

PERSONAL INFORMATION **Flavia Monti**

## EDUCATION AND TRAINING

2021 – current **Ph.D. in Engineering in Computer Science**

Sapienza Università di Roma, Rome, Italy

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, Rome, Italy

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, Rome, Italy

2009 – 2014 **Science High School Diploma**

Liceo Scientifico G. Peano, Monterotondo (RM), Italy

## EXPERIENCES

2022 **Study Abroad**

Limassol, Cyprus

2022 **Summer School On Service-Oriented Computing**

Hersonissos, Crete

2021 **Software Engineer**

Development of an image processing prototype for Industry 4.0., Sapienza Università di Roma, Rome, Italy

## TEACHING ACTIVITIES

A.Y. 2022/23 **Teaching Assistant****Progettazione del Software**, Sapienza Università di Roma, Rome, Italy2023 **Teacher**

Software analysis and design methodologies, ITS Academy Lazio Digital

A.Y. 2021/22 **Teaching Assistant****Progettazione del Software**, Sapienza Università di Roma, Rome, Italy

## TALKS

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

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

2022 **Talk**

**Transformation in Traditional Industry: Die Cutter 4.0**, Jerin George Mathew, Flavia Monti, Second School on Smart Data Processing and Systems of Deep Insight, DESTINI H2020

PROJECTS

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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.

2022 – current **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 – current **Fustella 4.0 – Rotalaser Industrial Project**

The aim of Fustella 4.0 is the development of a die cutter 4.0 to improve production process. 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.

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.

PUBLICATIONS

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- [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] **Flavia Monti**, Luciana Silo, Francesco Leotta, and Francesco 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] **Flavia Monti**, Luciana Silo, Francesco Leotta, and Francesco 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] Francesco Amadori, Michele Bardani, Eleonora Bernasconi, Federica Cappelletti, Tiziana Catarci, Gianluca Drudi, Mario Ferretti, Luigi Foschini, Paolo Galli, Michele Germani, et al. “Electrospindle 4.0: Towards Zero Defect Manufacturing of Spindles.” In: *RCIS Workshops*. 2022.
- [7] Francesco Leotta, Jerin George Mathew, Massimo Mecella, and **Flavia 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] Lucia Esposito, Silvestro V Veneruso, Francesco Leotta, **Flavia Monti**, Jerin George Mathew, and Massimo Mecella. “Unsupervised Segmentation of Human Habits in Smart Home Logs through Process Discovery.” In: *ITBPM@ BPM*. 2021.

PERSONAL SKILLS

Mother tongue Italian

Other languages

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C1	C1	C1	C1

Levels: A1 and A2: Basic user – B1 and B2: Independent user – C1 and C2: Proficient user  
[Common European Framework of Reference for Languages](https://europa.eu/europass/levels)

**Soft skills** During my university studies, I developed excellent organizational and communication skills, which I have since further honed through my professional experiences. Over the past five years, I have had the opportunity to participate in and present my work at various international conferences and project meetings, as well as lecture to master’s students. In addition, I have gained valuable experience in working collaboratively in teams and managing multiple projects concurrently.

**Computer skills**

- Programming languages: JAVA, PYTHON, C, C# (.NET), HTML, SQL
- Libraries: OPENCV
- Operating Systems: Windows, Unix, Macintosh, Android
- Programs: Microsoft Office, LaTeX