervised within the European FP6 MUSING project

• TEACHING ACTIVITIES

2022- Lecturer - AI and machine learning, European University Institute Supervisory Digital Finance Academy

2021 Lecturer - Financial data Science, Bank of Italy, Rome

2007 - 2019 Lecturer - Financial data Science, Italian Banking Association, Rome.

2007 Lecturer - Data mining, Swedish Statistical Society, Linkoping

2005 - 2008 Lecturer - Data mining (graduate), Advanced School on Complex models

2012 - Lecturer - Risk management, Data science, Statistucs for finance (graduate), University of Pavia

1999 - 2012 Lecturer - Economic Statistics (graduate), University of Pavia

2000 - Lecturer - Statistics (undergraduate), University of Pavia

1998 Lecturer - Training of European Statisticians. Siena

1994 - 1998 Lecturer - Statistics (undergraduate), Bocconi University, Milan
1992-1995 Lecturer - Mathematics, Finafrica foundation

- ORGANISATION OF SCIENTIFIC MEETINGS

2024 Programme chair, Second Conference on Explainable Artificial Intelligence, Malta
2023 Programme committee member, AAMAS Conference on Autonomous Agents, Auckland
2023 Programme chair, Conference on Explainable Artificial Intelligence, Lisbon
2023 Programme committee member, Credit scoring conference, Edinburgh
2023 Co-organiser, Statistics and Data Science, Pavia
2022 Programme committee member, International Fintech research conference, Politecnico Milan
2020 Programme committee member, IJCAI Conference on Artificial Intelligence, Yokohama
2019 Programme committee member, International Finance and Banking Society, Medellin
2018 Programme committee member, European Financial Management Association, Milan
2015 President of the Programme committee, Classification and data analysis conference, Cagliari
2011 President, Classification and data analysis conference, Pavia
2003 President, Statistical models for data mining III, Pavia
2001 President, Statistical models for data mining II, Pavia
2001 President, European Course in Advanced Statistics on data mining, Lugano
2001 President, Advanced school of the Italian Statistical Society on data mining, Rome
2000 President, Statistical models for data mining I, Pavia
1999 Co-Organiser, European Science Foundation Highly Structured Stochastic Systems, Pavia
1999 President, European Science Foundation workshop financial risk management, Tirano
1998 President, European Science Foundation workshop on graphical models, Tirano

- INSTITUTIONAL RESPONSIBILITIES

2023 - Member of ISO/IEC JTC1/SC42, CEN/CELENEC JTC21, UNI/CT 533 on AI
2023 - Member of the ACM Europe technology policy committee
2023 - Member of the AI Risks and Harm taxonomy project, AIAAIC
2022 Coordinator of the SAFE-AI project for the Milano Fintech Hub of the Bank of Italy
2021 Expert for the European Commission on the: impact assessment of the HERA authority
2019 - 2021 Member of the Expert group on Digital ethics in insurance, EIOPA, Frankfurt
2018 - 2019 Member of the Expert group on Fintech regulation for the Italian Market authority
2018 - 2021 Member of the Expert group for the National AI strategy, Italian Ministry of Development
2018 - 2021 Member of the Commission for the National Scientific Abilitation in Statistics
2018 - Advisor for fintech start ups: Blockchain Based Bank, Neosurance, Cryptovalues association
2017 - 2018 Member of the Big data expert group for the Italian Statistical Institute (ISTAT)
2017 Parliamentary hearing for the Italian Parliament on Financial Technologies
2016 - 2017 Member of the Big data expert group for the Deutsche Bundesbank, Germany
2010 - 2018 Independent member of the board of directors of the banking group Credito Valtellinese
2007 - 2010 Independent member of the board of directors of the on-line bank Bancaperta
2006 - 2010 Coordinator of the cultural marketing project "Antica Pieve di Mazzo", Cariplo Foundation
2005 - 2008 Member of the board of the energy public company Valdisotto Servizi
2013 - Member of the board and HR committee of the Department of Economics and Management
2011 - 2013 Delegate of the Rector of the University of Pavia for teaching and research assessment
2009 - 2010 Coordinator of a web-based teaching evaluation project for the Italian Ministry of Research
2005 - 2010 Member of the University of Pavia audit board (NUV)

- REVIEWING ACTIVITIES

2023- Editorial board member of "Journal of Data Science and Analytics", Springer
2023- Editor of "Statistics", Taylor and Francis
2019 - Editor of "Artificial Intelligence in Finance", Frontiers
2020 - Associate Editor of "Risks", Mdpi
2018 - 2020 Associate Editor of "Digital Finance", Springer
2011 - 2014 Associate Editor of "Applied Stochastic methods in Business and Industry", Wiley
2009 - 2013 Associate Editor of "Statistical Methods and applications", Springer
2000 - Reviewer for several scientific journals in Statistics, Artificial Intelligence and Finance, including: Annals of Applied Statistics, Artificial Intelligence, Applied artificial intelligence,

Bioinformatics, Computational Economics, Computational Management Science, Computational Statistics and Data Analysis, Expert systems with applications, European Journal of Operational Research, Finance Research letters, Financial Innovation, International Journal of Forecasting, International Review of Economics and Finance, International Review of Financial Analysis, Journal of Applied Statistics, Journal of Banking and Finance, Journal of Cleaner Production, Journal of Economic and Business Statistics, Journal of Empirical Finance, Journal of Financial Stability, Journal of Forecasting, Journal of the American Statistical Association, Journal of the Operational Research Society, Journal of the Royal Statistical Society (A, B,C), Management Science, North American Journal of Economics and Finance, Operations research letters, Physica A, Quality and Quantity, Quantitative Finance, Social networks, Statistics and Probability letters.

- 2023 - Review panel member, Icelandic Research Fund
- 2021 - Review board member, “Giorgio Mortara” scholarship for studies abroad, Bank of Italy
- 2021 - Review panel member, G-20 and BIS Techsprint on Green and Sustainable Finance
- 2020 - Review panel member, Science Foundation Ireland
- 2019 - Review panel member, Luxembourg National Research fund
- 2018 - Review panel member, AXA research fund
- 2014 - Review panel member, National research council of Canada
- 2012 - Scientific evaluator, Italian research assessment (VQR 2010-2014, VQR 2014-2018)

- MEMBERSHIPS OF SCIENTIFIC SOCIETIES

- 2023 - Member of the Association for scientific Computing Machinery (ACM)
- 2022- Fellow member of the International Statistical Institute (ISI)
- 2022- Member of the Institute for Mathematical Statistics (IMS)
- 2020 - 2024 Elected Member of the steering committee of the Italian Statistical Society
- 2021 - Academic member, International Association for Trusted Blockchain Applications (INATBA)
- 2019 - Member of the European Big Data Value Association (BDVA)
- 2013 - 2015 President of the Classification and Data Analysis group of the Italian Statistical Society
- 2013 - Honorary member of the Italian Association for financial risk management (AIFIRM)
- 2000 - Member of the European Network for Business and Industrial Statistics (ENBIS)
- 1993 - Member of the Italian Statistical Society (SIS)

- MAJOR COLLABORATIONS

- 2020 - 2022 Andrea Renda: Monitoring COVID-19 contagion growth, High Level Expert Group on Trustworthy AI and Center for European Policy Studies, Bruxelles.
- 2017 - 2020 Leonardo Gambacorta: Measuring contagion, operational and cyber risks, Monetary and Economics department, Bank for International Settlements, Basel, Switzerland.
- 1999 - 2001 Gareth Roberts: Efficient construction of reversible jump MCMC proposals, Statistical laboratory, University of Cambridge, U.K.
- 1996 -1999 Peter Green: Decomposable graphical gaussian model determination, Department of Mathematics, University of Bristol, U.K.

- RESEARCH GRANTS FUNDED

- Italian Ministry of Education, University and Research (PNRR Cascade Fund): “SUST-AI: Sustainable Artificial Intelligence in Finance”, cascade fund within the GRINS - Growing Resilient, Inclusive and Sustainable project. Grant amount 298000 euro.
- Italian Ministry of Education, University and Research (PRIN): “Fin4Green - Finance for a Sustainable, Green and Resilient Society”, 2022-2024, local coordinator, grant amount 170000 euro.
- European Commission Horizon 2020 contract number n. 101016233: “Periscope: pan-european response to the impacts of covid-19 and future pandemics and epidemics (2020-2023), coordinator of 32 partners, grant amount 9993000 euro.
- European Commission Horizon 2020 contract number n. n. 825215: “Fin-Tech: financial supervision and technological compliance”(2019-2021), coordinator of 24 partners, grant amount 2500000 euro.
- Italian Ministry of Education, University and Research: “Multivariate Statistical Models for Risk Management”, 2013-2016, coordinator of 6 partners, grant amount 924 000 euro.
- Italian Ministry of Development Industry 2015 grant on: “Technologies for Made in Italy: @bilita”, 2010-2012, local coordinator, grant amount 50000 euro.
- Cariplo Foundation Grant “Antica Pieve di Mazzo”, 2006-2010, coordinator, grant amount 1700000 euro.
- Italian Ministry of Education, University and Research (FIRB): “Data mining methods for small and medium enterprises”, 2006-2009, coordinator of 6 partners, grant amount 241000 euro.

—European Commission VI framework programme contract number n. 027097, “MUSING: Multy industry Semantic based business IntelliGence applications”, European VI framework programme, 2006-2010, Contract number n. 027097, local coordinator, grant amount 650000 euro.

-“Multivariate methods for the evaluation of academic quality and risks”, Italian Ministry of Education, University and Research (PRIN), 2009- 2010, local coordinator, grant amount 17630 euro.

-“Data mining methods to measure the risks of public utility services”, Italian Ministry of Education, University and Research (PRIN), 2007-2008, local coordinator, grant amount 18000 euro

-Italian Ministry of Education, University and Research (PRIN): “Statistical models for e-business”, 2005-2006, coordinator of 5 partners, grant amount 115000 euro.

- European Commission thematic network “Pro ENBIS”, local coordinator, 2003-2006. grant amount 7200 euro.

- Several research, training and consulting projects, among which: Italian Banking Association, Banca Popolare di Sondrio, Banco BPM, Credito Valtellinese, Intesa San Paolo, Monte dei Paschi di Siena, UBI, Unicredit; Accenture, KPMG, SAS Institute; Mediaset, Metro, Mondadori, Opera Multimedia, Sky.

- REPRESENTATIVE PUBLICATIONS

- [1] Giudici, P., Raffinetti, E. (2023). SAFE Artificial Intelligence in Finance. *Finance Research Letters.*, 56 , 10488. DOI: 10.1016/j.frl.2023.104088
- [2] Giudici, P., Pagnottoni, P., Spelta, A. (2023). Network self-exciting models to measure health impacts of COVID-19. *Journal of the Royal Statistical Society (Series A)*. DOI: 10.1093/jrssa/qnac006
- [3] Aldasoro, I., Gambacorta, L., Giudici, P., Leach, T. (2022). The drivers of cyber risk. *Journal of Financial Stability*, 60, 100989. Number of citations: 124 (Google Scholar); 28 (Scopus); 21 (Web of Science)
- [4] Giudici, P., Raffinetti, E. (2021) Shapley-Lorenz eXplainable Artificial Intelligence. *Expert systems with applications*, 167, 114104. Number of citations: 136 (Google Scholar); 93 (Scopus); 79 (Web of Science).
- [5] Bussman, N., Giudici, P., Marinelli, D., Papenbrock, J. (2021). Explainable machine learning in credit risk management. *Computational economics*, 57, 203-216. Number of citations: 281 (Google Scholar); 128 (Scopus); 98 (Web of Science).
- [6] Giudici, P., Hadji-Misheva, B., Spelta, A. (2020). Network based credit risk models. *Quality Engineering*, 32, 199-211. Number of citations: 76 (Google Scholar); 52 (Scopus); 48 (Web of Science).
- [7] Giudici, P., Sarlin, P., Spelta, A. (2020). The interconnected nature of financial systems: direct and common exposures. *Journal of Banking and Finance*, 112, 105149. Number of citations: 86 (Google Scholar); 51 (Scopus); 44 (Web of Science).
- [8] Avdjiev, S., Giudici, P., Spelta, A. (2019). Measuring contagion risk in international banking. *Journal of Financial Stability*, 42, 36-51. Number of citations: 76 (Google Scholar); 45 (Scopus); 42 (Web of Science).
- [9] Giudici, P., Abu-Hashish, I. (2019). What determines bitcoin exchange prices? A network VAR approach. *Finance Research Letters*, 28, 309-318. Number of citations: 180 (Google Scholar); 121 (Scopus); 107 (Web of Science).
- [10] Giudici, P., Spelta, A. (2016). Graphical network models for international financial flows. *Journal of Business and Economic Statistics*, 34, 128-138. Number of citations: 147 (Google Scholar); 82 (Scopus); 74 (Web of Science).

- RESEARCH MONOGRAPHS

Paolo Giudici (1st ed. 2003, 2nd ed. 2009), *Applied data mining for business and industry*, Wiley. Number of citations: 112 (Scopus); 1307 (Google Scholar). Chinese translation: Publishing House of the Electronics Industry, 2005. Italian version: Mc Graw Hill (1st ed. 2001, 2nd ed. 2009).

- INVITED PRESENTATIONS TO INTERNATIONALLY ESTABLISHED CONFERENCES

2024: OECD Paris: Invited Panelist: Artificial Intelligence in Finance

2024: Actuarial and Financial mathematics conference, Brussels: S.A.F.E. AI in finance

2024: Bank of Italy - Fintech committee: S.A.F.E. AI

2023: University of Cambridge Suptech workshop: Measuring Fairness in AI

2023: University of Loughborough: S.A.F.E. Artificial Intelligence in Finance

2023: Royal Statistical Society conference, Harrogate: S.A.F.E. artificial intelligence in finance

2023: World conference on Explainable AI, Lisbon: S.A.F.E. artificial intelligence in finance

2023: University of Louvain: S.A.F.E. Artificial intelligence in finance

2023: Central Bank of Ireland: Cyber Risk Management

2022: Machine learning in macroeconomics conference, Stockholm: Artificial Intelligence in finance
2022: Royal Statistical Society conference, Aberdeen: Explainable artificial intelligence
2022: Scottish Financial Risk Academy, Edinburgh: Cyber risk management
2022: European University Institute: Explainable artificial intelligence
2022: International conference on Risk Analysis, Perugia: Fintech risk management
2022: Nordic conference on Fintech and the Unions, Copenhagen: Fintech risk management
2021: European Center for Disease Prevention and Control: Forecasting COVID-19 counts
2021: National University of Singapore: Fintech risk management
2021: ESSEC Business School Paris: Cyber risk management
2020: Italian Statistical festival: the Periscope project
2020: European Bank Authority policy research conference: Basket based stable coins
2020: European Big Data Value Forum, Berlin: Explainable Artificial Intelligence
2020: Italian financial risk managers convention: financial technologies
2020: Einaudi Institute for economics and finance: COVID-19 counts
2020: Bioengineering Phd school, Bressanone: Explainable artificial intelligence
2019: OECD Blockchain forum, Paris: Fintech risk management
2019: Stu Hunter Quality Engineering conference, Varese: Network based credit risk models
2019: European Central Bank meeting on financial technologies: Fintech Risk Management
2019: Central Bank Research Association conference, New York: The drivers of cyber risk
2019: Society for financial econometrics, Shanghai: Bitcoin price discovery
2019: Italian Society for Technical Analysis Convention, Milan: Correlation networks
2018: Conference on AI in industry and finance, Zurich: Network models for robot advisory
2018: University of Lugano: Network based credit risk models
2018: Unicredit, Milan: Network based credit risk models
2018: China construction Bank, Milan: Network based credit risk models
2018: Kaunas University: Network models for robot advisory
2018: Eotvos Lorand University Budapest: Network models for robot advisory
2018: University of Nottingham: Financial data science
2018: Financial Engineering and Risk Management conference, Berlin: Bitcoin price discovery
2017: University of Nottingham, Ningbo: Network models for systemic risk
2017: Frankfurt School of Finance and Management: Network models for systemic risk
2017: European Bank Authority, London: Correlation network models for systemic risk
2017: Asian Development Bank Institute Tokyo: Trade networks
2016: Bank for International Settlements, Basel: Network models for systemic risk
2016: Bank of Italy, Rome: Network models for systemic risk
2016: Deutsche Bundesbank, Frankfurt: Network models and big data
2016: Italian Statistical Society, Salerno: Network models for risk management
2015: Canadian Statistical Society Isabel Loutit address: Big data analysis in financial risk management
2015: Deutsche Bundesbank, Frankfurt: Big data analysis in financial risk management
2014: Conference of European Statistics Stakeholders, Rome: Big data analysis
2014: Italian Parliament: Measuring trust
2014: European Central Bank workshop: Big data analysis in financial risk management
2013: Financial Engineering and banking society conference, Paris: Big data analysis
2013: University of Edinburgh: Big data analysis in financial risk management
2012: University of California at Berkeley: Merging credit ratings
2012: European Joint Research Centre, Ispra: Merging credit ratings
2011: International Association for statistical computing, Taipei: Merging credit ratings
2010: Tunisian Statistical Society, Tunis: Operational risk modelling
2008: Credit Research Centre, University of Edinburgh: Merging credit ratings
2007: Imperial College London: data mining
2007: Swedish Statistical Society, Linkoping: data mining
2007: Science & Letters Academy, Milan: Operational risk modelling
2006: Barclays Bank, London: Credit risk modelling
2005: SAS data mining technology conference, LasVegas: data mining
2004: ETH Polytechnic of Zurich: graphical gaussian models
2004: SAS data mining technology conference, LasVegas: data mining
2003: SAMSI Institute, Duke University: graphical gaussian models
2003: University of Leuven: graphical gaussian models
2003: University Rey Carlos III of Madrid: graphical gaussian models
2002: Royal Statistical Society, London: read paper on graphical gaussian models
2002: University of Vienna: graphical gaussian models in R
2001: Max-Planck Institute for Physics, Garching: data mining
2001: Equifax new technology conference, Birmingham: data mining

2000: Trinity College, Dublin: graphical gaussian models
1999: Siemens AG, Munich: graphical gaussian models
1998: Bayesian Statistics V meeting, Valencia: improving graphical gaussian models
1997: Isaac Newton Institute, Cambridge: graphical gaussian models
1997: University of Washington, Seattle: graphical gaussian models
1994: Bayesian Statistics IV meeting, Alicante: graphical gaussian models

- MAJOR CONTRIBUTIONS TO EARLY CAREERS: POSITIONS OF PHD SUPERVISED

Costanza Bosone, expected October 2024. Phd trainee at the European Central Bank
Barbara Tarantino, October 2023. Phd at the Department of Brain and Behavioural Sciences, Pavia
Golnoosh Babaei, October 2023. Phd at the Department of Economics and Management, Pavia
Niklas Bussmann, October 2023. Executive Phd at ING Bank
Alex Gramegna, October 2022. Post-doc researcher, University of Pavia
Alessandro Celani (cosupervision), October 2022. Researcher, Dutch Central Bank
Thomas Leach, October 2021. Researcher, DCAP Asset Management, Zurich
Paolo Pagnottoni, October 2020. Assistant Professor, University of Pavia
Iman Abu Hashish, October 2019. Assistant Professor, American University of Madaba
Gloria Polinesi (cosupervision), October 2019. Assistant Professor, University of Ancona
Branka Hadji-Misheva, October 2018. Associate Professor, University of Bern
Laura Parisi, October 2016. Financial stability expert, European Central Bank, Frankfurt
Shatha Qamhie Hashem, October 2016. Associate Professor, An-Najah University, Palestine
Daniel Felix Ahelegbey (cosupervision), July 2015. Assistant Professor, University of Pavia
Emanuela Raffinetti, October 2011. Assistant Professor, University of Pavia
Luciana Dalla Valle, October 2008. Associate Professor, Plymouth University
Chiara Cornalba, October 2008. Financial Manager, Credit Agricole
Paola Cerchiello, October 2007. Full Professor, University of Pavia
Silvia Figini, October 2007. Full Professor, University of Pavia
Roberto Castelo, October 2002 (cosupervision). Associate Professor, University Pompeu Fabra
Maura Mezzetti, October 2001 (cosupervision). Full Professor, University of Rome Tor Vergata
Claudia Tarantola, October 2000 (cosupervision) Associate Professor, University of Pavia

I authorize to process personal data (According to law 679/2016 of the Regulation of the European Parliament of 27th April 2016). I hereby express my consent to process and use my data provided in this CV.

Paolo Giudici