Monica Vitali

Curriculum Vitae

Personal Information

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	H-index	Publications	Citations	Co-authors
Scopus[1]	13	55	536	115
Google Scholar[2]	17	71	888	–

[1]last access 21/09/2025 `https://bit.ly/2SLxC4H`

[2]last access 21/09/2025 `https://bit.ly/2PwXuir`

ASN Qualified as **Associate Professor** (Abilitazione Scientifica Nazionale - ASN) for the scientific classes **01/B1** (since 11/09/2019) and **09/H1** (since 16/01/2020)

Summary

I am an Associate Professor at Politecnico di Milano, Italy, since June 2024 and a Visiting Researcher at Umeå University, Sweden, since January 2020. My main interests in research are related to Information Systems and their Energy Efficiency and Quality of Service. I research new strategies to improve the efficiency of data centers, clouds, and fog computing by applying techniques derived from the Artificial Intelligence and Machine Learning fields. I am very interested in adaptation and self-adaptation to discover how a complex system can heal itself when some problems occur. More specifically I have been working on energy efficiency and sustainability of cloud and fog applications, QoS-aware deployment in edge and fog computing, Data Quality in big data environments, Ambient Assisted Living, Smart Cities, and Smart Buildings.

Academic Positions

06–2024/now **Associate Professor**, Politecnico di Milano, Milano, ITALY.
Research in the field of Information Systems with a focus on adaptive systems, assessment and management of energy efficiency in applications, data quality in Big Data, and data management in hybrid and distributed environments, in collaboration with the Information Systems group.

06–2021/05–2024 **Assistant Professor (RTD-B)**, Politecnico di Milano, Milano, ITALY.
Research in the field of Adaptive Information Systems.

03–2020/05–2021 **Assistant Professor (RTD-A)**, Politecnico di Milano, Milano, ITALY.
Research in the field of Information Systems with a focus on adaptive systems, assessment and management of energy efficiency in applications, data quality in Big Data, and data management in hybrid and distributed environments, in collaboration with the Information Systems group.

02–2020/2023 **Visiting Senior Researcher**, Umeå University (UMU), Umeå, SWEDEN.
Research in the field of distributed systems and resource allocation in cloud and fog computing.

04–2019/01–2020 **Associate Professor**, Umeå University (UMU), Umeå, SWEDEN.
Research in the field of Cloud and Edge Computing within the Distributed System Group of the Computer Science Department.

01–2014/03–2019 **Research Assistant**, Politecnico di Milano, Milano, ITALY.
Research in the field of Information Systems with a focus on adaptive systems, assessment and management of energy efficiency in applications, data quality in Big Data, and data management in hybrid and distributed environments, in collaboration with the Information Systems group.

01–2011/12–2013 **Ph.D. Candidate**, Politecnico di Milano, Milano, ITALY.
Research in the field of adaptive systems for improving efficiency of applications in data centres using machine learning techniques.

07/2009–06/2010 **Research Assistant**, Università degli Studi di Palermo, Palermo, ITALY.
Research in the field of robotics and artificial intelligence with a focus on imitation learning models.

Education

01/2011–03/2014 **Ph.D in Information Technology (XXVI cycle)**, Politecnico di Milano, Milan, Graduation date: March 07, 2014.
Thesis: "Measuring and Improving Energy Efficiency of a Data Center in a Self-Adaptive Context", advisor Prof. Barbara Pernici.

09/2012–02/2013 **Visiting Student**, Massachusetts Institute of Technology, Cambridge, USA, Supported by the Rocca Foundation scholarship.
Study about machine learning techniques for Bayesian Networks automatic learning and probabilistic operator selection.

2006–2009 **Master of Science in Computer Science for Intelligent Systems (Laurea Specialistica in Ingegneria Informatica per i Sistemi Intelligenti)**, Università degli Studi di Palermo, Palermo, First-Class Honours (110/110 e Lode).
Thesis: "Study of an Agent Model Based on the Genetic Metaphor", advisor Prof. Salvatore Gaglio.

2003–2006 **Bachelor of Science in Computer Science (Laurea in Ingegneria Informatica)**, Università degli Studi di Palermo, Palermo, First-Class Honours (110/110 e Lode).
Thesis: "Genetic Programming in Multi-Agent Systems: an Application", advisor Prof. Salvatore Gaglio.

Work Experience and Training

03–09/2008 **Software Developer**, S.I.R.I.O., Palermo, ITALY.
Implementation of a wireless sensor network for vineyard and historical monuments monitoring related to two regional projects: *Virtus Vini* and *Geomon*

03–06/2008 **Intern**, National Research Council (CNR), Palermo, ITALY.
Research in self-organizing systems; development of a Jade/Prolog interface; development of a Jade based agent society in which individuals share Prolog knowledge

03–07/2006 **Intern**, National Research Council (CNR), Palermo, ITALY.
Research in multi-agent systems and genetic programming: development of a Java/Jade application using genetic programming techniques in agent systems

Research Activities

Participation in International Research Projects

09/2022–now **TEADAL**, *Trustworthy, Energy-Aware federated DAta Lakes along the computing continuum*, Horizon Europe Project, `https://www.teadal.eu`.
Enable trusted, verifiable, and energy efficient data flows, both in a stretched data lake and across a trustworthy mediatorless federation.

07/2022–now **CS-AWARE-NEXT**, *A cybersecurity situational awareness and information sharing solution for local public administrations based on advanced big data analysis*, Horizon Europe Project, `https://www.cs-aware-next.eu`.
Improved Data Quality assessment and AI-based data correlation for utilizing threat intelligence and social media in dynamic incident and risk management.

05/2020–04/2023 **CROWD4SDG**, *Citizen Science for Monitoring Climate Impacts and Achieving Climate Resilience*, H2020 European Project, `https://crowd4sdg.eu`.
Supporting analysis for the evaluation of social indicators starting from social media and involving crowd resources through an adaptive modular pipeline.

01/2017–12/2019 **DITAS**, *Data-intensive application Improvement by moving daTA and computation in mixed cloud/fog environmentS*, H2020 European Project, `http://www.ditas-project.eu`.
ROLE: Task Leader. Design a framework to overcome the barriers that hamper the adoption of Cloud Computing and increase the adoption of Fog computing by exploiting the full potential of these two paradigms in a synergic way. Support the development and execution of data-intensive application that are crucial for organizations and companies that want to manage their data in an efficient, reliable, scalable, and secure manner.

01/2016–12/2017 **EU-BRA BigSEA**, *Europe-Brazil Collaboration of BIG Data Scientific Research through Cloud-Centric Applications*, H2020 European Project, `http://www.eubra-bigsea.eu/`.
Design and implementation of Big Data services on top of a QoS-aware cloud infrastructure. Proposal of innovative technologies, using standards and providing security and privacy, for distributed applications on multiple data models.

10/2012–09/2014 **Eco$_2$Clouds**, *Experimental Awareness of CO_2 in Federated Cloud Sourcing*, 7th Framework European Project, `http://www.eco2clouds.polimi.it/`.
Development of methods, guidelines and technology for enriching cloud computing with means to take into proper consideration ecological concerns, such as energy consumption and CO_2 footprint of applications.

10/2010–06/2012 **GAMES**, *Green Active Management of Energy in IT Service centres*, 7th Framework European Project, `http://www.green-datacenters.eu/`.
Monitoring and management of energy efficiency in a data center using adaptive techniques to improve applications efficiency while preserving the quality of service.

05/2009–09/2010 **HUMANOBS**, *Humanoids that Learn Socio-Communicative Skills by Observation*, 7th Framework European Project, `http://www.humanobs.org/`.
Development of new cognitive architectural principles to allow intelligent agents to learn skills by observing and imitating the behaviour of a human demonstrator.

Participation in National Research Projects

09/2023–now **FREEDA**, *Failure-Resilient, Energy-aware, and Explainable Deployment of microservice-based Applications over Cloud-IoT infrastructures*, PRIN2021, `https://freeda.di.unipi.it`.
ROLE: Unit Leader. Deployment plan generation for microservice-based applications in the cloud continuum with failure resiliency and energy efficiency requirements.

09/2022–now **ICSC**, *Centro Nazionale di Ricerca in High Performance Computing, Big Data e Quantum Computing*, PNRR, `https://www.supercomputing-icsc.i`.
ROLE: Participant. Sustainable management of HPC tasks.

04/2014–09/2015 **Attiv@bili**, *Assistenza digitale e innovazione Sociale in Ambienti Controllati*, Bando Smart Cities Regione Lombardia.
Analysis and evolution of adaptive processes for social and health care addressed to elderly and not self-sufficient people. Analysis and management of monitoring data in an Ambient Intelligence environment.

03/2008–09/2008 **VirtusVini**, *Vineyard Monitoring through Wireless Sensor Networks*, Regione Sicilia, `http://www.dicgim.unipa.it/networks/wsn/projects/virtusvini.html`.
Implementation and management of a wireless sensor network for monitoring environmental features in a vineyard to enhance the quality of the production and reduce risks of failures.

03/2008–09/2008 **GeoMon**, *Structural Health Monitoring of Historical Heritage Buildings*, Regione Sicilia, `http://www.dicgim.unipa.it/networks/wsn/projects/geomon.html`.
Design and implementation of an innovative technological framework for monitoring critical structures and geological sites employing a wireless sensor network.

Research Projects Revision Activities

2024 Member of the selection committee of the "SPEC Kaivalya Dixit Distinguished Dissertation Award", SPEC Research Group

2024 Member of the committee for the assessment of the call for proposals "Market organisation and the energy system in 2050", Dutch Research Council (NWO), Netherlands

2023 Expert for the scientific evaluation of an industrial research project, Provincia Autonoma di Trento, Italy

2022 - now Member of the scientific advisory board of the Centre for sustainable ICT (CESICT) - NTNU, Norway

Research collaborations

- Prof. Eric Elmroth of the **Umeå University**, Sweden: joint research in the field of energy efficiency and performance management of serverless-oriented applications. Invited visiting researcher in February 2019 and associate professor between April 2019 and January 2020
- Prof. Una-May O'Reilly and Dr. Kalyan Veeramachaneni of the **Massachusetts Institute of Technology**, Cambridge - USA: joint research in the field of machine learning techniques applied to adaptive management of energy efficiency in data centres [J12][C29]. PhD visiting candidate between September 2012 and February 2013.
- Prof. Salvatore Gaglio, Dr Massimo Cossentino, and Dr Riccardo Rizzo of the **National Research Council** (ICAR-CNR), Palermo - IT: joint research in the field of evolutionary programming for coordination of multi-agent systems [C34][C36].
- Prof. Antonio Chella and Prof. Haris Dindo of the **Università degli Studi di Palermo**, Palermo - IT: joint research in the field of learning by imitation techniques [C33].

Organized Conferences

2026 **Program Chair** of the IEEE International Conference on Cloud Engineering (IC2E 2025)

2025 **Program Chair** of the Green ICT & ICT for Green Workshop at the European Informatics Leaders Summit (ECSS 2025)

2025 **Workshops and Tutorials Chair** of the IEEE International Conference on Cloud Engineering (IC2E 2025)

2025 **Track Chair** of the IEEE International Symposium on Cluster, Cloud, and Internet Computing (CCGRID)

2025 **General Chair** of the Parallel AI and Systems for the Edge (PAISE) workshop at IPDPS 2025

2024 **Doctoral Symposium Chair** of the IEEE International Conference on Autonomic Computing and Self-Organizing Systems (ACSOS)

2023 **General chair** of the IEEE Big Data Services Conference (BDS 2023), July 2023, Athens, GREECE

2023 **Sustainability chair** of the International Conference on Advanced Information Systems Engineering (CAISE 2023), 12-16 June 2023, Zaragoza, SPAIN

2022 **Program chair** of the IEEE Big Data Services Conference (BDS 2022), 15-18 August 2022, Fremont, CA, USA

2021 **Program co-chair** of the IEEE Joint Cloud Conference (JCC 2021), 23-26 August 2021, online only

2021 **Doctoral Symposium chair** of the IEEE International Conference on Cloud Engineering (IC2E 2021), October 2021, San Francisco, CA, USA

2021 **Program co-chair** of the 2nd International Workshop on Next Generation Information Systems: Emerging Challenges in Fog and Cloud Computing (NeGIS 2021), in conjunction with CAISE'21, June 29 2021, Melbourne, Australia

2020 **Doctoral Symposium Panellist** of the International Conference of the Italian Association for Artificial Intelligence (AIxIA 2020), 27 October 2020, online only

2020 **Program co-chair** of the International Workshop on Next Generation Information Systems: Modeling, Monitoring and Management in Cloud and Fog Computing (NeGIS 2020), in conjunction with CAISE'20, June 9 2020, Grenoble, France

2020 **Session chair** of The Web Conference (WWW 2020), April 2020, Taipei, Taiwan

2019 **Publicity vice-chair** of the 16th IEEE International Conference on Autonomic Computing (ICAC 2019) and the 13th IEEE International Conference on Self-Adaptive and Self-Organizing Systems (SASO 2019), June 16-20 2019, Umeå, Sweden

2016 **Program co-chair** of the International Workshop on Energy-awareness and Big Data Management in Information Systems (EnBIS2016), in conjunction with CAISE'16, June 14 2016, Ljubljana, Slovenia

Editorial Roles

2023-now **Editorial Board Member** of the Discover Computing Journal

2023 **Guest Editor** of the Special Issue on Big Data Computing Service and Machine Learning Applications for the Future Generation Computer Systems Journal (FGCS)

2019-2020 **Guest Editor** of the Special Issue on Co-design of Data and Computation Management in Fog Computing for the Future Generation Computer Systems Journal (FGCS)

Institutional Activities

2025 **Committee Member** of the selection procedure for 1 tenure-track position for Assistant Professors, Department of Human Sciences Promotion and Quality of Life, Università San Raffaele Roma, Italy

2025 **Committee Member** of the selection procedure for 1 tenure-track position for Assistant Professors, Department of Human Sciences Promotion and Quality of Life, Università San Raffaele Roma, Italy

2025 **External Examiner** of the PhD Defence Committee for the PhD Program in Information Engineering and Computer Science – XXXVII cycle, University of L'Aquila, Italy

2025 **External Examiner** of the PhD Defence Committee for Ines Filipa Fernandes Ramos, Department of Informatics, University of Milan, Italy

2024 **External Examiner** of the PhD Defence Committee for Chih-Kai Huang, University of Rennes, France

2022 **External Examiner** of the PhD Defence Committee for Tommi Berner, Department of Automatic Control, Lund University, Sweden

Speaker at International Conferences and Conventions

2024 Invited Speaker at the WUD SIGCHI-ITALY Event with the talk "Designing for Sustainability: How Energy-Efficient Web Application Design Impacts User Experience", November 14 2024, Milan, Italy

2024 Speaker and Panellist at the Green ICT & ICT for Green Workshop at the European Informatics Leaders Summit (ECSS)

2023 Participation to the International Conference on Cloud Engineering (IC2E'23), and **presentation** of the paper "Enriching Cloud-native Applications with Sustainability Features " [C10], September 25-28 2023, Boston, USA

- Participation to the International Conference on Advanced Information Systems Engineering (CAISE'23), and **presentation** of the paper "A Data-Centric Approach for Reducing Carbon Emissions in Deep Learning" [C9], June 12-16 2023, Zaragoza, Spain

2022 **Invited Speaker** at the School of Computing Science of Glasgow University (UK) for the Low Carbon and Sustainable Computing Seminar Series, with the talk "Making IT Green: Awareness-Driven Service Design and Management", 13 October 2022, online

- **Invited Lecturer** at the ide3a project Online lecture series "Critical Infrastructure and Digitalisation" (ide3a 2022), with the talk "From Cloud to IoT: Quality-aware Data Management with Energy Efficiency in Mind", 12 July 2022, online
- Participation to the International Conference on Advanced Information Systems Engineering (CAISE'22), and **presentation** of the paper "Towards Greener Applications: Enabling Sustainable-aware Cloud Native Applications Design" [C11], June 06-10 2022, Leuven, Belgium

2021 **Invited Speaker** at the International Workshop on Testing Distributed Internet of Things Systems (TDIS 2021), co-located with the IEEE International Conference on Cloud Engineering with the talk "Exploiting the Fog for Better Application Management: Potentials and Challenges in (Self-)Adaptive Systems", 04 October 2021, online only

- Participation to the International Conference on Concept Modeling (ER), and **presentation** of the paper "Modeling Adaptive Data Analysis Pipelines for Crowd-Enhanced Processes" [C12], October 18-21 2021, online only

2019 Participation to the International Conference on Service-Oriented Computing (ICSOC), and **presentation** of the paper "An Adaptive Monitoring Service Exploiting Data Correlations in Fog Computing" [C13], October 28-31 2019, Toulouse, France

2018 Participation to the International Conference on Services Computing (SCC), and **presentation** of the paper "Virtual Machine Profiling for Analyzing Resource Usage of Applications" [C15], June 25-30 2018, Seattle, USA

- **Discussion Session Leader** in the 13th Cloud Control Workshop, June 13-15, 2017, Skåvsjöholm, Sweden

2017 **Discussion Session Leader** in the 11th Cloud Control Workshop, June 12-14, 2017, Haga Slott, Enköping, Sweden

2016 Participation to the 2nd IEEE International Smart Cities Conference (ISC2), and **presentation** of the paper "Interconnecting Processes through IoT in a Health-Care Scenario" [C23], September 12-15 2016, Trento, Italy

- **Invited Speaker** and Participant in the 9th Cloud Control Workshop, June 27-29, 2016, Friiberghs Herrgård, Sweden
- Participation to the 28th International Conference on Advanced Information Systems Engineering (CAISE'16), and **presentation** of the paper "Optimizing Monitorability of Multi-cloud Applications" [C21], June 15-17 2016, Ljubljana, Slovenia

2015 Participation to the On The Move federated Conferences and Workshop (OTM'15), and **presentation** of the paper "PiE - Processes in Events: Interconnections in Ambient Assisted Living" [C25] in the EI2N workshop, October 26-30 2015, Rhodes, Greece

- Participation to the 23rd Italian Symposium on Advanced Database Systems (SEBD) and **presentation** of the paper "Managing Energy Efficiency and Quality of Service in Cloud Applications Using a Distributed Monitoring System" [C24], June 14-17 2015, Gaeta, Italy

2013 Participation to the international conference on Systems, Man, and Cybernetics, and **presentation** of the paper "Modeling Service Execution on Data Centers for Energy Efficiency and Quality of Service Monitoring" [C29], October 13-16 2013, Manchester, UK

2012 Attendance of the DataCentres Europe 2012 industry-oriented conference and **presentation** of a Demo related to the GAMES European project, May 23-24 2012, Nice, France

- Attendance of the 2012 VMware Academic Research Symposium and **presentation** of the poster "Resource Allocation in Virtual Machines for Energy Efficient Data Centers", September 26-27 2012, Cambridge, Massachusetts, USA

2011 Participation to the SIGMETRICS international conference and **presentation** of the paper "Usage centric green performance indicators" [C32] at the GreenMetrics Workshop, June 7-11 2011, San Jose, California

- Participation to the international conference on Intelligent Computer Communication and Processing (ICCP) and **presentation** of the paper "Business process co-design for energy-aware adaptation" [C31], August 24-26 2011, Cluj-Napoca, Romania

Program Committee Service

2024-2025 Senior PC member of the IEEE International Conference on Web Services (ICWS)

2024 PC member of the IEEE International Congress on Intelligent and Service-Oriented Systems Engineering (CISOSE)

2023 PC member of the IEEE International Conference on Web Services (ICWS)

2022-2025 PC member of the IEEE/ACM International Symposium on Cluster, Cloud and Internet Computing (CCGRID)

2021-2025	PC member of the IEEE International Conference on Cloud Engineering (IC2E)
2021	PC member of the International Symposium on Computer Architecture and High Performance Computing (SBAC-PAD)
2020	PC member of The Web Conference (WWW)
2019-2020	PC member of the International Conference on Distributed Computing Systems (ICDCS)
2018-2021	PC member of the IEEE International Conference On Big Data Service And Applications (BDS)
2019-2020	PC member of the IEEE International Conference on Advanced Information Systems Engineering (CAISE)
2019	PC member of the DaMove Workshop
2018-2025	PC member of the International Conference on Service Oriented Computing (ICSOC)
2014/2016/2018	PC member of the IEEE International Conference on Systems, Man, and Cybernetics (SMC)
2016-2018	PC member of the International Workshop on Energy-Efficient Data Centres (E2DC 2018)
2016-2019	PC member of the IEEE International Conference on Research Challenges in Information Science (RCIS)
2017	PC member of the 2017 IEEE International Conference on Smart City Innovations (IEEE SCI)
2017	PC member of the 1st IEEE International Workshop on Assured Cloud Computing and QoS aware Big Data (WACC)
2016-2023	PC member of the IEEE International Symposium on Computer and Communications (ISCC)
2016	PC member of the second IEEE International Smart Cities Conference (ISC2)

Reviewer Service for International Journals and Conferences

2025	Reviewer for the IEEE Transactions on Computers International Journal
2025	Reviewer for the Blockchain: Research and Applications International Journal
2025	Reviewer for the Patterns International Journal
2024	Reviewer for the IEEE Transactions on Service Computing Journal (IEEE TSC)
2024	Reviewer for the Journal of Systems and Software
2024	Reviewer for the Future Generation Computer Systems (FGCS) Journal
2024	Reviewer for the Heliyon Journal
2023-2024	Reviewer for the Journal of Supercomputing
2023	Reviewer for the Business & Information Systems Engineering Journal (BISE)
2023	Reviewer for the Computer Standards and Interfaces Journal (CSI)
2023	Reviewer for the ACM Trans. on Internet of Things (TIOT) Journal
2023	Reviewer for the European Conference on Information Systems (ECIS'23)

2022-2023 Reviewer for the Elsevier Journal on Big Data Research (BDR)

2022-2023 Reviewer for the International Journal of Data and Information Quality (JDIQ)

2022 Reviewer for the Computational Intelligence and Neuroscience Journal (CIN)

2021 Reviewer for the Elsevier Journal on Parallel and Distributed Computing (JPDC)

2021 Reviewer for the ACM Trans. on Autonomous and Adaptive Systems (TAAS) Journal

2021 Reviewer for the International Journal of Cooperative Information Systems (IJCIS)

2021 Reviewer for the IEEE Trans. on Dependable and Secure Computing (TDSC) Journal

2021 Reviewer for the Digital Communication and Networks (DCAN) Journal

2021 Reviewer for the ACM Transactions on Modeling and Performance Evaluation of Computing Systems (ToMPECS) Journal

2020-2021 Reviewer for the IEEE Access Journal

2019-2020 Reviewer for the Future Generation Computer Systems (FGCS) Journal

2019/2021 Reviewer for the IEEE Transactions on Services Computing (TSC) Journal

2019 Reviewer for the Journal of Environmental Management (JEMA)

2017-2021 Reviewer for the IEEE Transactions on Network and Service Management (IEEE TNSM) Journal

2019 Reviewer for the Energy Efficiency (ENEF) Journal

2018 Reviewer for the Complex Systems Informatics and Modeling Quarterly (CSIMQ) Journal

2018-2021 Reviewer for the World Review of Science, Technology and Sustainable Development (WRSTSD) Journal

2017 Reviewer for the IEEE Transactions on Network and Service Management (IEEE TNSM) Journal

2015/2017 Reviewer for the Computing (COMP) International Journal

2016 Reviewer for the IEEE International Conference on Networking, Sensing and Control (ICNSC)

2016 Reviewer for the Expert Systems with Applications International Journal

2016 Reviewer for the IEEE Transactions on Cloud Computing (TCC) Journal

2015 Reviewer for the ACM Transactions on the Web (TWEB) International Journal

2015 Reviewer for the International Journal Computing, special issue on Sustainable Computing Systems and Applications (COMP2016)

2015 Reviewer for the 23rd International Conference on Cooperative Information Systems (CoopIS2015)

Teaching Activities

Lecturer

Since AY 2023/2024 **Professor**, *30 hours - 5 CFU*, Information Systems for Computing Engineering, Politecnico di Milano.
Bachelor Level

Since AY 2020/2021 **Professor**, *30 hours - 5 CFU*, Digital Technologies, Politecnico di Milano.
Bachelor Level

From AY 2021/2022 to AY 2022/2023 **Professor**, *48 hours - 10 CFU*, Foundations of Informatics (Informatica A), Politecnico di Milano.
Bachelor Level

AY 2019/2020 **Contract Professor**, *30 hours - 5 CFU*, Digital Technologies, Politecnico di Milano.
Bachelor Level

AY 2019-2021-2023 **Contract Professor**, *14 hours*, PhD Course in Business Process Management, Politecnico di Milano.
PhD Level

AY 2019/2020 **Associate Professor**, *28 hours*, Cloud Computing, Umeå University.
Master Level

AY 2019/2020 **Associate Professor**, *28 hours*, Advanced Distributed Systems, Umeå University.
Master Level

AY 2018/2019 **Contract Professor**, *10 hours*, PhD Course in Information and Data Quality, Politecnico di Milano.
PhD Level

From AY 2017/2018 to 2018/2019 **Contract Professor**, *30 hours - 5 CFU*, Information Systems for Computing Engineering, Politecnico di Milano.
Bachelor Level

From AY 2014/2015 to 2019/2020 **Contract Professor**, *30 hours - 5 CFU*, Information Systems for Computing Engineering, Politecnico di Milano (COMO).
Bachelor Level

Teaching assistant

From AY 2013/2014 to 2018/2019 **Teaching Assistant**, *20 hours*, Information Systems (Prof. Cinzia Cappiello), Politecnico di Milano.

From AY 2011/2012 to 2016/2017 **Teaching Assistant**, *20 hours*, Information Systems for Computing Engineering (Prof. Barbara Pernici), Politecnico di Milano.

From AY 2011/2012 to 2016/2017 **Teaching Assistant**, *from 24 to 40 hours*, Foundations of Informatics (Prof. Maristella Matera), Politecnico di Milano.

AY 2015/2016 **Tutoring**, *22 hours*, Information Systems for Computing Engineering, Politecnico di Milano.

AY 2011/2012 **Tutoring**, *20 hours*, Matlab (Scuola di Ingegneria dell'Informazione), Politecnico di Milano.

Thesis Supervision

PhD Level

2020/2022 **Co-Supervisor**, *Magdalena Viktorsson*, Service and Resource Management in Serverless Computing with Automatic Configuration.
PhD Candidate in Computer Science, Umeå University, Sweden

2015/2019 **Co-Supervisor**, *Xuesong Peng*, Monitoring Data Utilization in Fog Computing Environments.
PhD Candidate in Information Technology, Politecnico di Milano

Master Level

AY 2024-2025 **Supervisor**, *Victor Medina Casas*, AI's Hidden Footprint: What It Really Takes to Power Large Language Models Like ChatGPT.
Master degree in Computer Engineering, Politecnico di Milano

AY 2023-2024 **Supervisor**, *Roberto Gandola*, Carbon-aware Deployment of Adaptive Cloud Native Applications.
Master degree in Computer Engineering, Politecnico di Milano

AY 2022-2023 **Supervisor**, *Hnia El Jadi*, Green User Experience.
Master degree in Computer Engineering, Politecnico di Milano

AY 2022-2023 **Supervisor**, *Luca Giudici*, Green AI: Balancing Sustainability in Data Preparation.
Master degree in Computer Engineering, Politecnico di Milano

AY 2022-2023 **Supervisor**, *Monica Giunta*, Green AI: Balancing Sustainability in Data Preparation.
Master degree in Computer Engineering, Politecnico di Milano

AY 2022-2023 **Supervisor**, *Mattia Sabella*, Green Federated Learning: A Data-Centric Approach in the Cloud Continuum.
Master degree in Computer Engineering, Politecnico di Milano

AY 2022-2023 **Supervisor**, *Lorenzo Amaranto*, Adaptive Monitoring for Data Reduction in Fog Computing Systems.
Master degree in Computer Engineering, Politecnico di Milano

AY 2021-2022 **Supervisor**, *Martín Félix Anselmo Iduya*, A Data-Centric Approach For Reducing Carbon Emissions in Deep Learning.
Master degree in Computer Engineering, Politecnico di Milano

AY 2021-2022 **Supervisor**, *Valentin Bootz*, An Architecture for Sustainability in Cloud-Native Applications.
Master degree in Informatics, Technical University of Munich (TUM), Germany

AY 2021-2022 **Supervisor**, *Simone dell'Oro*, An Adaptive Deployment Approach for Sustainable Microservice-Based Applications.
Master degree in Computer Engineering, Politecnico di Milano

AY 2020/2021 **Co-Supervisor**, *Mahdi Moazzen*, A framework to enable process improvement through context-aware data.
Master degree in Computer Engineering, Politecnico di Milano

AY 2019/2020 **Supervisor**, *Giulia Mangiaracina*, An Adaptive Multi-agent Based Approach to Improve DaaS in Fog Computing.
Master degree in Computer Engineering, Politecnico di Milano

AY 2018/2019 **Co-Supervisor**, *Alessandro Mandelli*, Analysis of Data Movement and Computation Movement with Spark for Fog Environments.
Master degree in Computer Engineering, Politecnico di Milano

AY 2017/2018 **Co-Supervisor**, *Alessandro Polenghi*, The First Step towards Software Testing Automatic Generation: Automatic Tests Quality Labeling.
Master degree in Computer Engineering, Politecnico di Milano

AY 2017/2018 **Co-Supervisor**, *Alessandro Terragni*, Analyzing Customer Journey with Process Mining: from Discovery to Recommendations.
Master degree in Computer Engineering, Politecnico di Milano

AY 2017/2018 **Supervisor**, *Chao Sun*, Improving DaaS with Kubernetes in Fog Computing Environments.
Master degree in Computer Engineering, Politecnico di Milano

AY 2017/2018 **Supervisor**, *Dushica Stojkoska*, Discovering relations between metrics in a real data center using Bayesian Networks.
Master degree in Computer Engineering, Politecnico di Milano

AY 2016/2017 **Co-supervisor**, *Samà Walter*, A flexible approach to data quality assessment for big data sources.
Master degree in Computer Engineering, Politecnico di Milano

AY 2016/2017 **Co-supervisor**, *Maccagni Giacomo*, A Method for Raising Quality Awareness in Big Data Analysis.
Master degree in Computer Engineering, Politecnico di Milano

Bachelor Level

AY 2018/2019 **Supervisor**, *Jia Moxin*, Data Reduction in Fog Computing.
Bachelor degree in Computer Engineering, double degree between Politecnico di Milano and Tongji University, China

AY 2015/2016 **Co-supervisor**, *Nebuloni Riccardo*, Energie Rinnovabili e Data Center.
Bachelor degree in Electrical Engineering, Politecnico di Milano

Awards and Recognitions

2023 Best Exploratory Paper Award at CAISE 2022

2018 C. M. Lerici Fellowship, a fellowship for promoting joint research between Italy and Sweden as a visiting researcher (Spring Term 2019 - 2 months) - Amount 27000 SEK, `http://cmlerici.se/borse-di-studio/`

2012 Progetto Roberto Rocca Fellowship, a fellowship for promoting joint research between MIT and Politecnico di Milano as a visiting Ph.D. Candidate (Autumn Term 2012 - 5 months) - Amount 8000 USD, `http://misti.mit.edu/progetto-roberto-rocca`

2012 Scholarship for participating to the 2nd 804 COST Training School on Energy Efficiency in Large Scale Distributed Systems held in Palma de Mallorca, 24-27 April 2012

2012–2013 PhD Scholarship awarded by the Ministry of Education, University, and Research (MIUR), Italy

2004–2005, 2007 Scholarship for merit to support university studies, awarded by the Minister of Public Instruction, Italy

Publications

Please notice that in most cases authors are listed in an alphabetic order

The symbol † indicates my role as corresponding author

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