

PERSONAL INFORMATION Paola Vicard



Enterprise	University	EPR
<input type="checkbox"/> Management Level	X Full professor	<input type="checkbox"/> Research Director and 1st level Technologist / First Researcher and 2nd level Technologist / Principal Investigator
<input type="checkbox"/> Mid-Management Level	<input type="checkbox"/> Associate professor	<input type="checkbox"/> Level III Researcher and Technologist
<input type="checkbox"/> Employee / worker level	<input type="checkbox"/> Researcher and Technologist of IV, V, VI and VII level / Technical collaborator	<input type="checkbox"/> Researcher and Technologist of IV, V, VI and VII level / Technical collaborator

WORK EXPERIENCE

November 2020 to present

Full Professor in Statistics

Università Roma Tre

- Teaching and Research
Higher education and research

December 2019 to July 2022

Deputy Director of the Department of Economics

November 2006 to October 2020

Associate Professor in Statistics

Università Roma Tre

- Teaching and Research
Higher education and research

June 2000 to October 2006

Assistant Professor in Statistics

Università Roma Tre

- Teaching and Research
Higher education and research

January 1998 to March 1999

Temporary Researcher

ISTAT – Italian National Statistical Institute

- Research
Research in Statistics, Sampling Designs

EDUCATION AND TRAINING

1993 – 1996

PhD in Methodological Statistics

- Graphical models and latent variables

1988 - 1993 Degree in Economic Statistics
Sapienza Università di Roma
- Multivariate Statistics

WORK ACTIVITIES

Editorial activity Referee for the following international journals:
Bayesian Analysis,
Biometrika,
Journal of the Royal Statistical Society - Series A,
Journal of the Royal Statistical Society - Series B,
Scandinavian Journal of Statistics,
International Statistical Review,
Computational Statistics and Data Analysis,
Biometrical Journal,
Statistics and Computing,
Statistical Methods and Application

Grants Scientific responsible for the research on "Application of Bayesian networks to the industrial portfolios of the Enel Group". The research programme was launched in May 2015, lasted one year and involved an agreement (with scientific content) between Enel Trade S.p.A. (Global Trading - Middle Office and Risk Management Unit) and the Department of Economics of Roma Tre University.

Awards Best contributed paper presented by young researchers at the Fifth International Conference on Forensic Statistics (Venice, 2002).

PERSONAL SKILLS

Mother tongue(s) Italian

Other language(s)

	Understanding		Speaking		Writing
	Listening	Reading	Spoken Interaction	Spoken Production	
English	C1	C2	C1	C1	C1

Job-related skills Teaching, Management of research and teaching teams

Digital skills Office, XIStat, LaTeX, Minitab, SPSS, Hugin, R

Other skills Consultancy for private and public organizations

ADDITIONAL INFORMATION

Publications Some relevant publications on peer review journals

- Vicard P. (2000). "On the identification of a single-factor model with correlated residuals". *Biometrika*, 87, 1, pag. 199-205.
- Di Zio M., Sacco G., Scanu M., Vicard P. (2005). "Multivariate techniques for imputation based on Bayesian networks". *Neural Network World*, 4, pp. 303-309.
- Di Serio M. C., Vicard P. (2005). "Graphical chain models for the analysis of complex genetic

- diseases: an application to hypertension". *Statistical Modelling*, 5, 119-143.
- Dawid A. P., Mortera J., Vicard P. (2007) "Object-oriented Bayesian networks for complex forensic DNA profiling problems". *Forensic Science International*, 169, pp. 195-205.
 - Renzi M.F., Vicard P., Guglielmetti R., Musella F. (2009) "Probabilistic expert systems for managing information to improve services". *Total Quality Management Journal*, 21, 4, pp. 429-442.
 - Ballin M., Scanu M., Vicard P. (2010) "Estimation of contingency tables in complex survey sampling using probabilistic expert systems". *Journal of Statistical Planning and Inference*, 140, 6, pp. 1501-1512.
 - Tarantola C., Vicard P., Ntzoufras I. (2012) "Monitoring and Improving Greek Banking Services Using Bayesian Networks: an Analysis of Mystery Shopping Data". *Expert systems with applications*, 39, 11, pp. 10103-10111. doi: 10.1016/j.eswa.2012.02.060.
 - Marella D., Vicard P. (2013) "Object-Oriented Bayesian Networks for modelling the respondent measurement error". *Communication in Statistics – Theory and Methods*, 42, pp. 3463-3477.
 - Mortera J., Vicard P., Vergari C. (2013) "Object-Oriented Bayesian Networks for a Decision Support System for Antitrust Enforcement". *The Annals of Applied Statistics*, 7, 2, pp. 714-738.
 - Musella F., Vicard P. (2015) "Object-Oriented Bayesian networks for complex quality management problems". *Quality & Quantity*. Pubblicato on line 2013. doi: 10.1007/s11135-013-9977-3. Pubblicato *Quality & Quantity*, 49, pp. 115-133.
 - Di Pietro L., Guglielmetti R., Musella F., Renzi M.F., Vicard P. (2015) "Reconciling internal and external performance in a holistic approach: a Bayesian network model in higher education". *Expert systems with applications*, 42, 5, pp. 2691-2702. doi: [10.1016/j.eswa.2014.11.019](https://doi.org/10.1016/j.eswa.2014.11.019).
 - Di Pietro L., Guglielmetti R., Musella F., Renzi M.F., Vicard P. (2017) "Monitoring an airport check-in process by using Bayesian networks". *Transportation Research Part A: Policy and Practice*, 106, pp. 235-247. doi: [10.1016/j.tra.2017.09.020](https://doi.org/10.1016/j.tra.2017.09.020)
 - Marella D., Vicard P. (2017) "Toward an Integrated Bayesian Network Approach to Measurement Error Detection and Correction". *Communication in Statistics–Simulation and Computation*, 48, 2, pp. 544-555. doi: [10.1080/03610918.2017.1387664](https://doi.org/10.1080/03610918.2017.1387664)
 - Vitale V., Musella F., Vicard P., Guizzi V. (2018) "Modelling an energy market with Bayesian networks for non-normal data". *Computational Management Science*, 17, pp. 47-64. doi: 10.1007/s10287-018-0320-2
 - Conti P. L., Di Iorio A., Guandalini A., Marella D., Vicard P., Vitale V. (2019) "On the estimation of the Lorenz curve under complex sampling designs". *Statistical Methods and Applications*, 29, pp. 1-24. <http://arxiv.org/abs/1812.03449>. DOI: 10.1007/s10260-019-00478-6
 - Di Serio C., Scala S., Vicard P. (2020) "Bayesian networks for cell differentiation process assessment". *Stat*, 9, 1. DOI: 10.1002/sta4.287.
 - Conti P.L., Marella D., Vicard P., Vitale V. (2021) "Multivariate statistical matching using graphical models". *International Journal of Approximate Reasoning*, 31, pp. 981-1013. DOI: 10.1016/j.ijar.2020.12.006.
 - Marella D., Vicard P. (2022) "Bayesian network structural learning from complex survey data: a resampling-based approach". *Statistical Methods and Applications* 31, p. 981-1013. DOI: 10.1007/s10260-021-00618-x
 - De Angelis C., Musella F., Vicard P. (2022) "Modeling school managers challenges in the pandemic era with Bayesian networks". Accepted for publication on *Social Indicator Research*. DOI: 10.1007/s11205-022-02952-3
 - Mecatti F., Vicard P., Musella F., Giammei L. (2022) "Bayesian networks versus gender bias". *Significance*, 19, 5. DOI: 10.1111/1740-9713.01684
 - Vicard P., Rancoita P.M.V., Cugnata F., Briganti A., Mecatti F., Di Serio C., Conti P.L. (2025) "Testing for causal effect for binary data when propensity scores are estimated through Bayesian Networks". *ASTA Advances in Statistical Analysis*. DOI: 10.1007/s10182-025-00535-4

Some relevant book articles

- Vicard P., Scanu M. (2012) "Application of Bayesian networks in Official Statistics". In *Advanced Statistical methods for the analysis of large data-sets*, edito da Di Ciaccio, Coli, Ibañez, Springer. pp. 113-125. ISBN: 978-3-642-21036-5.
- Marella D., Vicard P. (2014) "Modelling measurement errors by object-oriented Bayesian Networks: an application to 2008 SHIW". "Contributions to Sampling Statistics - ITACOSM 2013 Selected Papers", edito da Mecatti, Conti, Ranalli. Springer, pp: 139-150. ISBN 978-3-319-05319-6.
- Marella D., Vicard P. (2015) "Object-Oriented Bayesian Network to Deal with Measurement Error in Household Surveys". In *Advances in Statistical Models for Data Analysis*, edito da Morlini, Minerva e Vichi. Springer International Publishing Switzerland. Pagg. 157-164. DOI 10.1007/978-3-319-17377-1_17. ISBN 978-3-319-17376-4
- Marella D., Vicard P., Vitale V., Ababei D. (2019) "Measurement error correction by non

parametric Bayesian networks: application and evaluation". In "[Statistical](#) learning of complex data", edito da Greselin, Deldossi, Bagnato, Vichi. Springer International Publishing Switzerland. ISBN: 978-3-030-21140-0. Doi: 10.1007/978-3-030-21140-0_16

- Musella F., Vicard P., Vitale V. (2019) "Copula Grow-Shrink Algorithm for Structural Learning". In "[Statistical](#) learning of complex data", edito da Greselin, Deldossi, Bagnato, Vichi. Springer International Publishing Switzerland. ISBN: 978-3-030-21140-0. Doi: 10.1007/978-3-030-21140-0_17

International Projects

- 2021 - , member of the COST action CA19310 FinAI – Fintech and Artificial Intelligence in Finance – Towards a Transparent Financial Industry, 2020-2024 <https://fin-ai.eu/> - Diversity Team
- 2017- 2020, member of the European project Costnet (COST Action CA15109): the European Cooperation for Statistics of Network Data Science.
- 2001 – 2004, member of the European project "*Bayesian networks for forensic inference from genetic markers*" financed by Leverhulme Trust (UK).

Other Relevant Information

- Has been invited to several national and international conferences.
- June-July 2024 Appointed member of the Technical-Scientific Commission for the examination of proposals on generative artificial intelligence for the Italian Parliament
- 2022. Member of the committee for the prize for the best doctoral thesis in Statistics (Italian Statistical Society)
- January 2020 – July 2023, board member of the Italian Biometric Society (Italian Region of the International Biometric Society)
- Since 2020, board member of the Centro Universitario di Statistica per le Scienze Biomediche CUSSB (Università Vita- Salute San Raffaele, Milano)
- 2012. Principal investigator of the Commission for the award of the title of Doctor of Science for Doctorates abroad: Norwegian University of Science and Technology (Trondheim).

Organization and management of the following national and international conferences

- 2021. Member of the scientific committee of the 13th Virtual Conference of the Italian Region of the International Biometric Society (IBS), 20, 24, 29 September 2021.
- 2019. Member of the programme committee of Conference of the Italian Statistical Society, Pisa dal 22 al 24 June 2020.
- 2019. Member of the programme committee of the 12th Italian Region-IBS conference "Networking International Biometric Society Regions".
- 2018. Member of the programme committee of the Conference on Uncertainty in Artificial Intelligence UAI 2018 (<http://auai.org/uai2018/pcs.php>)
- 2017. Member of the programme committee of the Conference on Uncertainty in Artificial Intelligence UAI 2017 (<http://auai.org/uai2017/pcs.php>)
- 2015. Member of the local organizing committee of the International Conference ITACOSM 2015, Roma, 24-26 June 2015.
- 2015. 8th International Conference of the ERCIM Working Group on Computational and Methodological Statistics (London, 12-14 December 2015). Organization of the session: Analysis of data from complex surveys
- 2014. 7th International Conference of the ERCIM Working Group on Computational and Methodological Statistics (Pisa, 6-8 December 2015). Organization of the session: Bayesian networks in official statistics.

Teaching activity – some PhD level courses

- Member of the board of the PhD programme in Economics of the Department of Economica (University Roma Tre)
- November 2023 and 2024. Short course on "Introduction to Graphical Models and Bayesian Networks" in the Doctorate Program in Statistics (Department of Statistical Science, Sapienza University of Rome)
- 2018. Course on "Graphical models and applications to genomics [part 1: Fundamentals on graphical models]" within the COSTNET Networking Biostatistics meeting and training school
- Supervisor of several PhD theses on Bayesian networks and their applications.

FIRMA PAOLA VICARD