Martina De Sanctis

Gran Sasso Science Institute - GSSI

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Personal Information

Nationality Italian
Permanent Address Via Sant'Andrea, 18 - 67100, L'Aquila, Italy
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Research Topics

Autonomous, Collective, and Self-Adaptive Systems
Software Engineering and Architecture
Ethical Aspects of Autonomous and Self-Adaptive Systems

Current Position and Roles

from October 2024 **Assistant Professor** (Tenure track researcher) at the Gran Sasso Science Institute (GSSI) (`http://www.gssi.it`), at the Computer Science department, L'Aquila, Italy.

from May 2026 GSSI **Unit Representative** for the CINI "Informatics and Society" Laboratory.

from April 2024 **Scientific Committee member** of the International Center for Environmental Monitoring CIMA Research Foundation (`https://www.cimafoundation.org/en/`).

from August 2023 **Associate** member with the Gran Sasso Tech Foundation (GST) (`https://www.gransassotech.org/`).

Past Research Experiences and Training at Qualified Italian and Foreign Institutes

February 2025 **Visiting** the groups of Self-adaptive Software-intensive Systems (SASIS), and Institute of Information Security and Dependability (KASTEL) at the Karlsruhe Institute of Technology (KIT) (Germany).

April - May 2023 **Visiting** the Department of Computer Science and Media Technology - Faculty of Technology and Society of the Malmö University (Sweden).

from June 2020 to October 2024 **Assistant Professor** (fixed-term researcher type A) at the Gran Sasso Science Institute (GSSI) (`http://www.gssi.it`), at the Computer Science department, L'Aquila, Italy.

November 2018 - May 2020 **Postdoctoral researcher** at the Gran Sasso Science Institute (GSSI) (`http://www.gssi.it`), at the Computer Science department, L'Aquila, Italy.

November 2017 - November 2018 **Researcher** at the Distributed Adaptive Systems (DAS) unit (`https://das.fbk.eu/`), at Fondazione Bruno Kessler (FBK), Trento, Italy.

September 2017 **Visiting** the Department of Computer Science and Media Technology - Faculty of Technology and Society of the Malmö University (Sweden).

November 2013 - November 2017 **Doctoral researcher** at the Distributed Adaptive Systems (DAS) unit (`https://das.fbk.eu/`), at Fondazione Bruno Kessler (FBK) and Università degli Studi di Trento, Trento, Italy.

Education

November 2013 - November 2017 **Ph.D. in Computer Science** at the Doctoral School in *Information and Communication Technology*, University of Trento and Fondazione Bruno Kessler (FBK), Trento (Italy), with the *maximum score*.

Thesis Title: Dynamic Adaptation of Service-Based Systems: a Design for Adaptation Framework.

Defense Date: 15th May 2018

Thesis supervisors

Surname	Name	Institution	Country	Role
Pistore	Marco	FBK - Fondazione Bruno Kessler	Italy	Supervisor
Bucchiarone	Antonio	FBK - Fondazione Bruno Kessler	Italy	Co-Supervisor

Commission: members and roles

Surname	Name	University	Country	Profession	Roles
Dustdar	Schahram	Vienna University of Technology	Austria	Full Professor	Member / Reviewer
Pautasso	Cesare	University of Lugano	Switzerland	Full Professor	President / Reviewer
Baresi	Luciano	Politecnico di Milano	Italy	Full Professor	Member / Secretary

September 2007 - March 2012 **Master's degree in Computer Science**, Faculty of Mathematical, Physical and Natural Sciences of the University of L'Aquila.

Thesis title: "Modellazione di performance antipatterns nel linguaggio di descrizione architetturale *Æmilia*." (Performance antipatterns modeling in the Architectural Description Language *Æmilia*).

Topic: Realization of:

- a metamodel for the Architectural Description Language "Æmilia";
- a transformation mechanism from Æmilia textual specifications to Æmilia models (text-to-model transformation);
- an engine for automating the detection process of performance antipatterns in Æmilia models available at `https://github.com/CatiaTrubiani/panda-aemilia`;

This work has been pursued further and published in the journal *Information and Software Technology*, 2017 (See Publications)

Supervisor: Prof. Vittorio Cortellessa

Co-Supervisor: Dott.ssa Catia Trubiani

Final Mark: Maximum score (110/110) "cum laude"

February 2008 - June 2008 **Erasmus program**
University of Warsaw - Faculty of Mathematics, Informatics and Mechanics - Warsaw, Poland.

2002 - 2006 **Bachelor's Degree in Computer Science**, Faculty of Mathematical, Physical and Natural Sciences of the University of L'Aquila.

Thesis Title "Estensioni strutturali e comportamentali di un tool per la trasformazione di modelli software in modelli di performance". (Structural and behavioral extensions of a tool for the transformation of software models in performance models).

Supervisor Prof. Vittorio Cortellessa

Final Mark 104/110

1997 - 2002 **High school Degree** - Ragioniere Perito Commerciale e Programmatore - Istituto Tecnico Commerciale Statale "B. Pascal" via Bafile, 39 - 64100 Teramo (TE)

Final Mark maximum score (100/100)

Academic Certifications

2023 **Abilitazione Scientifica Nazionale** alle funzioni di Professore universitario di Seconda Fascia nel Settore Concorsuale 01/B1 - Informatica.

2023 **Abilitazione Scientifica Nazionale** alle funzioni di Professore universitario di Seconda Fascia nel Settore Concorsuale 09/H1 - Sistemi di Elaborazione delle Informazioni.

2022 French **Qualification** as *Maître de conférences en Informatique* - Section CNU 27 (N° qualification 22227346040).

Past Work Experiences

May 2012 - May 2013 **Software Developer** Quammodo S.r.l. - L'Aquila, Italy
Business sector: Web-based software applications.
Main responsibilities: Development of web-based, modular, extensible and customizable software applications through the use of technologies such as JEE 6, JSF 2.0, EJB 3.1, JPA2, JAAS. Activities of Test Driven Development (TDD) to support the implementation of a Software Patent (Peso delle Fonti) in the context of legal disputes. Research and analysis of Software Project Management tools based on agile methods (SCRUM).

September 2010 - March 2011 **Software Developer** Tribe ICT (`www.tribeict.it`) - L'Aquila, Italy
Business sector: Geographic Information Systems (GIS).
Main responsibilities: Design, management, and technological support for the development of a distributed, extensible and customizable GIS framework. The system is based on the uDig platform (http://www.udig.org) and exploits the following technologies: Java, Eclipse (RCP, EMF, JFace), JTS, Geoserver, Geonetwork.

Aug - Sept 2007 Aug - Sept 2004 **Trainee** Tinn S.r.l. (`www.tinn.it`) - Teramo, Italy
Business sector: Management systems for public administration.
Main responsibilities: Analysis, development and testing of the project MIIP (Modulo di Immatricolazione on line, Iscrizione e Pagamenti).

Teaching Activities

Highlights:
– 130 hours of frontal teaching to PhD students.
– Teaching of a 3-hour tutorial at 12th IEEE International Conference on Self-Adaptive and Self-Organizing Systems.

2026 I held a course (with exam) for doctoral students together with Prof. Patrizio Pelliccione on: ***Autonomous and Self-adaptive Systems*** (duration: 14 hours (total), 8 (personal)) at the Gran Sasso Science Institute (GSSI) - L'Aquila, Italy.

I held a course (with exam) for doctoral students together with colleagues on: ***Engineering of Human-centric and Smart Systems*** (duration: 14 hours (total), 2 (personal)) at the Gran Sasso Science Institute (GSSI) - L'Aquila, Italy.

2025 I held a course (with exam) for doctoral students together with Prof. Patrizio Pelliccione on: ***Autonomous and Self-adaptive Systems*** (duration: 14 hours (total), 8 (personal)) at the Gran Sasso Science Institute (GSSI) - L'Aquila, Italy.

I held a course (with exam) for doctoral students together with colleagues on: ***Engineering of Human-centric and Smart Systems*** (duration: 14 hours (total), 2 (personal)) at the Gran Sasso Science Institute (GSSI) - L'Aquila, Italy.

I held a course (with exam) for doctoral students together with colleagues on: ***Introduction to Software Engineering*** (duration: 30 hours (total), 2 (personal)) at the Gran Sasso Science Institute (GSSI) - L'Aquila, Italy.

2024 I held a course (with exam) for doctoral students together with Prof. Patrizio Pelliccione on: ***Autonomous and Self-adaptive Systems*** (duration: 14 hours (total), 8 (personal)) at the Gran Sasso Science Institute (GSSI) - L'Aquila, Italy.

I held a course (with exam) for doctoral students together with colleagues on: ***Engineering of Human-centric and Smart Systems*** (duration: 14 hours (total), 2 (personal)) at the Gran Sasso Science Institute (GSSI) - L'Aquila, Italy.

I held a course (with exam) for doctoral students together with colleagues on: ***Introduction to Software Engineering*** (duration: 30 hours (total), 6 (personal)) at the Gran Sasso Science Institute (GSSI) - L'Aquila, Italy.

2023 I held a course (with exam) for doctoral students together with colleagues on: ***Introduction to Software Engineering*** (duration: 30 hours (total), 6 (personal)) at the Gran Sasso Science Institute (GSSI) - L'Aquila, Italy.

I held a course (with exam) for doctoral students together with Dr. Ludovico Iovino, Prof. Patrizio Pelliccione, and Prof. Paola Inverardi on: ***Engineering and quality management of human-centric and smart systems*** (duration: 14 hours (total), 4 (personal)) at the Gran Sasso Science Institute (GSSI) - L'Aquila, Italy.

I held a course (with exam) for doctoral students together with Prof. Patrizio Pelliccione on: ***Autonomous and Self-adaptive Systems*** (duration: 14 hours (total), 8 (personal)) at the Gran Sasso Science Institute (GSSI) - L'Aquila, Italy.

I held an invited lecture for master students of the course: ***Software Architectures*** (duration: 2 hours) at the University of L'Aquila, Italy.

I held an invited lecture for master students of the course: ***Architecting Intelligent Systems*** (duration: 2 hours) at the University of L'Aquila, Italy.

2022 I held a course (with exam) for doctoral students together with Dr. Ludovico Iovino and Prof. Patrizio Pelliccione on: ***Introduction to Software Engineering*** (duration: 30 hours (total), 10 (personal)) at the Gran Sasso Science Institute (GSSI) - L'Aquila, Italy.

I held a course (with exam) for doctoral students together with Prof. Patrizio Pelliccione on: ***Autonomous and Self-adaptive Systems*** (duration: 14 hours (total), 8 (personal)) at the Gran Sasso Science Institute (GSSI) - L'Aquila, Italy.

I held a course (with exam) for doctoral students together with Dr. Ludovico Iovino and Prof. Patrizio Pelliccione on: ***Software Quality*** (duration: 14 hours (total), 4 (personal)) at the Gran Sasso Science Institute (GSSI) - L'Aquila, Italy.

2021 I held a course (with exam) for doctoral students together with Dr. Ludovico Iovino and Prof. Patrizio Pelliccione on: ***Introduction to Software Engineering.*** (duration: 30 hours (total), 10 (personal)) at the Gran Sasso Science Institute (GSSI) - L'Aquila, Italy.

I held a course for doctoral students on: ***Introduction to Self-Adaptive Systems.*** (duration: 8 hours) at the Gran Sasso Science Institute (GSSI) - L'Aquila, Italy.

2020 I held a course (with exam) for doctoral students together with Dr. Ludovico Iovino on: ***Software, Systems and Services.*** (duration: 30 hours (total), 15 (personal)) at the Gran Sasso Science Institute (GSSI) - L'Aquila, Italy.

I held a course for doctoral students on: ***Multi-agents systems modeling and simulation.*** (duration: 6 hours) at the Gran Sasso Science Institute (GSSI) - L'Aquila, Italy.

2019 I held a seminar for doctoral students entitled: ***Smart Cities: a high-level overview.*** (duration: 2 hours) as part of the course *Software Systems and Services* at the Gran Sasso Science Institute (GSSI) - L'Aquila, Italy.

2018 I held a tutorial entitled: ***A Design for adaptation framework for self-adaptive systems.*** (duration: 3 hours) at the 12th IEEE International Conference on Self-Adaptive and Self-Organizing Systems - SASO 2018 - Trento, Italy.

PhD Supervision and Tutoring

from 2026 **Supervision** of the PhD student Hareem Kibriya. Thesis project: *"Advanced Software Solutions for Smart and Digital Factories"* - PhD Program in Computer Science: XLI cycle.

from 2025 **Supervision** of the PhD student Hina Shahid. Thesis project: *"Adaptive Early Warning Systems in the Context of Climate Change"* - PhD Program in Computer Science: XL cycle.

Co-supervision of the PhD student Sofiia Prokofievaa. Thesis project: *"AI-based solution to increase autonomy and robustness in robotics for on-orbit servicing"* - PhD Program in Computer Science: XL cycle.

Co-supervision of the PhD student Irene Mastrodicasa. Thesis project: *"Ethics in robotics: embedding moral values into the design of autonomous systems"* - PhD Program in Computer Science: XL cycle.

from 2022 **Co-supervision** of the PhD student Rickson Simioni Pereira. Thesis project: *"Engineering Domain-Specific Recommender Systems with Model-Driven Techniques: From Conceptual Models to Deployable Pipelines"* - PhD Program in Computer Science: XXXVII cycle

2019 - 2022 **Assisted supervision** of the PhD student Maria Teresa Rossi. Thesis project: *"Supporting Smart Cities Quality Evaluation Exploiting Model-Driven Engineering"* - PhD Program in Computer Science: XXXIV cycle.

Prizes and Awards

2026 **Distinguished Paper Award** from the paper titled "*Lessons Learned from Training the Next Generation of Space Software Engineers*" from the 48th IEEE/ACM International Conference on Software Engineering - Software Engineering Education and Training track (SEET@ICSE 2026). Online at `https://conf.researchr.org/track/icse-2026/icse-2026-software-engineering-education-and-training--seet-?#event-overview`

2022 **Best Reviewer Award** from the International Journal of Software and Systems Modeling (SoSyM) for the year 2021. Online at `https://www.sosym.org/reviewer_awards/`

Certificate of Appreciation from the 31st International Joint Conference On Artificial Iintelligence - (IJCAI-ECAI 2022) in recognition of the contribution as a member of the Programme Committee.

2021 **Journal First Award** for the journal paper: Martina De Sanctis, Ludovico Iovino, Maria Teresa Rossi, Manuel Wimmer: **MIKADO – A Smart City KPIs Assessment Modeling Framework.** In International Journal on Software and Systems Modeling (SoSyM) 2021 - Springer. Online at `https://www.sosym.org/journal_first/`

Reviewer Recognition Award from the International Journal on Software and Systems Modeling (SoSyM) for the year 2021. Online at `https://www.sosym.org/reviewer_awards/`.

2016 **Best Demo Award** for the demo: **DeMOCAS: Domain Objects for Service-based Collective Adaptive Systems.** In 14th International Conference on Service-Oriented Computing, (ICSOC 2016)

Academic Activities

Coordination of or Participation in the Organisation of International Conferences

2026 **Proceedings co-chair** of the 23rd International Conference on Software Architecture - (ICSA 2026), June 22-26, Amsterdam, Netherlands.
Web site: `https://conf.researchr.org/committee/icsa-2026/icsa-2026-organizing-committee`

2025 **Tutorial track co-chair** of the 19th European Conference on Software Architecture - (ECSA 2025), September 15-19, Limassol, Cyprus.
Web site: `https://conf.researchr.org/track/ecsa-2025/ecsa-2025-workshops-tutorials`

2024 **Artifact Evaluation track co-chair** of the 5th International Conference on Autonomic Computing and Self-Organizing Systems - (ACSOS 2024), September 16-20 Aarhus, Denmark.
Web site: `https://conf.researchr.org/home/acsos-2024`

Poster track co-chair of the 21st IEEE International Conference on Software Architecture (ICSA 2024), Hyderabad, India - June 4-8, 2024.
Web site: `https://conf.researchr.org/committee/icsa-2024/icsa-2024-organizing-committee`

2023 **Steering committee member** of the International Workshop on Context-aware, Autonomous and Smart Architectures (CASA).

Workshop co-chair of the 3rd International Workshop on MDE for Smart IoT Systems (MeSS 2023), co-located with STAF'23 - Leicester, United Kingdom - July 18-21, 2023.
Web site: `https://conf.researchr.org/home/staf-2023/mess-2023#About`

Publication co-chair of the 34th IEEE International Symposium on Software Reliability Engineering (ISSRE2023), Florence, Italy - October 9-12, 2023.
Web site: `https://issre.github.io/2023/index.html`

2022 **Proceedings co-chair** of the 16th European Conference on Software Architecture (ECSA2022), Prague, Czech Republic - September 19-23, 2022.
Web site: `https://conf.researchr.org/home/ecsa-2022`

Workshop co-chair of the 5th International Workshop on Context-aware, Autonomous and Smart architectures (CASA2022), co-located with ECSA'22 - Prague, Czech Republic.
Web site: `https://casaecsa.github.io/casa2022/`

Workshop co-chair of the 14th International Workshop on Software Engineering for Resilient Systems (SERENE2022), co-located with EDCC'22 - Zaragoza, Spain.
Web site: `https://serene.disim.univaq.it/2022/`

2020 **Publications co-chair** of the 10th International Conference on the Internet of Things (IoT 2020), Malmö University, Sweden - October 6-9, 2020.
Web site: `https://iot-conference.org/iot2020/`

2018 **Workshop co-chair** of the 3nd International Workshop on Engineering Collective Adaptive Systems (eCAS 2018) at SASO 2018.
Web site: `https://apice.unibo.it/xwiki/bin/view/ECAS2018/`

Program Committee Membership

2027
- *Software Engineering in Society (SEIS) track at the IEEE/ACM 49th International Conference on Software Engineering (ICSE) 2027* - **SEIS@ICSE 2027**
- *Tutorials and Technical Briefings at the IEEE/ACM 49th International Conference on Software Engineering* - **ICSE 2027**

2026
- *New Ideas and Emerging Results (NIER) track at the 41st IEEE/ACM International Conference on Automated Software Engineering* - **NIER@ASE 2026**
- *23rd International Conference on Software Architecture* - **ICSA 2026**
- *New and Emerging Ideas (NEMI) track at the 23rd International Conference on Software Architecture* - **NEMI@ICSA 2026**
- *25th International Conference on Autonomous Agents and Multiagent Systems* - **AAMAS 2026**
- *Software Engineering in Society (SEIS) track at the IEEE/ACM 48th International Conference on Software Engineering (ICSE) 2026* - **SEIS@ICSE 2026**
- *35th International Joint Conference on Artificial Intelligence* - **IJCAI 2026**
- *20th European Conference on Software Architecture* - **ECSA 2026**

2025
- *19th European Conference on Software Architecture* - **ECSA 2025**
- *24th International Conference on Autonomous Agents and Multiagent Systems* - **AAMAS 2025**
- *Software Engineering in Society (SEIS) track at the IEEE/ACM 47th International Conference on Software Engineering (ICSE) 2025* - **SEIS@ICSE 2025**
- *34th International Joint Conference on Artificial Intelligence* - **IJCAI 2025**

2024
- *33rd International Joint Conference on Artificial Intelligence* - **IJCAI 2024**
- *IEEE International Conference on Web Services* - **ICWS 2024**
- *22nd International Conference on Service-oriented Computing* - **ICSOC 2024**
- *35th IEEE International Symposium on Software Reliability Engineering* - **ISSRE 2024**
- *18th European Conference on Software Architecture* - **ECSA 2024**
- *23rd International Conference on Autonomous Agents and Multi-Agent Systems* - **AAMAS 2024**
- *11th International Conference on Internet of Things: Systems, Management and Security* - **IOTSMS 2024**
- *17th International Conference on the Quality of Information and Communications Technology* - **QUATIC 2024**
- *3rd International Workshop on Foundations and Practice of Visual Modeling* - **FPVM@MoDELS2024**
- *6th International Workshop on Automated and verifiable Software System Development* - **ASYDE@ASE2024**

2023
- *32th International Joint Conference on Artificial Intelligence* - **IJCAI 2023**
- *18th Symposium on Software Engineering for Adaptive and Self-Managing Systems - Artifact Track* - **SEAMS 2023**
- *IEEE International Conference on Web Services* - **ICWS 2023**
- *21st International Conference on Service-oriented Computing* - **ICSOC 2023**
- *17th European Conference on Software Architecture - Workshops and Tutorial Track* - **ECSA 2023**
- *The 11th technical track on Software Architecture: Theory, Technology, and Applications* - **SA-TTA 2023** co-located with the 38th ACM/SIGAPP Symposium On Applied Computing (SAC 2023)
- *Third International Workshop on Model-driven Engineering for Software Architecture* - **MDE4SA 2023**, co-located ECSA 2023
- *International Workshop on Context-aware, Autonomous, and Smart Architectures* - **CASA 2023**, co-located ECSA 2023
- *16th International Workshop on Models@run.time* - **Models@run.time 2023**, co-located ACSOS 2023
- *5th International Workshop on Automated and verifiable Software sYstem DEvelopment* - **ASYDE 2023**, part of eapls - European Association for Programming Languages and Systems
- *3rd International Workshop on Foundations and Practice of Visual Modeling* - **FPVM 2023**, co-located with STAF 2023

2022
- I have been appointed as a **member of the novel Program Committee Board (PCB)** of ***IJCAI*** - *International Joint Conference on Artificial Intelligence* for the next three years - IJCAI 2022, IJCAI 2023, IJCAI 2024.
- *20th International Conference on Service-oriented Computing* - **ICSOC 2022**
- *International Workshop on MDE for Smart IoT Systems* - **MeSS 2022**, co-located with STAF 2022
- *The international Health Data Workshop* - **HEDA 2022**, co-located with the 43rd International Conference on Application and Theory of Petri Nets and Concurrency

2021
- *30th International Joint Conference on Artificial Intelligence* - **IJCAI 2021**
- *19th International Conference on Service-oriented Computing* - **ICSOC 2021**
- *15th European Conference on Software Architecture - Demo Track* - **ECSA 2021**
- *The 15th International Workshop on **Models@Runtime 2021***, co-located with MODELS 2021
- *Second International Workshop on Model-driven Engineering for Software Architecture* - **MDE4SA 2021**, co-located ECSA 2021
- *International Workshop on MDE for Smart IoT Systems* - **MeSS 2021**, co-located with STAF 2021

2020
- *Thirty-Fifth AAAI Conference on Artificial Intelligence* - **AAAI 2021**
- *18th International Conference on Service Oriented Computing - Demo Track* - **ICSOC 2020**
- *First International Workshop on Model-driven Engineering for Software Architecture* - **MDE4SA 2020** at ECSA 2020
- *First international workshop on frontiers in software engineering education* - **FISEE 2019**
- *15th International Conference on Software Technologies* - **ICSOFT 2020**
- *First International Workshop on Modeling Smart Cities* - **MoSC 2020** at STAF 2020

2019
- *14th International Conference on Software Technologies* - **ICSOFT 2019**
- *Second international workshop on software engineering aspects of continuous development and new paradigms of software production and deployment* - **DevOps 2019**
- *1st Workshop on Evaluation and Measurements in Self-Aware Computing Systems* - **EMSAC 2019** at SASO 2019
- *4th International Workshop on Engineering Collective Adaptive Systems* - **eCAS 2019** at SASO 2019.

2018
- *3rd International Workshop on Microservices: Science and Engineering* - **MSE 2018**
- *The 16th International Conference on Service-Oriented Computing* - **ICSOC 2018** - Demo Track

Journal Reviewing Activities

2025
- **Peer-reviewer** for the ASE Journal.
- **Peer-reviewer** for the Journal of Systems and Software (JSS) - Elsevier.

2024
- **Peer-reviewer** for the ACM Journal on Responsible Computing.
- **Peer-reviewer** for the Journal Information and Software Technology (IST) - Elsevier.

2023
- **Peer-reviewer** for the IET Software.
- **Peer-reviewer** for the Journal Computing - Springer.
- **Peer-reviewer** for the Journal of Computer Languages (COLA).

2022
- **Peer-reviewer** for the IEEE Transactions on Software Engineering (TSE).
- **Peer-reviewer** for the Journal Computing - Springer.
- **Peer-reviewer** for the International Journal of Evaluation and Program Planning (EPP).
- **Peer-reviewer** for the Journal of Object Technology (JOT).

2021
- **Peer-reviewer** for the IEEE Transactions on Software Engineering (TSE).
- **Peer-reviewer** for the IEEE Intelligent Transportation Systems Transactions (T-ITS).
- **Peer-reviewer** for the International Journal of Systems and Software (JSS), Elsevier.
- **Peer-reviewer** for the International Journal on Software and Systems Modeling (SoSyM).
- **Peer-reviewer** for the IEEE Technology and Society Magazine (IEEE-TSM).

2020
- **Peer-reviewer** for the IEEE Intelligent Transportation Systems Transactions (T-ITS).
- **Peer-reviewer** for the International Journal of Systems and Software (JSS), Elsevier.
- **External Reviewer** of IJCAI 2020, 29th International Joint Conference on Artificial Intelligence, Yokohama, Japan.
- **External Reviewer** of ATMOS 2020, the Symposium on Algorithmic Approaches for Transportation Modelling, Optimization, and Systems, Pisa, Italy.
- **External Reviewer** of ACSOS 2020, the 1st IEEE International Conference on Autonomic Computing and Self-Organizing Systems, Washington DC, USA.

2019
- **Peer-reviewer** for the book "Microservices - Science and Engineering". Edited by Bucchiarone, A., Dragoni, N., Dustdar, S., Lago, P., Mazzara, M., Rivera, V., Sadovykh, A., Springer.
- **Peer-reviewer** for the International Journal of Systems and Software, Elsevier.
- **External Reviewer** of ICSA 2019, IEEE International Conference On Software Architecture, Hamburg, Germany.
- **External Reviewer** of ICSOC 2019, the 17th International Conference on Service-Oriented Computing, Toulouse, France.
- **External Reviewer** of SASO 2019, the 13th IEEE International Conference on Self-Adaptive and Self-Organizing Systems, Umea, Sweden.
- **External Reviewer** of TOOLS50+1 2019, Technology of Object-Oriented Languages and Systems, Innopolis, Russia.

2018
- **Peer-reviewer** for the International Journal of Simulation and Process Modelling.
- **Peer-reviewer** for the International Journal of Systems and Software, Elsevier.
- **Peer-reviewer** for the ACM Transactions on Autonomous and Adaptive Systems.
- **External Reviewer** of the First international workshop on software engineering aspects of continuous development and new paradigms of software production and deployment - DevOps 2018.
- **External Reviewer** of ICSOC 2018, the 16th International Conference on Service-Oriented Computing, Hangzhou, Zhejiang, China.
- **External Reviewer** of SOCA 2018, the 11th International Conference on Service-Oriented Computing and Applications, Paris, France.

2017
- **External Reviewer** of SASO 2017, the 11th IEEE International Conference on Self-Adaptive and Self-Organizing Systems, Tucson, AZ, USA.
- **External Reviewer** of SEAMS 2017, the 12th International Symposium on Software Engineering for Adaptive and Self-Managing Systems, Buenos Aires, Argentina.
- **External Reviewer** of SAC 2017, the 32nd ACM SIGAPP Symposium On Applied Computing, Marrakech, Morocco.
- **External Reviewer** of eCAS 2017, the 2nd eCAS Workshop on Engineering Collective Adaptive Systems, Tucson, AZ, USA.
- **External Reviewer** of IoT-ASAP 2017, the International Workshop on Engineering IoT Systems: Architectures, Services, Applications, and Platforms, Gothenburg, Sweden.
- **External Reviewer** of PRIMA 2017, the 20th International Conference on Principles and Practice of Multi-Agent Systems, Nice, France.

2016
- **Peer-reviewer** for the journal IET Software.
- **External Reviewer** of ICSOC 2016, the 14th International Conference on Service-Oriented Computing, Banff, Canada.
- **External Reviewer** of FSE 2016, the ACM SIGSOFT International Symposium on the Foundations of Software Engineering, Seattle, WA, USA.
- **External Reviewer** of ICWS 2016, the 23rd IEEE International Conference on Web Services, San Francisco, CA, USA.
- **External Reviewer** of SASO 2016, the 10th IEEE International Conference on Self-Adaptive and Self-Organizing Systems, Augsburg, Germany.

2015
- **Peer-reviewer** for the journal IEEE Transactions on Services Computing.
- **External Reviewer** of ICSOC 2015, the 13th International Conference on Service-Oriented Computing, Goa, India.

2014
- **External Reviewer** of ICSOC 2014, the 12th International Conference on Service-Oriented Computing, Paris, France.

Grant Applications Evaluation

2023 **External peer-Reviewer** of Discovery Grant projects proposal for the Natural Sciences and Engineering Research Council of Canada (NSERC).

2022 **External peer-Reviewer** of Discovery Grant projects proposal for the Natural Sciences and Engineering Research Council of Canada (NSERC).

Research Projects

July 2025 - July 2026 **Organizing Committee Member** of the project **SPACERAISE 2nd edition** (`https://spaceraise.academy/`)- *Sinergie per orientare e promuovere un'Alta Formazione Innovativa, Interdisciplinare, Internazionale*

Project's Partners Gran Sasso Tech (GST)

July 2024 - July 2025 **Project Coordinator** of the project **SPACERAISE** (`https://spaceraise.academy/`)- *Bando a cascata Rome Technopole Innovation Ecosystem - Spoke 3 – University education, industrial PhD courses, internationalization (177.000,00 Euro)*

Project Summary The SPACERAISE project consists in the development and management of an intensive training program with high technological and scientific content, aimed at young talents who wish to understand the major challenges in the field of space software engineering and acquire new skills in Artificial Intelligence, Robotics, and Digital Twins for aerospace applications. The program, will exploit a multidisciplinary approach based on the intersection of basic research conducted by the Computer Science area of GSSI, complemented by internationally renowned faculty, and industrial applications, to promote advanced and specialized training capable of addressing emerging needs in the aerospace and technology sectors. The program involves the design and development of an intensive doctoral school, structured into three distinct specialization tracks, covering the most significant challenges in software engineering within the space domain, namely Artificial Intelligence for Aerospace, Robotics for Space Applications, and Digital Twins for Space Manufacturing and/or for Satellites.

Project's Partners Gran Sasso Tech (GST)

November 2022 - April 2025

I have been appointed **Work Package leader** (WP6) and **Task leader** in the project **RASTA** - Realtà Aumentata e Story-Telling Automatizzato per la valorizzazione di Beni Culturali ed Itinerari (Augmented Reality and Automated Story-Telling for the Enhancement of Cultural Heritage and Itineraries) - *(progetto di ricerca industriale e sviluppo sperimentale - PNR PON R&I 2014-2020)*

WP Summary

The WP6 is titled **"Itinerari turistici Parco Nazionale d'Abruzzo, Lazio e Molise"** and, in collaboration with other project partners in the context of other WPs, it aims at defining a framework for the valorisation of the Park's territory, the presentation and recommendation of touristic routes, and data consultation with semantic correlation and interoperability between sources. The composition of tourist routes will be prepared considering user profiling, and also points of interest, routes classification based on different completion difficulties, geolocation. The calculation engine on which the recommendation system is based will be extended with algorithmic techniques that will consider variables and data from sensors installed in areas of the park. The analysis of tourist flows is one of the objectives that are a consequence of the use of provided tools such as the technological tools for the composition of customised tourist routes. With the aim of obtaining information from tourist transit in order to further provide customised recommendations of tourist itineraries within the Park, the project proposes the identification of tourist flows through three tools: $i)$ tracking through the use of route planning tools, $ii)$ automatic identification through presence sensors, $iii)$ user identification through NFC, RFID or QRcode.

Project's Partners

Consorzio Interuniversitario Nazionale per l'Informatica (CINI) - Gran Sasso Science Institute - SA DOCUMENTS SRL - T.S.C. GLOBAL CONSULTING SRL - Università degli Studi del MOLISE - Università degli Studi di MILANO-BICOCCA - Università degli Studi di PERUGIA - Università degli Studi della Campania "Luigi Vanvitelli" - Università del SALENTO

June 2020 - May 2023

Participant in the project **Cultural Heritage** - *(Programma Operativo Nazionale Ricerca e Innovazione (PON) 2014-2020 Project - Attraction and International Mobility (AIM) (Azione I.2, AIM - Linea 1))*

Project Summary

The project aims to structure a digital ecosystem for cultural heritage by supporting the digital transition of cultural heritage through the design and implementation of a software platform accessible online as a means to enable citizens to interact with cultural heritage more closely and in different ways. The realization of a smart environment in which portable device applications and multisensory instrumentation will form the basis of a technical approach that will exploit cutting-edge technologies to support the generation of a dynamic ecosystem. The project aims to: (i) Overall improve the availability of high-quality data on open platforms and social media and increase access to rich and diverse content for transmission in space and time, lowering cultural barriers and increasing public participation. (ii) Provide learning experiences and social entertainment that will contribute to a better understanding and reinterpretation of cultural heritage.

Web site

`https://bit.ly/2X5SRCe`

January 2018 - October 2018

Participant in the project **Smart-Construction** - *(EIT Digital activity #18014)*

Project Summary — Smart-Construction is an innovation activity supported by EIT Digital in the field of digital industry providing holistic solutions to automatically monitor workflows and tasks on construction sites. Within the framework of this project, we have developed a product for the automated synchronisation of digital drawings and documentation with the actual progress of the construction site. It integrates portable computing and IoT technologies developed for deployment on construction sites.

Project's Partners — Ferrovial Agroman (https://www.ferrovial.com/enus/business/construction/), Ci3 (http://www.ci3.es/en/), DFKI Kaiserslautern

Web site — `https://bit.ly/2PAMwuk`

July 2013 - January 2016 — Participant in the project **ALLOW Ensembles** - *(ICT-2011.9.10 - FET Proactive: Fundamentals of Collective Adaptive Systems (FOCAS))*

Project Summary — The objective of ALLOW Ensembles is to develop a new design principle for large-scale collective systems (CAS) based on the concepts of cells and ensembles. Cells are basic building blocks representing the different components of the system and ensembles are collections of cells collaborating together to accomplish certain goal in a given context. We use Adaptive Pervasive Flows – a programming paradigm based on workflow technology for pervasive systems – to model the behavior of cells as a set of interrelated tasks. This enables the salient principle of cell specialization. It allows for changing the behavior of the individual cell (tasks and order of execution) to fit into an ensemble and to achieve a given goal with high utility in collaboration with other cells of the ensemble. The ALLOW Ensembles concepts will be investigated on the basis of two scenarios that become increasingly relevant on the European scale: integrated urban mobility and smart production chains.

Project's Partners — Imperial College (London), DFKI - German Research Center for Artificial Intelligence, University of Crete (Grece)

Web site — `https://cordis.europa.eu/project/rcn/106345/factsheet/it`

Research and Training Periods Spent Abroad

February 2025 — **Visiting** the groups of Self-adaptive Software-intensive Systems (SASIS), and Institute of Information Security and Dependability (KASTEL) at the Karlsruhe Institute of Technology (KIT) (Germany).

April - May 2023 — **Visiting** the Department of Computer Science and Media Technology - Faculty of Technology and Society of the Malmö University (Sweden).

During my visiting, we set the basis for the realization of a User-System Mixed-initiative Paradigm in Internet of Things environments (See Publications). Moreover, I held an invited seminar titled: *Smart and self-adaptive systems: an adaptation approach and an evaluation framework.*

September 2017 — **Visiting** period at the Department of Computer Science and Media Technology - Faculty of Technology and Society of the Malmö University (Sweden).

During my visiting, we set the environment for applying the design for adaptation approach of service-based systems in an Internet of Things environment. This way, we demonstrated the domain independent nature of the approach and further defined a software architecture for the dynamic formation and enactment of Emergent Configurations in the IoT (See Publications).
Moreover, I held an invited seminar titled: *A Design for Adaptation Approach of Distributed Service-Based Systems*, available online at: `https://mau.instructure.com/courses/3945/pages/previous-seminars`

Contributed Presentations at Scientific Conferences

April 2026 — 48th IEEE/ACM International Conference on Software Engineering - Software Engineering Education and Training track (SEET@ICSE2026) - Title: *Lessons Learned from Training the Next Generation of Space Software Engineers.* - Rio de Janeiro, Brazil.

June 2025 — 37th International Conference on Advanced Information Systems Engineering - CAiSE 2025 - Title: *Engineering Early Warning Systems: an Industrial Experience.* - Vienna, Austria.

October 2024 — 12th International Symposium on Leveraging Applications of Formal Methods, Verification and Validation - ISoLA 2024 - Title: *Engineering Ethical-Aware Collective Adaptive Systems.* - Crete, Greece.

September 2024 — 17th International Conference on the Quality of Information and Communications Technology - QUATIC 2024 - Title: *Do Modern Systems Require New Quality Dimensions?* - Pisa, Italy.

July 2024 — ACM International Conference on the Foundations of Software Engineering - FSE 2024 - Title: *Evaluation Framework for Autonomous Systems: The Case of Programmable Electronic Medical Systems.* - Journal First track - Porto de Galinhas, Brasil.

September 2022 — 3rd IEEE International Conference on Autonomic Computing and Self-Organizing Systems - ACSOS 2022 - Title: *Towards an Evaluation Framework for Autonomous Systems.* - (Virtual)

September 2022 — First Meeting on Robotics and Software Engineering 2022 - RSE'22 - *Ethical-aware Adjustable Autonomous Systems.* - L'Aquila, Italy.

September 2022 — 8th Italian Conference on ICT for Smart Cities And Communities - I-CiTies 2022 - Title: *A Classification and Comparison Framework for Journey Planners.* - Ascoli Piceno, Italy.

January 2022 — 19th European Conference on Software Architecture - ICSA 2022 - Title: *ROUTE: A Framework for Customizable Smart Mobility Planners.* - Honolulu, HAWAII (USA).

September 2021 — 7th Italian Conference on ICT for Smart Cities And Communities - I-CiTies 2021 - Title: *A Reference Architecture for Personalized and Self-adaptive e-Health Apps.* - Salerno, Italy (Online).

September 2019 — 13th European Conference on Software Architecture - ECSA 2019 - Title: *QoS-based Formation of Software Architectures in the Internet of Things.* - Paris, France.

September 2019 — 5th Italian Conference on ICT for Smart Cities And Communities - I-CiTies 2019 - Title: *LISCAMBIO: literacy and city-center revitalization.* - Pisa, Italy.

May 2019 — Second international workshop on software engineering aspects of continuous development and new paradigms of software production and deployment - DevOps 2019 - Title: *A DevOps Perspective for QoS-aware Adaptive Applications.* - Toulouse, France.

September 2018 — 12th IEEE International Conference on Self-Adaptive and Self-Organizing Systems - SASO 2018 - Tutorial titled: *A Design for adaptation framework for self-adaptive systems.* - Trento, Italy.

November 2017 — 15th International Conference on Service-Oriented Computing - ICSOC 2017 - Title: *ATLAS: A world-wide travel assistant exploiting service-based adaptive technologies.* - Malaga, Spain.

June 2016 — 23rd IEEE International Conference on Web Services - ICWS 2016 - Title: *Incremental composition for adaptive by-design service based systems.* - San Francisco, CA, USA.

November 2015 — 13th International Conference on Service-Oriented Computing - ICSOC 2015 - Title: *Design for adaptation of distributed service-based systems.* - Goa, India.

12th International Workshop on Engineering Service-Oriented Applications - WESOA@ICSOC 2015 - Title: *Distributed service co-evolution based on domain objects.* - Goa, India.

September 2014 — The 3rd European Conference on Service-Oriented and Cloud Computing - ESOCC 2014 - Title: *Domain objects for dynamic and incremental service composition.* - Manchester, UK.

Ph.D. Symposium of the Third European Conference on Service-Oriented and Cloud Computing (ESOCC 2014)- Title: *Domain Objects for Dynamic Service-based Applications*. Published as technical report and available at: `http://www.minet.uni-jena.de/preprints/klan_14/ESOCC_PhDSymposium_Proceedings.pdf`

Invited Talks

June 2026 — **Invited Keynote** at the 1st International Workshop on Architecting Next Generation of Ecosystems (ANGE) and the 12th International Workshop on Autonomous Systems and Software Architecture (WASA), co-located with ICSA 2026, Amsterdam, Netherlands. `https://icsaworkshop.github.io/ange-2026/`

March 2025 — **Invited Speaker** at NII Shonan Meeting (No. 190) on *Engineering Dependable Ubiquitous Systems*, Shonan, Japan.

March 2024 — **Invited Seminar** at CIMA Foundation - Title of the seminar: *Smart and Self-Adaptive Systems: an Adaptation Approach and an Evaluation Framework*, Savona, Italy.

September 2023 — **Invited Keynote** at the 4th International Workshop on Agility with Microservices Programming - AMP'23 - co-located with ECSA 2023, Istanbul, Turkey. `https://amp.fe.up.pt/2023/keynotes/`

September 2022 — **Invited Speaker** at the First Meeting on Robotics and Software Engineering 2022 - RSE'22 - Title of the talk: *Ethical-aware Adjustable Autonomous Systems.* - L'Aquila, Italy.

Third Mission, Technology Transfer, and Media Presence Activities

2025 - 2026 — **Member of the Organizing Committee** of the project SPACERAISE 2.

Web site `https://spaceraise.academy/`

2024 - 2025 **Project Coordinator** of the project SPACERAISE - Bando a cascata Rome Technopole Innovation Ecosystem.

Web site `https://spaceraise.academy/pasteditions/2025/`

2023 **Speaker** for the MUR Orientation Programme - Sustainability course, at the Liceo delle Scienze Umane (L'Aquila). Title of the speech: *"Smart Mobility: la sfida di una mobilità pulita, sostenibile, efficiente."*

2022 **Speaker** at Festival delle Scienze di Roma (XVII edizione). Title of the speech: *"Calcola il percorso migliore, ma non solo: verso la mobilità intelligente."*
Festival Web page: `https://bit.ly/3majTYP`
Event Web page: `https://bit.ly/3kmKba1`

2021 **Speaker** at Tech Share Day Digital 2021 – KTT: Open Data for Smart Cities and Public Administration. Web page: `https://bit.ly/3IQAIA3`

Summer Schools Attendance

June 2014 **Attendee**. Attended the *8th Symposium and Summer School On Service-Oriented Computing*, 2014 - University of Crete, Greece.

September 2013 **Attendee**. Attended the *EIT ICT Labs Summer School, Intelligent Services for Digital Cities*, (ISDC-2013), part of the "Digital Cities of the Future" programme of the EIT ICT Labs - University of Trento, Italy.
`https://www.eitdigital.eu/news-events/news/article/summer-school-on-intelligent-services-for-digital-cities/`

Miscellaneous

from 2022 Member of ACM Sigsoft.

September 2018 Member of the supporting staff of SASO 2018, the 12th IEEE International Conference on Self-Adaptive and Self-Organizing Systems.

September 2008 Member of the supporting staff of ASE 2008, the 23rd IEEE/ACM International Conference on Automated Software Engineering.

March 2016 Poster at the ICT Days (`http://2016.ictdays.it/en`), Trento, Italy.

Participation in National and International Research Groups

from 2023 – ongoing Participation in the activities of the **EXOSOUL** (A software exoskeleton to protect and support citizen's ethics and privacy in the digital world) multidisciplinary research group `https://exosoul.disim.univaq.it/`.

from 2018 – ongoing Participation in the activities of the **Computer Science research group of the GSSI** within different projects.

2018 – 2025 Collaboration with the **CDL-MINT, Department of Business Informatics – Software Engineering, JKU Linz** (Austria) directed by Prof. Manuel Wimmer. The collaboration is still active and has led to the publication of several scientific papers in international conferences and journals (e.g., ECSA, ICSOC, SoSyM).

2019 - 2022 Collaboration with Prof. Henry Muccini, from the **Department of Information Engineering and Computer Science and Mathematics (DISIM), University of L'Aquila** (Italy). The collaboration has led to the publication of two scientific papers at the ICSA2020 and IoT 2021 conferences.

from 2017 - ongoing Collaboration with the **Internet of Things and People (IoTaP) Research Center, Malmö University** (Department of Computer Science and Media Technology of the Faculty of Technology and Society - Malmö), (Sweden) directed by Prof. Paul Davidsson, with colleagues Prof. Romina Spalazzese, Prof. Fahed Alkhabbas, and Prof. Andreas Jacobsson. The collaboration is still active and has led to the publication of several scientific papers in international conferences (e.g., ECSA 2023, ICSA 2022, ICSOC 2018).

2019 - 2022 Collaboration with the **Software and Sustainability (S2) Research Group of the Vrije Universiteit Amsterdam** (The Netherlands) directed by Prof. Patricia Lago, with colleagues Prof. Mark Hoogendoorn, Prof. Ivano Malavolta, and Eoin Martino Grua. The collaboration led to the publication of three scientific papers, a workshop paper at CASA@ECSA2020, a book chapter in the Software Sustainability book (Springer 2021), and a journal article at IST 2022.

2013 - 2018 Participation in the research activities of the **Distributed Adaptive Systems (DAS) research group of the Fondazione Bruno Kessler (FBK)**, Trento (Italy), during my PhD as a member of the laboratory, mainly with researchers Dr. Marco Pistore, Dr. Antonio Bucchiarone, Dr. Annapaola Marconi, and Dr. Paolo Traverso. In particular, my PhD thesis was developed in the context of the European project ALLOW Ensembles - (ICT-2011.9.10 -FET Proactive: Fundamentals of Collective Adaptive Systems (FOCAS), and further extended in the context of the project Smart-Construction - (EIT Digital activity #18014).

Faculty Service Activities

from 2025 **Member** of the Doctoral Board for the PhD programs (A.Y. 2025/26 – Cycle XLI and A.Y. 2026/27 – Cycle XLII) at the Department of Computer Science, GSSI.

2025 **Member** of the Selection Committee of student applications for PhD Scholarships XLI Cycle at the Department of Computer Science, GSSI.

Member of the Examination Committee (D.R. n. 206/2025) for the award of the degree of Doctor of Philosophy (PhD) in Computer Science for PhD students Juan Antonio Pinera Garcia and Tiziano Santilli, XXXVII Cycle, at the Department of Computer Science, GSSI.

from 2020 **Participant** to the selection process of student applications for PhD Scholarships at the Department of Computer Science, GSSI, for the academic years 2020/21, 2021/22, 2022/23, 2023/24, 2024/25.

February 2024 **Member** of the evaluation commission (D.R. no. 26/2024) for the selection procedure issued by rectoral decree no. 164/2023 about an international comparative evaluation for the award of research grants for the Computer Science Area (GSSI), for the projects:
- VITALITY/ASTRA_PNRR – Innovation, digitalisation and sustainability for the diffused economy in Central Italy (CUP: D13C21000430001); and
- PRIN_2022 HALO – etHical-aware AdjustabLe autOnomous systems (CUP: D53D23008710006);

2023 - 2024 **Member** of the PhD rules committee for Computer Science at GSSI. We have been revising the rules for the Computer Science PhD program at GSSI.

Sept–Dec 2023 **Member** of the organizing group of the Computer Science Area (GSSI) 2–days retreat, which was held on December 13th–14th, 2023 at Caramanico Terme, Pescara –Italy.

December 2023 **Member** of the evaluation commission (23/05688) for the PhD Research Fellow about an international comparative evaluation for the award of research grants for the Western Norway University of Applied Sciences, for the projects "Interoperability: eliminating data silos in software systems".

November 2023 **Member** of the evaluation commission (D.R. no. 182/2023) for the selection procedure issued by rectoral decree no. 164/2023 about an international comparative evaluation for the award of research grants for the Computer Science Area (GSSI), for the projects:
- AGRI_BIOSERV_PNRR – Research Centre for Agri-Food Innovation - "Centro Europeo Agri-BioSERV" (CUP: C43C21000150001);
- PRIN_2022 RoboChor: Robot Choreography (CUP: D53D23017560001); and
- CHANGES_PNRR – Cultural Heritage Active Innovation for Sustainable Society (CUP: D53C22002560006).

June 2023 **Member** of the evaluation commission for the selection procedure issued by rectoral decree no. 94/2023 about an international comparative evaluation for the award of 1 research grants for the Computer Science Area (GSSI) for the project:
- RASTA: Augmented Reality and Automated Story-Telling for the Enhancement of Cultural Heritage and Itineraries - (progetto di ricerca industriale e sviluppo sperimentale - PNR PON R&I 2014-2020).

February 2023 **Member** of the evaluation commission (D.D. no. 47/2023) for the selection procedure announced by the D.D. No. 331/2022, for a public selection procedure, based on qualifications and interviews, for the recruitment at the GSSI of 2 temporary technologist for the project:
- VITALITY/ASTRA_PNRR (CUP D13C21000430001).

January 2023 **Member** of the evaluation commission (D.D. no. 1/2023) for the selection procedure announced by the D.D. No. 338/2022, for a public selection procedure, based on qualifications and interviews, for the recruitment at the GSSI of a temporary technologist for the project:
- AllarMeteo (CUP D13C22001430002).

Publications

Master's and PhD Theses

2018 Martina De Sanctis: **Dynamic Adaptation of Service-Based Systems: a Design for Adaptation Framework.** University of Trento. Available at: `https://martinadesanctis.bitbucket.io/publications/PhD-Thesis_MartinaDeSanctis.pdf`
PhD Thesis.

2012 Martina De Sanctis: **Performance antipatterns modeling in the Architectural Description Language Æmilia.** University of L'Aquila.
Master Thesis.

Book Chapters

2021 Eoin Martino Grua, Martina De Sanctis, Ivano Malavolta, Mark Hoogendoorn, and Patricia Lago. **Social Sustainability in the e-Health Domain via Personalized and Self-adaptive Mobile Apps.** In *Software Sustainability* 2021 - Springer: 301-328.
The order of authors reflects the extent of their contribution to the article.

Journal Articles

2026 Marco Autili, Martina De Sanctis, Paola Inverardi, Mashal Afzal Memon, Patrizio Pelliccione, Sara Pettinari. **A reference architecture for ethical-aware autonomous systems.** In *Journal of Systems and Software,* (JSS) 2026. Available at: `https://www.sciencedirect.com/science/article/pii/S0164121225004182`
The authors contributed equally to the article.

Marco Autili, Riccardo Corsi, Martina De Sanctis, Paola Inverardi, Patrizio Pelliccione. **Ethics label for digital systems to promote transparency and user awareness.** In *Journal of Systems and Software,* (JSS) 2026. Available at: `https://www.sciencedirect.com/science/article/pii/S0164121225004212`
The authors contributed equally to the article.

Costanza Alfieri, Martina De Sanctis, Donatella Donati, Paola Inverardi. **fRAme: an evaluation framework for human augmentation or replacement by autonomous intelligent systems.** In *AI & Society,* 2026. Available at: `https://link.springer.com/article/10.1007/s00146-025-02631-0`
The authors contributed equally to the article.

2025 Martina De Sanctis, Ludovico Iovino, Maria Teresa Rossi, Manuel Wimmer. **A low-code assessment platform for urban digital twins.** In *Information and Software Technology,* (IST) 2025. Available at: `https://www.sciencedirect.com/science/article/pii/S0950584925000655`
The authors contributed equally to the article.

Martina De Sanctis, Ludovico Iovino, Maria Teresa Rossi. **Ethical Risk Traceability in Smart City KPIs Assessment.** In *IET Smart Cities,* 2025. Available at: `https://ietresearch.onlinelibrary.wiley.com/doi/full/10.1049/smc2.70012`
The authors contributed equally to the article.

Marco Autili, Martina De Sanctis, Paola Inverardi, Patrizio Pelliccione. **Engineering Digital Systems for Humanity: A Research Roadmap.** In *ACM Transactions on Software Engineering and Methodology,* (TOSEM) 2025. Available at: `https://dl.acm.org/doi/10.1145/3712006`
The authors contributed equally to the article.

2024 Andrea Bombarda, Silvia Bonfanti, Martina De Sanctis, Angelo Gargantini, Patrizio Pelliccione, Elvinia Riccobene, Patrizia Scandurra. **Evaluation Framework for Autonomous Systems: The Case of Programmable Electronic Medical Systems.** In *IEEE Transaction on Software Engineering* (TSE) 2024. Available at: `https://ieeexplore.ieee.org/document/10466433`
The authors contributed equally to the article.

2023 Martina De Sanctis, Amleto Di Salle, Ludovico Iovino, and Maria Teresa Rossi. **A Technology Transfer Journey to a Model Driven Access Control System.** In *International Journal on Software Tools for Technology Transfer* (STTT) 2023 - Springer. Available at: `https://link.springer.com/article/10.1007/s10009-023-00697-z`
The authors contributed equally to the article.

2022 Eoin Martino Grua, Martina De Sanctis, Ivano Malavolta, Mark Hoogendoorn, and Patricia Lago. **An evaluation of the effectiveness of personalization and self-adaptation for e-Health apps.** In *Information and Software Technology* (IST) 2022 - Elsevier. Available at: `https://www.sciencedirect.com/science/article/pii/S0950584922000180`
The authors Grua and De Sanctis were the main contributors to the article.

Martina De Sanctis, Ludovico Iovino, Maria Teresa Rossi and Manuel Wimmer. **MIKADO – A Smart City KPIs Assessment Modeling Framework.** In *International Journal on Software and Systems Modeling* (SoSyM) 2021 - Springer. Available at: `https://link.springer.com/article/10.1007/s10270-021-00907-9`
SoSyM First Award.
The authors contributed equally to the article.

2021 Antonio Bucchiarone, Martina De Sanctis, and Nelly Bencomo. **Agent-Based Framework for Self-Organization of Collective and Autonomous Shuttle Fleets.** In *IEEE Transactions on Intelligent Transportation Systems* (T-ITS) 2020: 1-13. -
The authors Bucchiarone and De Sanctis were the main contributors to the article.

2020 Martina De Sanctis, Antonio Bucchiarone and Annapaola Marconi. **Dynamic Adaptation of Service-Based Applications: a Design for Adaptation Approach.** In *Journal of Internet Services and Applications* 11(1): 2 (2020) - Springer. doi: 10.1186/s13174-020-00123-6.
The candidate contributed the majority to the article.

2019 Martina De Sanctis, Antonio Bucchiarone and Annapaola Marconi. **ATLAS: A new way to exploit world-wide mobility services.** In *Software Impacts* - Elsevier, volume 1. doi:10.1016/j.simpa.2019.100005 Available at: `https://www.sciencedirect.com/science/article/pii/S2665963819300053`
The candidate contributed the majority to the article.

2017 Martina De Sanctis, Catia Trubiani, Vittorio Cortellessa, Antinisca Di Marco and Mirko Flamminj. **A model-driven approach to catch performance antipatterns in ADL specifications.** In *Information And Software Technology* - Elsevier, volume 83, pp. 35–54. doi: 10.1016/j.infsof.2016.11.008 Available at: `https://www.sciencedirect.com/science/article/abs/pii/S0950584916303743`
The authors De Sanctis and Trubiani were the main contributors to the article.

Magazine Articles

2020 Antonio Bucchiarone, Mirko D'Angelo, Danilo Pianini, Giacomo Cabri, Martina De Sanctis, Mirko Viroli, Roberto Casadei, Simon Dobson. **On the Social Implications of Collective Adaptive Systems.** In *IEEE Technology and Society Magazine* 39(3): 36-46 (2020).
The order of authors reflects the extent of their contribution to the article.

2019 Antonio Bucchiarone, Martina De Sanctis, Peter Hevesi, Marco Hirsch, Francisco Javier Royo Abancéns, Pablo Fernández Vivanco, Orkhan Amiraslanov, and Paul Lukowicz. **Smart Construction: Remote and Adaptable Management of Construction Sites through IoT.** In *IEEE Internet of Things Magazine*, volume 2, issue 3, pp.38–45. doi: 10.1109/IOTM.0001.1900044 Available at: `https://ieeexplore.ieee.org/abstract/document/8950968`
The order of authors reflects the extent of their contribution to the article.

Conference Papers

2026 Roberto Casadei, Martina De Sanctis, Gianluca Filippone, Sara Pettinari, Gian Luca Scoccia, Nicolas Troquard. **Operationalising Normative Rules in Autonomous Robotic Systems Through Context-Oriented Programming.** In *the 35th International Joint Conference on Artificial Intelligence*, (IJCAI) 2026.
The authors contributed equally to the article.

Martina De Sanctis, Francesco Basciani, Amleto Di Salle, Martina Feliciani, Patrizio Pelliccione, Franco Raimondi, Davide Zaminga. **Lessons Learned from Training the Next Generation of Space Software Engineers.** In *the 48th IEEE/ACM International Conference on Software Engineering - Software Engineering Education and Training track*. (SEET@ICSE) 2026 **Distinguished Paper Award.**
The author De Sanctis was the main contributor to the article.

Gianluca De Ninno, Martina De Sanctis, Paola Inverardi, Romina Spalazzese, Christos Tsigkanos. **Developers' Blind Spot: Designing Systems to Enable Stakeholders' Understanding of Ethical Qualities.** In *the IEEE/ACM 48th International Conference on Software Engineering - Software Engineering in Society*, (SEIS@ICSE) 2026.
The authors contributed equally to the article.

Martina De Sanctis, Gianluca Filippone, Paola Inverardi, Raffaela Mirandola, Sara Pettinari, Patrizia Scandurra. **A Process to Enforce Ethical Requirements of Autonomous Systems at Runtime.** In *the 21st International Conference on Software Engineering for Adaptive and Self-Managing Systems*, (SEAMS) 2026.
The authors contributed equally to the article.

Mirko D'Andrea, Hina Shahid, Vincenzo Scotti, Alessandro Burastero, Giuseppina Castelluti, Martina De Sanctis, Amleto Di Salle, Diego Perez-Palacin, Raffaela Mirandola. **Rethinking the Architecture of an Operational Wildfire Simulator System: The Case of Propagator.** In *the 23rd International Conference on Software Architecture*, (ICSA) 2026.
The order of authors reflects the extent of their contribution to the article.

Roberto Casadei, Martina De Sanctis, Gianluca Filippone, Sara Pettinari, Gian Luca Scoccia, Nicolas Troquard. **Leveraging Context-Oriented Programming to Implement Normative Rules in Autonomous Systems.** In *the 25th International Conference on Autonomous Agents and Multiagent Systems*, (AAMAS) 2026.
The authors contributed equally to the article.

Patrizia Scandurra, Martina De Sanctis, Gianluca Filippone, Paola Inverardi, Raffaela Mirandola, Sara Pettinari. **Specification and Analysis of Ethical Requirements in Autonomous Systems Using Abstract State Machines.** In *the International Conference on Rigorous State-Based Methods*, (ABZ) 2026.
The author Scandurra was the main contributor to the article.

Sadaf Hussain Janjua, Hina Shahid, Sara Pettinari, Gianluca Filippone, Martina De Sanctis, Paola Inverardi. **Human-Robot Ethical Collaboration through Adaptive Business Processes.** In *the 5th International Conference on Hybrid Human-Artificial Intelligence*, (HHAI) 2026.
The order of authors reflects the extent of their contribution to the article.

2025 Rickson Simioni Pereira, Claudio Di Sipio, Martina De Sanctis, Ludovico Iovino. **Automated Recommender System Integration in Model-Based Ecosystems.** In *The 37th International Conference on Advanced Information Systems Engineering*, (CAiSE) 2025.
The order of authors reflects the extent of their contribution to the article.

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The authors De Sanctis and Geihs were the main contributors to the article.

Languages

Italian	Mothertongue	
English	Intermediate	*Conversationally fluent*
French	Intermediate	*Conversationally fluent*
Polish	Basic	*Basic words and phrases only*

Autorizzo il trattamento dei miei dati personali ai sensi del GDPR 679/16 e del Decreto Legislativo 30 giugno 2003 n. 196 ("Codice in materia di protezione dei dati personali") ai fini di attività di ricerca e selezione del personale e contatti lavorativi.

Date
May, 25th 2026

Signature