

Claudio Dema

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WORK EXPERIENCE

16/10/2023 - Today

TECHNOLOGIST

CNR IMAA (Consiglio Nazionale delle Ricerche – Istituto di Metodologie per l'Analisi Ambientale)

Main Activities and Work Area

- Support to the management of the ARES node of the ACTRIS research infrastructure
- Management, analysis and processing of climatological data relating to atmospheric aerosols on a European scale
- Design and application of standards and techniques to make scientific data interoperable and reusable in compliance with the FAIR Guiding Principles (evaluation of the quality of scientific data and of the production, processing and distribution process)
- Software analysis, design and development
- Java and Python based web development technologies
- Design, creation and management of databases

Sector: Public research in the environmental sector, IT

01/07/2021 – 15/10/2023

Research fellow

CNR IMAA (Consiglio Nazionale delle Ricerche – Istituto di Metodologie per l'Analisi Ambientale)

Research activities within the ACTRIS Data Center for Aerosol Remote Sensing: database management, development of the centralized system for data processing, data curation and traceability and compliance with the FAIR Data principles

02/01/2020 – 30/06/2021

Research fellow

CNR IMAA

FAIRness management of ACTRIS-ARES data and development of pilot products related to them

16/01/2018–31/12/2019

CTER (Collaboratore Tecnico Informatico per Ente di Ricerca)

CNR IMAA

01/10/2014–31/12/2017

Software developer

G.S.I. (Gruppo Servizi Informatici) - GPI Group - Potenza (Italy) - <https://www.gpi.it/>

EDUCATION AND TRAINING

01/10/2014–28/03/2017

MASTER DEGREE IN COMPUTER ENGINEERING AND INFORMATION TECHNOLOGIES

EQF level 7

Università degli Studi della Basilicata, Vote: **110/110 cum laude**

Thesis: **Study, Development and Testing of Machine Learning Techniques for Data Cleaning**

01/10/2011–02/10/2014

BACHELOR DEGREE IN COMPUTER SCIENCES

EQF level 6

Università degli Studi della Basilicata, Vote: **110/110 cum laude**

Thesis: **Study and development of Greedy Algorithms for the generation of Ground Deformation Maps using Satellite Radar Techniques**

PARTICIPATION IN A SCIENTIFIC PROJECT

ENVRI-HUB NEXT (ENVironmental Research Infrastructures delivering an open access Hub and NEXT-level interdisciplinary research framework providing services for advancing science and society)
CAMS_21b_phase2 (ACTRIS-A pro CAMS – Provision of ACTRIS Observations - Profiles)
ITINERIS (Italian Integrated Environmental Research Infrastructures System)
SYLVA (a SYstem for real-time obserVation of Aeroallergens)
RI-URBANS (Research Infrastructures Services Reinforcing Air Quality Monitoring Capacities in European Urban & Industrial AreaS)
ATMO-ACCESS (Sustainable Access to Atmospheric Research Facilities)
ACTRIS-IMP (ACTRIS Implementation Project)
E-SHAPE (EuroGEOSS Showcases: Applications Powered by Europe)
ENVRIFAIR (ENVironmental Research Infrastructures building Fair services Accessible for society, Innovation and Research)
CAMS_21b_phase1 (ACTRIS-A pro CAMS – Provision of ACTRIS Observations - Profiles)
DUSTCLIM (Dust Storms Assessment for the development of user-oriented Climate Services in Northern Africa, Middle East and Europe)
ACTRIS-PPP (ACTRIS Preparatory Phase Project)
ENVRIplus (ENVironmental Research Infrastructures Providing Shared Solutions for Science and Society)
ACTRIS-2 (Aerosol, Clouds, and Trace gases Research InfraStructure)

POSITIONS HELD IN NATIONAL AND INTERNATIONAL SCIENTIFIC AND TECHNICAL BODIES

- * Leader of Work Packages 11/12 “Enabling Services – Rollout/Integration” in ENVRI-HUB NEXT project
- * Leader of Work Package 1 “Provision of aerosol profile observations” in CAMS21b_2023-2027 project
- * Member of the GALION Data Center Working Group
- * Co-leader of Work Package 5 “Common requirements and testbed for (meta)data services, community standards and cataloguing” in ENVRI FAIR project (<https://www.envri-fair.eu>)

RESEARCH INFRASTRUCTURE MANAGEMENT RESPONSIBILITY

* Responsible for the coordination of the technical implementation of the Aerosol REmote Sensing ACTRIS Data Center unit (ARES) of ACTRIS European research infrastructure
 * Member of the ACTRIS Data Centre Data Expert Team
 * Responsible for the development and the implementation of accessing data interfaces within the ACTRIS Aerosol Remote Sensing (ARES) Data Center of the ACTRIS European Research Infrastructure

PERSONAL SKILLS

Mother tongue

Other language(s)

English

French

Italian

UNDERSTANDING		SPEAKING		WRITING
Listening	Reading	Spoken interaction	Spoken production	
C1	C1	C1	C1	C1
A2	A2	A2	A2	A2

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2: Proficient user
 Common European Framework of Reference for Languages

IT SKILLS

Operating Systems	UNIX/Linux, Windows
Programming Languages	Java, Python, PHP, C#, C, C++, Matlab, Basic, CUDA
HTTP Server	Apache
Web layout design	HTML5, CSS3
IDE	Eclipse, NetBeans, PyCharm, XCode, Android Studio, Microsoft Visual Studio
Web Interface Library	JQuery, WSDL, XML
Database	SQL implementato su DBMS SQLServer, MySQL, PostgreSQL
Web Server Platform	Apache, Tomcat
Software Applications	Git, TortoiseVPN, JasperSoft Studio, Team Viewer, Pulse Secure
Frameworks	CXF, Spring Security, ZK Studio, JDBC, Django

SCIENTIFIC PUBLICATIONS

- Comparison of dust optical depth from multi-sensor products and the MONARCH dust reanalysis over Northern Africa, the Middle East and Europe DOI: [10.5194/acp-2022-655](https://doi.org/10.5194/acp-2022-655)
 - Characterization of Extremely Fresh Biomass Burning Aerosol by Means of Lidar Observations DOI: [10.3390/rs14194984](https://doi.org/10.3390/rs14194984)
 - JSTARS-2016-00192.R2 A Minimum-Acceleration Combination Approach for the Retrieval of Multi-Platform InSAR Deformation Time-Series DOI: [10.1109/JSTARS.2016.2577878](https://doi.org/10.1109/JSTARS.2016.2577878)

PUBLICATION OF SCIENTIFIC DATASET

- ACTRIS data during the COVID-19 pandemic spring 2020 DOI: <https://doi.org/10.21336/gen.682q-8163>
 - ACTRIS Aerosol Remote Sensing Data during the COVID-19 pandemic - GARRLiC products DOI: <https://doi.org/10.25326/69>
 - ACTRIS Aerosol Remote Sensing Data during the COVID-19 campaign held in May 2020 - GARRLiC products DOI: <https://doi.org/10.25326/70>
 - ACTRIS Aerosol Remote Sensing Data during the COVID-19 pandemic DOI: <https://doi.org/10.21336/gen.w3w1-j222>
 - ACTRIS Aerosol Remote Sensing COVID-19 campaign data of May 2020 DOI: <https://doi.org/10.21336/gen.xmbc-ti86>

CONFERENCES

- Sensitivity Study on the Performance of the Single Calculus Chain Aerosol Layering Module
 For ILR: Emerging lidar techniques, methodologies, and discoveries
 - ACTRIS Aerosol Profiling Database: new design and new products for a wider use of aerosol lidar data
[10.26314/GARR-Conf22-proceedings](https://doi.org/10.26314/GARR-Conf22-proceedings)
 - EO4D_ash – Earth observation data for detection, discrimination & distribution (4D) of volcanic ash
<https://doi.org/10.5194/egusphere-eGU21-14552>, 2021
 - ELDAmwL: The EARLINET Single Calculus Chain Module for the Retrieval of Optical Products at Multiple Wavelengths
 For ELC (European Lidar Conference) 2020
 - ACTRIS aerosol profiling database: new design and new products for a wider use of aerosol lidar data
 For ISDE11, 11th International Symposium on Digital Earth
 - A Minimum Curvature Combination Method for the Generation of Multi-platform DInSAR Deformation Time-Series
 For 2015 ESA Fringe Workshop

TECHNICAL REPORTS

- The FAIRness of ACTRIS
 - Development and implementation of a REST API for the ACTRIS ARES DC Unit
 - Project brief of implementation of Open Science and EOSC targets
 - ESHAPE Pilot 6.1 – Exercise #1
 - ENVRI FAIR WP8 GUI Requirements
 - ENVRI FAIR WP8 GUI working group progress report
 - ENVRI FAIR Deliverable 5.2 "Implementation plan for common development goals"
 - CNR contribution to ACTRIS Preparatory Phase Project
 - Data Management Plan for ACTRIS Aerosol Remote Sensing Data Centre Unit (ARES)
 - EARLINET Uploading Interface
 - New EARLINET Data File Structure

PERSONAL DATA TREATMENT

I authorize the processing of my personal data pursuant to Legislative Decree 30 June 2003, n. 196 Code regarding the protection of personal data

DATE AND SIGNATURE

22/05/2024