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### Main recent publications in journals

Devis Bianchini, Carlo Bono, Alessandro Campi, Cinzia Cappiello, Stefano Ceri, Francesca De Luzi, Massimo Mecella, Barbara Pernici, Pierluigi Plebani, [Challenges in AI-supported process analysis in the Italian judicial system: what after digitalization?](#) Digital Government: Research and Practice, Vol. 5, No. 1, ACM, 2024

Barbara Pernici, Carlo Bono, Ludovica Piro, Mattia Del Treste, Giancarlo Vecchi, [Improving the analysis of the judiciary performance. The use of data mining techniques to assess the timeliness of civil trials](#), International Journal of Public Sector Management, Volume 37, Issue 1, 2024

Edoardo Ramalli, Barbara Pernici, Challenges of a Data Ecosystem for Scientific Data, Data and Knowledge Engineering, Volume 148, 2023, 102236, Elsevier [link](#)

Carlo A. Bono, Cinzia Cappiello, Barbara Pernici, Edoardo Ramalli, Monica Vitali, Pipeline Design for Data Preparation for Social Media Analysis, ACM Journal of Data and Information Quality, Volume 15, Issue 4, Article No.: 42, Pages 1 – 25, 2023 [link](#)

Carlo Bono, Mehmet Oguz Mülâyim, Cinzia Cappiello, Mark Carman, Jesus Cerquides, Jose Luis Fernandez-Marquez, Rosy Mondardini, Edoardo Ramalli, Barbara Pernici, A Citizen Science approach for analysing social media with crowdsourcing, IEEE Access, Vol. 11, pp. 15329 – 15347, 2023 <https://ieeexplore.ieee.org/document/10041135>

- E. Ramalli, B. Pernici, Knowledge Graph Embedding for Experimental Uncertainty Estimation, *Information Discovery and Delivery*, Vol. 51 No. 4, pp. 371-383, Nov. 2023 [link](#)
- E. Ramalli, T. Dinelli, A. Nobili, A. Stagni, B. Pernici, T. Faravelli, Automatic validation and analysis of predictive models by means of big data and data science, *Chemical Engineering Journal*, vol. 454, part 3, Feb. 2023 [link](#)
- S. Geisler, M.-E. Vidal, C. Cappiello, B. Farias Lóscio, A. Gal, M. Jarke, M. Lenzerini, P. Missier, B. Otto, E. Paja, B. Pernici, J. Rehof, Knowledge-driven Data Ecosystems Towards Data Transparency, accepted for publication on *ACM Journal of Data and Information Quality*, vol. 14, 1, 2022 <https://arxiv.org/abs/2105.09312>
- G. Scalia, C. Francalanci, B. Pernici, CIME: Context-aware geolocation of emergency-related posts, *Geoinformatica*, Volume 26, pages 125–157, (2022)
- D. Rooein, D. Bianchini, F. Leotta, M. Mecella, P. Paolini, B. Pernici, aCHAT-WF: Generating conversational agents for teaching business process models, *Software and Systems Modeling*, 2022, 1-24
- Edoardo Ramalli, Gabriele Scalia, Barbara Pernici, Alessandro Stagni, Alberto Cuoci, Tiziano Faravelli, Data ecosystems for scientific experiments: managing combustion experiments and simulation analyses in chemical engineering, 2021, *Frontiers in Big Data* <https://www.frontiersin.org/articles/10.3389/fdata.2021.663410/full>
- G. Scalia, C. Grambow, B. Pernici, T.P. Li, W. Green, Evaluating Scalable Uncertainty Estimation Methods for Deep Learning Based Molecular Property Prediction, *Journal of Chemical Information and Modeling*, Vol 60/Issue 6, 2020, [link](#)
- Andrea Autelitano, Barbara Pernici, Gabriele Scalia, Spatio-temporal mining of keywords for social media cross-social crawling of emergency events, *Geoinformatica*, Volume 23, pages 425–447, (2019), Springer
- Andrea Marrella, Massimo Mecella, Barbara Pernici, Pierluigi Plebani, A design-time data-centric maturity model for assessing resilience in multi-party business processes, *Information Systems*, 2019 [link](#)
- C. Cappiello, C. Cerletti, C. Fratto, and B. Pernici, Validating data quality actions in scoring processes, *ACM Journal of Data and Information Quality (JDIQ)*, 9(2), 11, pp. 1-28, 2018
- Clemens Havas, Bernd Resch, Chiara Francalanci, Barbara Pernici, Gabriele Scalia, Jose Luis Fernandez-Marquez, Tim Van Achte, Gunter Zeug, Rosy Mondardini, Domenico Grandoni, Birgit Kirsch, Milan Kalas, Valerio Lorini, Stefan Rüping, E2mC: Improving Emergency Management Service Practice through Social Media and Crowdsourcing Analysis in Near Real Time, *Sensors*, 17(12), 2017 [link](#)
- U. Wajid, C. Cappiello, P. Plebani, B. Pernici, N. Mehandjiev, M. Vitali, M. Gienger, K. Kavoussanakis, D. Margery, D. Garcia Perez, P. Sampaio, [On Achieving Energy Efficiency and Reducing CO<sub>2</sub> Footprint in Cloud Computing](#), *IEEE Transactions on Cloud Computing*, Vol. 4(2), pp. 138-151, April 2016
- C. Cappiello, N. Ho, B. Pernici, P. Plebani, M. Vitali, M., [CO<sub>2</sub>-aware Adaptation Strategies for Cloud Applications](#), *IEEE Transactions on Cloud Computing*, Vol. 4(2), pp. 152-165, April 2016
- A. Mello Ferreira, B. Pernici, [Managing the complex data center environment: an Integrated Energy-aware Framework](#), *Computing*, special issue on Contributions of Computational Intelligence in Designing Complex Information Systems, [Computing 98\(7\)](#): 709-749, 2016 ([download](#))

Monica Vitali, Barbara Pernici, Una-May O'Reilly, [Learning a Goal-Oriented Model for Energy Efficient Adaptive Applications in Data Centers](#), Information Sciences, [Volume 319](#), 20 October 2015, Pages 152–170