PERSONAL INFORMATION Flavia Monti

EDUCATION

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

2024 **Software Engineer**

Analysis and development of computer vision techniques applied to quality control in industrial systems, Sapienza Università di Roma, Rome, Italy

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. 2024/25 **Teaching Assistant**

Progettazione del Software, Department of Computer, Control and Management Engineering, Sapienza Università di Roma, Rome, Italy

A.Y. 2023/24 **Teaching Assistant**

Progettazione del Software, Department of Computer, Control and Management Engineering, Sapienza Università di Roma, Rome, Italy

A.Y. 2022/23	**Teaching Assistant**

Progettazione del Software, Department of Computer, Control and Management Engineering, Sapienza Università di Roma, Rome, Italy

2023	**Lecturer**

Metodologie di Analisi e Progettazione del Software (UML), ITS Academy Lazio Digital

A.Y. 2021/22	**Teaching Assistant**

Progettazione del Software, Department of Computer, Control and Management Engineering, Sapienza Università di Roma, Rome, Italy

SERVICE

Proceedings Chair

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

Publication Chair

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

Program Committee Membership

21st Conference on Information and Research Science Connecting to Digital and Library Science (IRCDL 2025), 1st Workshop on Large Language Models for Service-Oriented Architectures and Systems Design (LLM-SOA).

Reviewer

6th International Conference on Process Mining (ICPM 2024), Women in Computer Vision workshop (WiCV 2024 @ECCV 2024), 5th International Conference on Process Mining (ICPM 2023), 31st Symposium on Advanced Database Systems (SEBD 2023), Journal of Data and Information Quality (JDIQ), IEEE Transactions on Services Computing (TSC), Journal of Data Science and Engineering (DSEJ).

PERSONAL SKILLS AND COMPETENCES

Mother tongue	Italian

Other languages

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

English — row above

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), SQL
– Libraries: OPENCV
– Development Tools: Git (Version Control), Docker, Eclipse, Visual Studio, Visual Studio Code
– Operating Systems: Microsoft Windows, Unix
– Programs: Microsoft Office, LaTex

SOFTWARE PROJECTS

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

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 – 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.

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.

TALKS

2024 Invited talk

Toward Agile Business Processes in Smart Manufacturing through Artificial Intelligence, Francesco Leotta, Flavia Monti, Workshop on Business Process Management and Process Mining, University of Oxford, Oxford, England

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 speaker

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 Invited 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

PUBLICATIONS

For the list of publications please refer to the following pages on Google Scholar (Pegkmv-cAAAAJ), Scopus (57278490100), ORCID (0000-0003-3349-7861), dblp.