francesca costabile

Date of birth: 05/04/1977 | **Nationality:** Italian | **Gender:** Female |

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WORK EXPERIENCE

16/02/2010 – CURRENT – Rome, Italy

SENIOR RESEARCH SCIENTIST - STRATEGIC AREA COORDINATOR - IMPACT ON ENVIRONMENT, CULTURAL HERITAGE AND HEALTH – CONSIGLIO NAZIONALE DELLE RICERCHE – INSTITUTE FOR ATMOSPHERIC SCIENCE AND CLIMATE

Research activities dealing with air quality, atmospheric science and climate, air pollution and related adverse health effects.

01/01/2022 – CURRENT – Italy

ENVIRONMENTAL EXPERT – NEXTGENERATION EU - REGIONE LOMBARDIA

Support to NextGenerationEU activities foreseen in Italy in the field of environmental assessment

01/06/2021 – CURRENT – Cologne, Germany

SCIENTIFIC EXPERT – EUROPEAN UNION EASA

Scientific Expert of the CAQIII project dealing with cabin air quality in commercial aircrafts

01/09/2017 – 31/12/2020 – Brussels, Belgium

SCIENTIFIC EXPERT – EUROPEAN COMMISSION – DG MOVE

Chairwoman, rapporteur, and member of the Scientific Committee of the FACTS project dealing with cabin air quality in commercial aircrafts

01/08/2012 – CURRENT – Rome, Italy

PROFESSOR – UNIVERSITY OF ROME "TOR VERGATA"

2018-2024- National Academic Qualification as Associate Professor/ Area 02 – Physics/ Academic Discipline : 02/C1 - astronomy, astrophysics, Earth and planetary physics. Phyisics department. Course: Chemodynamics of the atmosphere (FIS/06 – 8 cfu).

01/02/2008 – 01/10/2008 – Leipzig, Germany

VISITING RESEARCHER – LEIBNIZ INSTITUTE FOR TROPOSPHERIC RESEARCH

Particle number size distribution in urban areas.

01/01/2002 – 31/12/2004

GUEST LECTURER – TOR VERGATA AND VENICE INTERNATIONAL UNIVERSITIES

Guest Lecturer : Air quality in urban areas

01/03/2002 – 15/02/2010
RESEARCH SCIENTIST – CONSIGLIO NAZIONALE DELLE RICERCHE – INSTITUTE FOR ATMOSPHERIC POLLUTION (IIA)

Air pollution in urban areas: the case of Chinese megacities in the framework of the Sino-Italian Cooperation Program for Environmental Protection .
The activities were paid by CNR (Italy), but the work was carried out in China (Beijing, Suzhou, Shanghai, Lanzhou.)

01/03/2002 – 28/02/2003
JUNIOR CONSULTANT (PERMANENT) – HEWLETT-PACKARD

Broadband transmission technology.
3-month HP educational training in **Data handling and transmission networks** (Unix, HP-UX system and network admin, Windows NT, HP openview, Oracle PL/SQL), HP university, Bergamo, Italy

EDUCATION AND TRAINING

01/11/2004 – 28/02/2008
PH.D. (DOCTORAL DEGREE) – Mechanical Engineering Department of the University of Rome "Tor Vergata"

Field(s) of study
- Energy and Environment.

Thesis: Spatial distribution of traffic-related pollutants from tailpipe-to-road-to-ambient: the case of ultrafine-particles.

2001 – 2002
POSTGRADUATE DEGREE – Chemistry Department of the University of Rome "La Sapienza", Italy

Environmental Chemistry / Air pollution and environmental protection

1995 – 2000
LAUREA (VECCHIO ORDINAMENTO) - M.S., B.E. - ENV. ENGINEERING – University of Rome "La Sapienza", Italy

Environmental Engineering **(Ingegneria Ambiente e Territorio)**,
Dynamics of the Atmosphere, pollutant chemistry.
Title of the thesis : "Neural networks for air pollution forecast in an urban area"

110/110 cum laude

2018 – CURRENT
NATIONAL ACADEMIC QUALIFICATION AS ASSOCIATE PROFESSOR – Italian Ministry of research

2018-2024- National Academic Qualification as Associate Professor/ Area 02 – Physics/ Academic Discipline : 02/C1 - astronomy, astrophysics, Earth and planetary physics

LANGUAGE SKILLS

Mother tongue(s): **ITALIAN**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	C1	C2	C1	C2	C2
FRENCH	B1	B1	B1	B1	B1
GERMAN	A1	A1	A1	A1	A1
CHINESE	A1	A1	A1	A1	A1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

DIGITAL SKILLS

Microsoft Word | Microsoft Powerpoint | Google Drive | Microsoft Excel | Microsoft Office | Social Media | Zoom | Skype | Outlook | Google Docs | Power Point | Organizational and planning skills | Internet user | Written and Verbal skills | LinkedIn | Motivated | Decision-making | Presenting | Analytical skills | Team-work oriented | Creativity | Good listener and communicator | Strategic Planning | Gmail | Critical thinking | Reliability | Research and analytical skills | Conflict resolution | Excellent writing and verbal communication skills | Flexibility | Responsibility | Good time management | Detail-Oriented | Twitter | Empathic listener | leadership

PROJECTS

Selected projects

2019/2021: RHAPS (Redox-activity and Health-effects of Atmospheric Primary and Secondary aerosol) funded by the Italian Ministry of research, 2019-2021 [3 years/1 million euros],
2017/2019: Chairperson, rapporteur of the Scientific Committee of the EU funded FACTS project: https://www.facts.aero/index.php/the-project/scientific-committee - MOVE/B3/SER/2016-363/SI2.748114
2017: P.I. of The Carbonaceous aerosol in Rome and Environs (CARE)" experiment - https://www.researchgate.net/project/CARBONACEOUS-AEROSOL-IN-ROME-AND-ENVIRONSCARE
2016-now: associate partner of ACTRIS2 IA - European Research Infrastructure for the observation of Aerosol, Clouds, and Trace gases – Integrating Activities - EU H2020 (2015-2018)
2015-2017 – Participant in AirSEaLab : Climate air pollution interaction in coastal environment. Funded by CNR.
2011-2015: Participant and Member of the Steering Committee of the project DIAPASON "Desertdust impact on air quality through model-predictions and advanced sensors observations" – Under the EU LIFE+ programme, Grant agreement LIFE10 ENV/IT/391.
2008 – now: Expert and member of CEN/TC 264/Working Group 32 "Air quality - Determination of the particle number concentration" .
2008-2009: Associate/responsible person: project EUSAAR (European Supersite for Atmospheric Aerosol Research) – www.eusaar.net, Supported by the European Commission under the 6th Framework Programme, Contract number: RII3-CT-2006-026140)
2002-2004: Project coordinator of the bilateral Sino-Italian “Air quality monitoring System – AQMS – phase I” [2 years/2.3 million euros] Suzhou, China.
2003-2004: Project coordinator of the bilateral Sino-Italian “Intelligent Transport System based on Traffic Air Pollution Control, ITS-TAP” [1 year/500.000 euro] in Beijing, China
2004-2007 : Project coordinator of the bilateral Sino-Italian “Air quality monitoring System - AQMS – phase II” [3 years/2.3 millions euro] Suzhou, China
2004-2006: Project coordinator of the bilateral Sino-Italian “Chemical Laboratory” Beijing, China
2004-2007: Project coordinator of the bilateral Sino-Italian “Olympic Village Monitoring” Beijing, China [2 years/2 millions euros].
2005-2007: Project coordinator of the bilateral Sino-Italian “Air Quality Monitoring System and Greenhouse Gas Emission Inventory” Lanzhou [3 years/1.5 millions euros], China.
2005-2007: Project coordinator of the bilateral Sino-Italian “Air Pollution Emission Monitoring-APEM” Shanghai [2 years/1.167.000 euro], China.
2006 Project planner of the bilateral Sino-Italian “Air Quality monitoring Improvement-AQMI” Urumqi, China.

PUBLICATIONS

Selected publications

HINDEX 21
https://scholar.google.com/citations?user=FZDJCzAAAAAJ&hl=en

D Contini, F Costabile: Does air pollution influence COVID-19 outbreaks?Atmosphere 11 (4), 377

Costabile, et al : Evidence of association between aerosol properties and
in-vitro cellular oxidative response to PM1, oxidative potential of PM2.5, a biomarker of RNA oxidation,
and its dependency on the combustion aerosol. Atmos. Env. 2019
(doi 10.1016/j.atmosenv.2019.06.023)

Alas, Costabile, et al.: Methodology for High-Quality Mobile Measurement with Focus
on Black Carbon and Particle Mass Concentrations, Atmos. Meas. Tech., 12 (9), 4697-4712, 2019.

Tranfo, Costabile, et al. Levels of urinary biomarkers of oxidatively generated damage to
DNA and RNA in different groups of workers compared to general population volunteers. Manuscript
in review, Int. J. Environ. Res. Public Health, 16 (16), 2995, 2019

Gualtieri, Costabile, et al.: Is it the time to study air pollution effects under
environmental conditions? A case study to support the shift of in vitro toxicology from the bench to the
field. Chemosphere 207, 552-564, 2018 ; doi: 10.1016/j.chemosphere.2018.05.130

Costabile, F., et al: First results of the "Carbonaceous aerosol in Rome and Environs
(CARE)" experiment: beyond current standards for PM10, Atmosphere 2017, 8, 249.
Costabile, F., Gilardoni, S., Barnaba, F., Di Ianni, A., Di Liberto, L., Dionisi, D.,

Manigrasso, M., Paglione, M., Poluzzi, V., Rinaldi, M., Facchini, M. C., and Gobbi, G. P.:
Characteristics of brown carbon n the urban Po Valley atmosphere, Atmos. Chem. Phys., 17, 1–14,
2017.

S Gilardoni, Costabile et al.Direct observation of aqueous secondary organic aerosol from biomass-burning emissions,
Proceedings of the National Academy of Sciences 113 (36), 10013-10018

Traffic and nucleation events as main sources of ultrafine particles in high-insolation developed world cities
M Brines, M Dall'Osto, DCS Beddows, RM Harrison, F Gómez-Moreno, ...
Atmospheric Chemistry and Physics 15 (10), 5929-5945

Summertime photochemistry during CAREBeijing-2007: RO_x budgets and O_3 formation
Z Liu, Y Wang, D Gu, C Zhao, LG Huey, R Stickel, J Liao, M Shao, T Zhu, ...
Atmospheric Chemistry and Physics 12 (16), 7737-7752

Spatio-temporal variability and principal components of the particle number size distribution in an urban atmosphere
F Costabile, W Birmili, S Klose, T Tuch, B Wehner, A Wiedensohler, ...
Atmospheric Chemistry and Physics 9 (9), 3163-3195

A new approach to link transport emissions and air quality: An intelligent transport system based on the control of traffic air pollution
F Costabile, I Allegrini
Environmental Modelling & Software 23 (3), 258-267

Identification of key aerosol populations through their size and composition resolved spectral scattering and absorption
F Costabile, F Barnaba, F Angelini, GP Gobbi
Atmospheric Chemistry and Physics 13 (5), 2455-2470

HOBBIES AND INTERESTS

Scientific interests

Air Quality, atmospheric aerosol, and health effects. In particular, large interest in characterisation of ultrafine particles; combustion generated aerosol and urban areas; black Carbon and carbonaceous aerosol; relevant health effects from both toxicology and epidemiology point of view.

NETWORKS AND MEMBERSHIPS

Selected Commitees

2021/2023 : Expert of the Scientific Committee appointed by EASA

2017/2020 : Expert and chairperson of the FACTS Scientific Committee appointed by EC DG MOVE (https://www.facts.aero/index.php/the-project/scientific-committee)

2010-now : Expert member of the EU CEN/TC 264/WG 32 on Ambient air 2019 -now: a member of the evaluation panel of the Sino-Swiss Science and Technology Cooperation (SSSTC) on air quality and health

2011-2015: Member of the Steering Committee of the EU funded project DIAPASON dealing with air quality

2002-2007: a member of Chinese international bids Committees dealing with air quality in Chinese Megacities.

VISITING RESEARCH EXPERIENCE

Visiting research

2008: Post-doc and Visiting researcher at fT, Leipzig,Germany - subject: ultrafine aerosol particles in urban atmosphere.
2002-2007: Visiting researcher Tsinghua university and Peking university, Beijing, China – subject: urban air pollution in megacities.
2004:2007: Lecturer at the University of Rome Tor Vergata (Engineering departments) and Venice International University. Advisor of master and PhD students.
2002-2004: fellowship at CNR IIA (Italy)