

PERSONAL INFORMATION **Flavia Monti**

EDUCATION AND TRAINING

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

Sapienza Università di Roma, Rome, Italy

Research Interests Industry 4.0 and Smart Manufacturing. Specifically the integration of new technologies and approaches like computer vision, machine learning and artificial intelligence with the purpose of improving production quality, reducing costs, increasing 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

EXPERIENCES

Jan - Mar 2024 **Visiting Researcher**

TUM School of Computation, Information and Technology. Technical University of Munich, Munich (Germany).

Sep 2022 **Visiting Researcher**

Department of Electrical Engineering & Information Technologies. Cyprus University of Technology, Limassol (Cyprus).

Jul 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. 2023/24 **Teaching Assistant****Progettazione del Software**, Sapienza Università di Roma, Rome, ItalyA.Y. 2022/23 **Teaching Assistant****Progettazione del Software**, Sapienza Università di Roma, Rome, Italy2023 **Lecturer**

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

2024 Tutorial

Engineering Information Systems with LLMs and AI-based techniques, Massimo Mecella, Marco Calamo, [Flavia Monti](#), 36th International Conference on Advanced Information Systems Engineering, CAiSE 2024, Limassol, Cyprus

2023 Tutorial

Services in Industry 4.0. Modeling and composition for agile supply chains., Francesco Leotta, [Flavia Monti](#), Luciana Silo, 21st International Conference on Service-Oriented Computing, ICSOC 2023, Rome, Italy

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

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

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 **Fustella 4.0 – Rotlaser 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.

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.

SERVICE

2023 Proceedings Chair

21st International Conference on Service-Oriented Computing, ICSOC 2023.

2023 Publication Chair

21st International Conference on Service-Oriented Computing, ICSOC 2023.

2023 External Reviewer

5th International Conference on Process Mining (ICPM 2023), 31st Symposium on Advanced Database Systems (SEBD 2023), Journal of Data and Information Quality (JDIQ)

PUBLICATIONS

- [1] **Flavia Monti**, Jerin George Mathew, Francesco Leotta, Agnes Koschmider, and Massimo Mecella. "On the Application of Process Management and Process Mining to Industry 4.0". In: *Software and Systems Modeling*. Springer. 2024.
- [2] 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.
- [3] 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.
- [4] 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.
- [5] Francesco Leotta, **Flavia Monti**, and Luciana Silo. "Services in Industry 4.0. Modeling and Composition for Agile Supply Chains". In: *Service-Oriented Computing – ICSOC 2023 Workshops*. Springer. 2023.
- [6] **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.
- [7] **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.
- [8] 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.
- [9] 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.
- [10] Francesco Leotta, Jerin George Mathew, Massimo Mecella, and **Flavia Monti**. "Towards an Information Systems-driven Maturity Model for Industry 4.0". In: *Enterprise, Business-Process and Information Systems Modeling: 23rd International Conference, BPMDS 2022 and 27th International Conference, EMMSAD 2022, Held at CAiSE 2022, Leuven, Belgium, June 6–7, 2022, Proceedings*. 2022.

- [11] 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.

SOFTWARE PROJECTS

Software projects are available at <https://github.com/iaiamomo>.

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](#)

Computer skills

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