

# Flavia Monti

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## Education

- 2021–current **Ph.D. in Engineering in Computer Science**, *Sapienza Università di Roma*.  
Research Interests Smart Manufacturing. In particular the application of innovative technologies, such as digital twin, computer vision and artificial intelligence, with the goal of improving production quality, reduce costs, increase machinery uptime, analyze failures and defects towards zero defect manufacturing.
- 2018–2021 **Master's Degree in Engineering in Computer Science**, *Sapienza Università di Roma*.  
Advisor Prof. Francesco Leotta  
Thesis *Vision based real-time die cutting defect detection*  
The aim of the thesis is the implementation of a vision based software able to monitor in real-time the cardboard production and to identify its errors.
- 2014–2018 **Bachelor's Degree in Engineering in Computer Science and Automation**, *Sapienza Università di Roma*.

## Experiences

- 2023 **Proceedings Chair**, *21st International Conference on Service-Oriented Computing, ICSOC 2023*.
- Sep 2022 **Study abroad**, *Cyprus University of Technology, Limassol (Cyprus)*.
- Jul 2022 **Summer School On Service-Oriented Computing**, *Hersonissos, Crete (GR)*.
- 2021 **Software Engineer**, *Sapienza Università di Roma*.  
Development of an image processing prototype for I4.0.

## Teaching Activities

- A.Y. 2023/24 **Teaching Assistant**, *Progettazione del Software*, Sapienza Università di Roma.
- A.Y. 2022/23 **Teaching Assistant**, *Progettazione del Software*, Sapienza Università di Roma.
- A.Y. 2022/23 **Teacher**, *Software analysis and design methodologies*, ITS Academy Lazio Digital.
- A.Y. 2021/22 **Teaching Assistant**, *Progettazione del Software*, Sapienza Università di Roma.

## Panels, Seminars, Tutorials and Talks

- Jun 2023 **Tutorial**, *Services in Industry 4.0. Modeling and composition.*, Francesco Leotta, Massimo Mecella, Flavia Monti, Luciana Silo, 17th Symposium and Summer School on Service-Oriented Computing, SummerSOC 2023, Hersonissos, Crete, Greece.
- Jun 2022 **Tutorial**, *Engineering Information Systems in Smart Manufacturing*, Francesco Leotta, Massimo Mecella, Flavia Monti, 34th International Conference on Advanced Information Systems Engineering, CAiSE 2022, Leuven, Belgium.

Jun 2022 **Panel**, *AI, AR and governance in manufacturing and I4.0/I5.0*, Geert Poels, Andrei Bertic, Raimundas Matulevičius, Flavia Monti, Erik Proper, 34th International Conference on Advanced Information Systems Engineering, CAiSE 2022, Leuven, Belgium.

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## Projects

- 2022–current **Electrospindle 4.0**, the goal of Electrospindle 4.0 is to apply innovative technologies to realize a family of Zero Defects products (spindles), produced through a Zero Defects Manufacturing process.  
In the Electrospindle 4.0 project, my work primarily involved supporting research and contributing to the development of early stage solutions for managing data analyses.
- 2021–current **TopKontrol**, *Die Cutter 4.0 Industrial Project*, the aim of TopKontrol is the development of a monitoring and quality control system for the packaging production.  
My work on TopKontrol project is primarily focused on the development of a computer-vision software component, able to identify, in real-time, cardboard defects during production. Moreover, my work is also focused on the improvement of a monitoring software component responsible to collect, via Bluetooth low energy sensors, usage data of the die cutters machine component.
- 2022–2023 **BinTraWine**, *Blockchain, Tracking and Tracing solutions for Wine*, the aim of BinTraWine is to employ blockchain technology for traceability in the wine supply chain.
- 2021–2022 **DESTINI H2020 Twinning Project**, *Smart Data Processing and Systems of Deep Insight*, the aim of DESTINI is to facilitate transfer of scientific knowledge and expertise, as well as of best research practices from the leading institutions to Cyprus University of Technology.

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## Publications

- [1] S. Agostinelli, F. De Luzi, M. Manglaviti, M. Mecella, F. Monti, F. M. Petriccione, M. Mesenzani, A. Pollini, A. Verioli, and U. Amadio, “Bintrawine - blockchain, tracking and tracing solutions for wine,” in *RPE@ CAiSE*, 2023.
- [2] M. Calamo, A. De Franceschi, G. De Santis, F. Leotta, C. Mazzaroppi, J. G. Mathew, M. Mecella, F. Monti, C. Sabatino, L. Visani, and M. Visani, “Topkontrol: A monitoring and quality control system for the packaging production,” in *RPE@ CAiSE*, 2023.
- [3] G. De Giacomo, M. Favorito, F. Leotta, M. Mecella, F. Monti, and L. Silo, “Aida: A tool for resiliency in smart manufacturing,” in *Intelligent Information Systems: CAiSE Forum 2023, Zaragoza, Spain, June 12–16, 2023, Proceedings*, Springer, 2023.
- [4] F. Monti, L. Silo, F. Leotta, and F. Mecella, “On the suitability of ai for service-based adaptive supply chains in smart manufacturing,” in *2023 IEEE International Conference on Web Services (ICWS)*, IEEE, 2023.
- [5] F. Monti, L. Silo, F. Leotta, and F. Mecella, “Services in smart manufacturing: Comparing automated reasoning techniques for composition and orchestration,” in *Service-Oriented Computing: 17th Symposium and Summer School, SummerSOC 2023, Hersonissos, Crete, Greece, June 25–July 1, 2023, Revised Selected Paper*, Springer, 2023.
- [6] F. Amadori, M. Bardani, E. Bernasconi, F. Cappelletti, T. Catarci, G. Drudi, M. Ferretti, L. Foschini, P. Galli, M. Germani, *et al.*, “Electrospindle 4.0: Towards zero defect manufacturing of spindles,” in *RCIS Workshops*, 2022.
- [7] F. Leotta, J. G. Mathew, M. Mecella, and F. Monti, “Supporting zero defect manufacturing through cloud computing and data analytics: The case study of electrospindle 4.0,” in *International Conference on Advanced Information Systems Engineering*, Springer, 2022.

- [8] L. Esposito, S. V. Veneruso, F. Leotta, F. Monti, J. G. Mathew, and M. Mecella, "Unsupervised segmentation of human habits in smart home logs through process discovery.," in *ITBPM@ BPM*, 2021.

## Computer skills

Programming languages	C, JAVA, PYTHON, HTML, SQL
Libraries	OPENCV
Operating Systems	Windows, Unix, Macintosh, Android
Programs	Microsoft Office, LaTeX

## Languages

Italian	<b>Native language</b>
English	<b>Intermediate</b>

I declare that the information in this Curriculum Vitae is accurate and true. I authorize the processing of my personal data in the cv in accordance with Article 13 of Legislative Decree No. 196 of June 30, 2003 "Code on the Protection of Personal Data" and Article 13 of the GDPR (EU Regulation 2016/679).

Rome, 15/10/2023  
Flavia Monti