

PERSONAL INFORMATION **Antonio Piersanti**

✉ antonio.piersanti@enea.it

🌐 <https://impatti.sostenibilita.enea.it/en/people/antonio-piersanti>

Date of birth 26/09/1977 | Nationality Italian

PROFESSIONAL EXPERIENCE

From July 2021 **Head of the Atmospheric Pollution Laboratory**

Division Models and Technologies for Risks reduction, at ENEA (Italian National Agency for New Technologies, Energy and Sustainable Economic Development), Bologna Research Center

November 2009 – June 2021 **Researcher, permanent position**

Atmospheric Pollution Laboratory, ENEA

Air pollution modeling, impact assessment of air pollution on human health - ecosystems - materials, atmospheric emission inventories, air quality plans, experimental assessment of air quality. Support to the Ministry of the Environment for air quality policies at national and European level. Participation to the Forum for Air quality Modeling of the European Commission and to the UN-ECE Task Force on Integrated Assessment Modeling. Support to industry for impact assessment of atmospheric emissions.

February 2009 – October 2009 **Employee, permanent position**

Siteco Informatica s.r.l., Bologna (road mapping technologies). Development of road information systems, for evaluation of road heritage, measurement campaigns for detection of road networks with Road Scanner (mobile mapping system), project assistant in processing of road maps in G.I.S.

September 2003 – January 2009 **Employee, temporary + permanent position**

Arianet s.r.l., Milano (air pollution modeling). Software development for calculation of atmospheric emissions on motorways and urban networks. Air quality assessment and planning, for public and private companies: meteorological and climatic characterization, traffic assignment procedures, dispersion modelling of atmospheric pollutants, evaluation of emissions from road construction sites, production of air quality plans.

EDUCATION AND TRAINING

1996 – 2003 **Master degree in Environmental Engineering**

Università di Bologna

PERSONAL SKILLS

Native language	Italian				
Other languages	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Interaction	Oral production	
	English	C1	C2	C1	C1
French	B2	B2	A2	A2	A1

Communication skills

High interaction with managers and colleagues for achievement of objectives. Presentation and discussion of results in meetings, national and international conferences, international scientific articles. I work in expert groups with members from of different institutions. Institutional website editor. Constant care of relationships at all levels in personal life. I work in a NGO in local and international charity projects .

Organizational skills

Head of a group of 15 persons, located in 5 different research centers in Italy. Group work in private companies and public bodies, in close contact with customers (budget € 10⁶). Support for national environmental policy: coordination of groups (10 people), contacts with national and local administrations. In my NGO, I coordinate local and international charity projects (budget € 10³) and responsible tourism projects (20 people per year).

IT skills G.I.S. (QGIS, ESRI ArcGIS, Mapinfo); Microsoft Excel - Access, Libre Office, base level programming skills in Fortran 90 – Visual Basic – SQL – Unix – DOS – html, web CMS (Wordpress, Plone).

OTHER INFORMATION

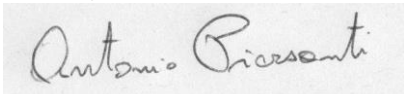
Projects Scientific investigator for ENEA in the Collaboration Agreement with Italian ministry of Environment for implementation of the NEC Directive (2019-2021, 1M €).
 European air quality forecasting in the Copernicus Atmospheric Monitoring System - CAMS, 2018-ongoing.
 Horizon Europe Research and Innovation Actions projects: CAMEO for satellite data assimilation in CAMS air quality models (2023-2025).
 Evaluation of visibility in natural parks through air quality monitoring (2020-ongoing).
 Evaluation of the interaction between air pollution and the Covid19 pandemic in Italy (Pulvirus project), 2020-2022.
 Health impact assessment of atmospheric pollution in Italy: EU Life + MED HISS, VIIAS. Assessment of human exposure and health impact of atmospheric pollution caused by coal-fired power plants and steel mills of national relevance.
 Support to the Lebanese Ministry of the Environment on air quality regulation (funding from UNDP and Ministry of Foreign Affairs), 2013-2014.

Publications First author of 4 articles and co-author of 54 peer-reviewed articles in international journals and contributions in published proceedings of international conferences, co-author of 9 ENEA technical reports.

Tutoring Tutoring of 1 bachelor degree thesis (2017).

Personal data I authorize the processing of my personal data pursuant to Italian Legislative Decree 196 of 30 June 2003 and art. 13 GDPR (EU Regulation 2016/679).

Date 6 January 2024

Sign 

LIST OF PUBLICATIONS (sorted by date - newest)

- Vitali, L., Cuvelier, K., Piersanti, A., Monteiro, A., Adani, M., Amorati, R., Bartocha, A., D'Ausilio, A., Durka, P., Gama, C., Giovannini, G., Janssen, S., Przybyła, T., Stortini, M., Vranckx, S., and Thunis, P. (2023) A standardized methodology for the validation of air quality forecast applications (F-MQO): Lessons learnt from its application across Europe, *Geoscientific Model Development*, 16(20), pp. 6029-6047. DOI: 10.5194/gmd-16-6029-2023
- Mircea M., Borge R., Finardi S., Briganti G., Russo F., de la Paz D., D'Isidoro M., Cremona G., Villani M.G., Cappelletti A., Adani M., D'Elia I., Piersanti A., Sorrentino B., Petralia E., de Andrés J.M., Narros A., Silibello C., Pepe N., Prandi R., Carlino G. (2023) The Role of Vegetation on Urban Atmosphere of Three European Cities. Part 2: Evaluation of Vegetation Impact on Air Pollutant Concentrations and Depositions. *Forests*, 2023, 14 (6), 1255. DOI: 10.3390/f14061255
- Adani, M., Guarnieri, G., Vitali, L., Ciancarella, L., D'Elia, I., Mircea, M., Gualtieri, M., Cappelletti, A., D'Isidoro, M., Briganti, G., Piersanti, A., Stracquadanio, M., Righini, G., Russo, F., Cremona, G., Villani, M. G., and Zanini, G. (2022) Evaluation of air quality forecasting system FORAIR_IT over Europe and Italy at high resolution for year 2017, *Atmospheric Pollution Research* 13 (2022) 101456. DOI: 10.1016/j.apr.2022.101456
- D'Isidoro, M., D'Elia, I., Vitali, L., Briganti, G., Cappelletti, A., Piersanti, A., Finardi, S., Calori, G., Pepe, N., Di Giosa, A., Bolignano, A., Zanini, G., (2022) Lessons learnt for air pollution mitigation policies from the COVID-19 pandemic: The Italian perspective, *Atmospheric Pollution Research* 13 (2022) 101620. DOI: 10.1016/J.APR.2022.101620
- Michetti, M., Gualtieri, M., Anav, A., Adani, M., Benassi, B., Dalmastrì, C., D'Elia, I., Piersanti, A., Sannino, G., Zanini, G., Uccelli, R. (2022) Climate change and air pollution: Translating their interplay into present and future mortality risk for Rome and Milan municipalities. *Science of the Total Environment*, 830, art. no. 154680. DOI: 10.1016/j.scitotenv.2022.154680
- Michetti M., Adani M., Anav A., Benassi B., Dalmastrì C., D'Elia I., Gualtieri M., Piersanti A., Sannino G., Uccelli R., Zanini G. (2022) From single to multivariable exposure models to translate climatic and air pollution effects into mortality risk. A customized application to the city of Rome, Italy. *MethodsX*, 9:101717. DOI: 10.1016/j.mex.2022.101717
- Gualtieri, M.; Berico, M.; Grollino, M.G.; Cremona, G.; La Torretta, T.; Malaguti, A.; Petralia, E.; Stracquadanio, M.; Santoro, M.; Benassi, B.; Piersanti, A.; Chiappa, A.; Bernabei, M.; Zanini, G. (2022) Emission Factors of CO₂ and Airborne Pollutants and Toxicological Potency of Biofuels for Airplane Transport: A Preliminary Assessment. *Toxics* 10 (2022) 617. DOI: 10.3390/toxics10100617
- Piersanti, A., D'Elia, I., Gualtieri, M., Briganti, G., Cappelletti, A., Zanini, G., Ciancarella, L. The Italian National Air Pollution Control Programme: Air Quality, Health Impact and Cost Assessment. (2021) *Atmosphere*, 12, 196. DOI: 10.3390/atmos12020196
- D'Elia, I., Briganti, G., Vitali, L., Piersanti, A., Righini, G., D'Isidoro, M., Cappelletti, A., Mircea, M., Adani, M., Zanini, G., Ciancarella, L. (2021) Measured and modelled air quality trends in Italy over the period 2003-2010. *Atmospheric Chemistry and Physics*, 21 (13), pp.10825–10849. DOI: 10.5194/acp-21-10825-2021
- Russo, F., Villani, M.G., D'Elia, I., D'Isidoro, M., C. Liberto, Piersanti, A., Tinarelli, G., G. Valenti, Ciancarella, L. (2021) A Study of Traffic Emissions Based on Floating Car Data for Urban Scale Air Quality Applications. *Atmosphere* 12(8), 1064. DOI: 10.3390/atmos12081064
- Villani, M.G., Russo, F., Adani, M., Piersanti, A., Vitali, L., Tinarelli, G., Ciancarella, L., Zanini, G., A. Donateo, M. Rinaldi, C. Carbone, S. Decesari, P. Saenger (2021). Evaluating the Impact of a Wall-Type Green Infrastructure on PM₁₀ and NO_x Concentrations in an Urban Street Environment. *Atmosphere* 12(7), 839. DOI: 10.3390/atmos12070839
- Adani, M., Piersanti, A., Ciancarella, L., D'Isidoro, M., Villani, M.G., Vitali, L. Preliminary tests on the sensitivity of the FORAIR_IT air quality forecasting system to different meteorological drivers. (2020) *Atmosphere*, 11 (6), art. no. 574. DOI: 10.3390/atmos11060574
- De Marco, A., Anav, A., Ciancarella, L., D'Elia, I., Gualtieri, M., Mircea, M., Piersanti, A., Screpanti, A., Vialetto, G., et al. Impacts of air pollution on human and ecosystem health, and implications for the National Emission Ceilings Directive: Insights from Italy. (2019) *Environment International*, 125, pp. 320-333. DOI: 10.1016/j.envint.2019.01.064
- Pisoni, E., Piersanti, A. et al. Supporting the improvement of air quality management practices: The "FAIRMODE pilot" activity. (2019) *Journal of Environmental Management*, 245, pp. 122-130. DOI: 10.1016/j.jenvman.2019.04.118

- Uccelli, R., Pacchierotti, F., Piersanti, A., Ciancarella, L. Impact of modelled PM_{2.5}, NO₂ and O₃ annual air concentrations on some causes of mortality in Tuscany municipalities. (2019) *European Journal of Public Health*, 29 (5), pp. 871-876. DOI: 10.1093/eurpub/cky210
- Vitali, L., Ciancarella, L., Piersanti, A., Zanini, G. et al. AMS-MINNI national air quality simulation on Italy for the calendar year 2015. (2019) *Rapporto Tecnico RT/2019/15/ENEA*.
- Piersanti, A., Ciancarella, L., Pacchierotti, F., Uccelli, R. Air quality modeling and inhalation health risk assessment for a new generation coal-fired power plant in Central Italy. (2018) *Science of the Total Environment*, 644, pp. 884-898. DOI: 10.1016/j.scitotenv.2018.06.393
- D'Elia, I., Piersanti, A., Briganti, G., Cappelletti, A., Ciancarella, L., Peschi, E. Evaluation of mitigation measures for air quality in Italy in 2020 and 2030. (2018) *Atmospheric Pollution Research*, 9 (6), pp. 977-988. DOI: 10.1016/j.apr.2018.03.002
- Gandini, M., Ciancarella, L., Piersanti, A., et al. Long term effect of air pollution on incident hospital admissions: Results from the Italian Longitudinal Study within LIFE MED HISS project. (2018) *Environment International*, pp. 1087-1097. DOI: 10.1016/j.envint.2018.10.020
- Piersanti, A., Ciancarella, L., Pacchierotti, F. et al. Qualità dell'aria e tutela della salute. *Energia, ambiente e innovazione* 1/2017.
- De Marco, A., Screpanti, A., Mircea, M., Piersanti, A., Proietti, C., Fornasier, M.F. High resolution estimates of the corrosion risk for cultural heritage in Italy. (2017) *Environmental Pollution*, 226, pp. 260-267. DOI: 10.1016/j.envpol.2017.03.066
- Kracht O., Piersanti A., Cremona G., Righini G., Vitali L. et al. Spatial representativeness of air quality monitoring sites - Outcomes of the FAIRMODE/AQUILA intercomparison exercise. (2017) EUR 28987 EN, Publications Office of the European Union, Luxembourg, 2017, ISBN 978-92-79-77218-4. DOI: 10.2760/60611
- Russo, F., Ciancarella, L., Piersanti, A., Righini, G., Vitali, L. Micro-scale dispersion modelling with background correction to simulate air quality in Milan (2017) *Rapporto tecnico RT/2017/6/ENEA*.
- Telloi, C., Malaguti, A., Mircea, M., Berico, M., Piersanti, A., Ciancarella, L. Aerosol emission factors estimated for harvest threshing and ploughing in Po Valley. (2017) *Rapporto tecnico RT-2017-13-ENEA*.
- Piersanti, A., Ancona, C., Berti, G., Cadum, E., Ciancarella, L., D'Elia, I., Forastiere, F., Righini, G. Health impact of air pollution on Italy: Main findings of VIIAS and MED HISS projects. (2016) *Environmental Modelling and Software for Supporting a Sustainable Future, Proceedings - 8th International Congress on Environmental Modelling and Software, iEMSs 2016*, 1, pp. 295-300.
- Ciancarella, L., D'Elia, I., Piersanti, A., Zanini, G. et al. LA SIMULAZIONE NAZIONALE DI AMS-MINNI RELATIVA ALL'ANNO 2010. (2016) *Rapporto tecnico RT/2016/12/ENEA*.
- Vitali, L., Assennato, G., Ciancarella, L., Giua, R., Piersanti, A., Zanini, G. et al. A Lagrangian modelling approach to assess the representativeness area of an industrial air quality monitoring station. (2016) *Atmospheric Pollution Research*, 7 (6), pp. 990-1003. DOI: 10.1016/j.apr.2016.06.002
- Zanini, G., Piersanti, A. et al. An atmospheric modeling system for Lebanon. (2016) *Rapporto Tecnico ENEA RT-2016-9-ENEA*.
- Piersanti, A., Vitali, L., Righini, G., Cremona, G., Ciancarella, L. Spatial representativeness of air quality monitoring stations: A grid model based approach. (2015) *Atmospheric Pollution Research*, 6 (6), pp. 953-960. DOI: 10.1016/j.apr.2015.04.005
- Mircea, M., Ciancarella, L., Piersanti, A., Zanini, G. et al. Assessment of the AMS-MINNI system capabilities to simulate air quality over Italy for the calendar year 2005. (2014) *Atmospheric Environment*, 84, pp. 178-188. DOI: 10.1016/j.atmosenv.2013.11.006
- Alessandrini, Piersanti, A. et al. Air pollution and mortality in twenty-five Italian cities: Results of the EpiAir2 Project [Inquinamento atmosferico e mortalità in venticinque città Italiane: Risultati del progetto EpiAir2]. (2013) *Epidemiologia e Prevenzione*, 37 (4-5), pp. 220-229.
- Malaguti, A., Mircea, M., La Torretta, T.M.G., Piersanti, A., Salvi, S., Zanini, G., Berico, M. et al. Fine carbonaceous aerosol characteristics at a coastal rural site in the Central Mediterranean as given by OCEC online measurements. (2013) *Journal of Aerosol Science*, 56, pp. 78-87. DOI: 10.1016/j.jaerosci.2012.06.004
- Tinarelli, G., Piersanti, A., Radice, P., Clemente, M., De Maria, R. Microscale modelling simulations for the site characterization of air quality

stations in an urban environment. (2009) *Radiation Protection Dosimetry*, 137 (3-4), art. no. ncp225, pp. 294-299. DOI: 10.1093/rpd/ncp225

Gariazzo, C., Silibello, C., Finardi, S., Radice, P., Piersanti, A., Calori, G. et al. A gas/aerosol air pollutants study over the urban area of Rome using a comprehensive chemical transport model. (2007) *Atmospheric Environment*, 41 (34), pp. 7286-7303. DOI: 10.1016/j.atmosenv.2007.05.018

Piersanti, A., Monforti, F., Zanini, G. Simulation of PM10 concentration patterns for a 2010 traffic scenario in Bologna, Italy. (2005) *Environmental Modeling and Assessment*, 10 (4), pp. 291-301. DOI: 10.1007/s10666-005-9016-4