

Pamela Zontone

Assistant professor

EDUCATION AND TRAINING

2008

PhD in Information and Industrial Engineering

Research activity, in collaboration with STMicroelectronics, focused on two approaches for achieving error-resilient video coding: multiple description coding and distributed source coding. Thesis titled "Techniques for Robust Video Transmission over Unreliable Networks" University of Udine, Italy

2004

Laurea in Electronic Engineering, 110/110 cum laude

Thesis titled "Frame-based multiple description video coding"
University of Udine, Italy

PROFESSIONAL HISTORY

2023-present

Assistant Professor (RTDa)

Working on the Robotics and AI for Socioeconomic Empowerment (RAISE) project. Study and application of AI-based approaches, within a research framework for generating self-aware agents, using drones and autonomous vehicles. Also working on the B-prepared European project. Analysis of algorithms for the automatic detection of anomalies or unexpected situations during the testing of Virtual Reality (VR) games or smartphone applications. Coordinating the activities of undergraduate and PhD students.
University of Genoa, Italy

2017-2023

External Collaborator and Research fellow

Research topics included biophysical signal processing, machine learning, and human activity recognition, as well as developing stress detection techniques in drivers using machine learning and deep learning algorithms for classification purposes. Coordinated the activities of undergraduate and PhD students. Assisted students and PhD students in their projects, including programming. Student assessment.
University of Udine, Italy

2009-2011

Postdoctoral fellow

Worked on the LivingKnowledge (LK) European project in collaboration with European partners. Attended meetings organized by the LK partners and contributed to drafting project deliverables. Image retrieval, sentiment analysis, and image forensic techniques were analyzed, including the study of machine learning algorithms, with the goal of assessing diversity and bias in multimedia content on the web. Coordinated the activities of undergraduate (Bachelor and Master) students.
University of Trento, Italy

2008-2009

Research fellow

Worked on video transmission systems over peer-to-peer networks, in collaboration with STMicroelectronics
University of Udine, Italy

2004

Collaborator

Worked on joint source-channel video coding techniques, in collaboration with STMicroelectronics
University of Udine, Italy

ACADEMIC APPOINTMENTS

2025-present

Instructor of the “Python” course (1 cfu)

Course taught, with Profs. Lucio Marcenaro and Andrea Sciarrone, during the academic year 2025-2026
University of Genoa, Italy

2024-present

Instructor of the “Introduzione ai sistemi dinamici cognitivi” course (1 cfu)

Couse delivered on the RAISE Aulaweb platform, with instruction provided through interactive videos that can be followed asynchronously and independently
University of Genoa, Italy

2024-present

One of the reference instructors for the Master’s degree program in Electronic Engineering

University of Genoa, Italy

2023-present

Instructor of the “Cognitive Telecommunication Systems” course (1 cfu)

Course taught, with prof. Carlo Regazzoni, during the academic years 2023-2024, 2024-2025, and 2025-2026
University of Genoa, Italy

2025

Instructor of the “Introduction to Cognitive Dynamic Systems” PhD course

Course taught (20 hours) during the academic year 2024-2025
University of Genoa, Italy

2025

Instructor of the “Cognitive Self-Aware Ego-Things” PhD course

Course taught (5 hours), with prof. Carlo Regazzoni, during the academic year 2024-2025
University of Genoa, Italy

2024-2025

Instructor of the “Fondamenti di programmazione per l'elaborazione di segnali e dati” course (1 cfu)

Course taught, with prof. Lucio Marcenaro, during the academic year 2024-2025
University of Genoa, Italy

2023-2025

Instructor of the “Cognitive Data Fusion” course (1 cfu)

Course taught, with prof. Carlo Regazzoni, during the academic years 2023-2024, 2024-2025
University of Genova, Italy

2024, 2025

Member of the Examination Committee for the PhD Final Exam in Joint Doctoral Programme in Interactive and Cognitive Environments (JD-ICE)

University of Genova, Italy

2024, 2025

Member of the Admission Committee for PhD programs in Joint Doctoral Programme in Interactive and Cognitive Environments (JD-ICE)

University of Genova, Italy

2023

Instructor of the “Cognitive Self-Aware Ego-Things” PhD course

Course taught (5 hours), with prof. Carlo Regazzoni, during the academic year 2022-2023
University of Genova, Italy

EXPERIENCE

MAIN SEMINARS

2025 Invited Lecture Session/Tutorial

Held a tutorial (4 hours) titled “Advancing Self-awareness in Autonomous Systems” at the “AIDA Symposium and Summer School on ‘AI/ML Cutting Edge Trends”
Aristotle University of Thessaloniki, Greece

2024 Seminar speaker

Held a seminar (4 hours) titled “Self-Aware Autonomous Systems” in the “Signal Processing for Autonomous Systems” PhD course taught by Prof. David Martín Gómez (University Carlos III of Madrid)
University of Genova, Italy

2024 Invited speaker

Oral presentation titled “Enhancing self-awareness in autonomous multi-sensor agent” at the plenary opening session of the 12th edition (2024) of the PhD Conference in Industrial and Information Engineering
University of Udine, Italy

2024 Invited speaker

Oral presentation titled “Multimedia signal processing in raise: the research activities within the PNRR project Robotics and AI for socio-economic empowerment (RAISE)” in the “Technical Session: PNRR projects and the MMSP community”, with Prof. Lucio Marcenaro GTTI Thematic Meeting on Multimedia Signal Processing (GTTI MMSP 2024)

2023 Co-presenter of a workshop

Held a workshop titled “Advanced sensors and machine learning techniques for biomedical signal processing”, with prof. Antonio Affanni, at the PhD summer school “AI-DLDA: International Summer School on Artificial Intelligence”
University of Udine, Italy

2021, 2022 Presenter of a workshop

Held a workshop titled “Biosignal Processing” during the “Signal Theory” course taught by prof. Roberto Rinaldo
University of Udine, Italy

2019 Invited speaker

Oral presentation titled “Stress Detection in Drivers” in the “Special Session: Industrial and professional applications for multimedia and multidimensional signal processing”, with Prof. Roberto Rinaldo

GTTI Thematic Meeting on Multimedia Signal Processing (GTTI MMSP 2019)

EDITORSHIP OR PARTICIPATION IN EDITORIAL BOARDS OF JOURNALS, PUBLISHING SERIES, ENCYCLOPAEDIAS AND TREATISES**2018-present****Reviewer for international journals**

IEEE Transactions on Image Processing, IEEE Transactions on Biomedical Engineering, IEEE Journal of Biomedical and Health Informatics, IEEE Transactions on Industrial Informatics, IEEE Transactions on Image Processing, MDPI Journals (Sensors, Signals, Applied Sciences)

2023-2024**Guest Editor**

MDPI Sensors Special Issue “Advanced Sensors and Sensing Technologies in Biomedical Signal Acquisition and Processing”, section “Biomedical Sensors” (publication of 8 papers)

PRIZES AND ACCOLADES FOR SCIENTIFIC ACTIVITY, INCLUDING MEMBERSHIP OF ACADEMIES**2021** Best presentation in a joint session. Award in memory of Prof. Felice Cennamo.

P. Zontone, “Skin Potential Response (SPR) Measurement for Stress Recognition in Simulated City Driving”, *5th National Forum of Measurements*, Messina, Italy, 16-18 September 2021

2008 Best Paper Award

S. Milani, P. Zontone, “Cross-Layer Optimization Strategies for Video Transmission over IEEE 802.11e Networks”, *Proceedings of the 2008 GTTI Annual Meeting*, Florence, Italy, 16-18 June 2008

OTHER EXPERIENCES

Pamela Zontone is affiliated with the Consorzio Nazionale Interuniversitario per le Telecomunicazioni (CNIT), IEEE (The Institute of Electrical and Electronics Engineers), and IEEE Signal Processing Society (SPS). She is the chair of the subcommittee “Social presence” of the IEEE Signal Processing Society (SPS) Autonomous Systems Initiative (ASI). She has served on the Technical Committee of the 9th International Conference on Frontiers of Signal Processing (ICFSP 2024), held in Paris from 12 to 14 September 2024.