

PERSONAL INFORMATION

Adelaide Dinoi



RESEARCH ACTIVITIES

My **research activity** focuses on 1) monitoring of atmospheric pollutants and evaluation of their impact on air quality and climate change, 2) characterization of the chemical/physical properties of aerosols in the lower troposphere by a wide variety of instrumental techniques; 3) study of dispersion processes (by ADMS model), chemical transformations and long-range transport. Particular interest to identification and characterization of new particle formation events (NPF); study of atmospheric aerosol optical properties; Chemical characterization of carbonaceous species (OC, EC) by thermal optical transmittance technique (NIOSH870/EUSAR protocols) and by Multi-Angle Absorption Photometer (eBC); impact evaluation of vehicles and shipping emissions on air quality based on experimental observations, emission inventory analysis, and numerical modeling.

Laboratory activity: Long-term experience in Instrumental checks, management, and calibration of different aerosol and gas sampling devices together with validation and data analysis, acquired in the ECO Observatory, GAW/ACTRIS infrastructure.

WORK EXPERIENCES

From **July 2020 to now**. Researcher at the Institute of Atmospheric Sciences and Climate (ISAC-CNR), National Research Council.

March 2015 - June 2020. Post-doc position at the Institute of Atmospheric Sciences and Climate (ISAC-CNR), National Research Council.

November 2015 - Short Term Mobility (research grant) at the Leibniz Institute for Tropospheric Research of Leipzig (Aerosol and Cloud Department) Leipzig-Germany. Supervisor: Prof. Alfred Wiedensohler.

June 2013 - February 2015. Contract Research at the ISAC-CNR, Institute of Atmospheric Sciences and Climate, Division of Lecce, in the framework of I-AMICA Project "High Technology Infrastructure for Environmental and Climate Monitoring" - Code PONA3_00363, CUP B61D11000220007.

September 2007 - October 2012. Postdoc fellowship at the Physics Department University of Salento.

January - February 2007. **Short term mobility** at the Institute of Planetary Research DLR – German Aerospace Center Berlin (Germany). Supervisor: Joern Helbert.

From **January 2012 to now** Co-founder and consultant of the Spin-Off of the University of Salento RESEAUX S.r.l. (www.reseaux.it).

EDUCATION AND TRAINING

July 2007- Ph.D. in Physics, Physics Department-University of Salento, Lecce. Supervisor Prof. Sergio Fonti sergio.fonti@le.infn.it

April 2001 - Master degree in Physics, Physics Department-University of Salento, Lecce. Supervisor Prof. Sergio Fonti sergio.fonti@le.infn.it

2-6 July, 2018 International Summer School –Conference “SORBETTO” SOLar Radiation Based Established Techniques for aTmospheric Observation, CNR Headquarter and Sapienza University, Italy.

1 June 2009, Giornata Studio “Tecniche di monitoraggio dei microinquinanti organici: aspetti tecnologici e tecnico-normativi”. Arpa Puglia- Dipartimento Provinciale di Taranto, Via Anfiteatro, 8 Taranto.

14-19 December, 2009 Prima Scuola Italiana di Aerosol (IAS), Palazzo Turtur, Molfetta, Bari.

3-7 December, 2007 Aerosol School 2007. ” Sorgenti, Tecniche di monitoraggio e Caratterizzazione” Chiostro S. Maria Del Carmine Piazza Tancredi, 7 Lecce.

14 May – 1 June, 2007 Corso di formazione “Valutazione dei campi elettromagnetici”. Servizio Prevenzione e Protezione Dipartimento di Fisica, Università del Salento, Lecce.

29-31 January, 2007 Corso Teorico di microscopia elettronica a scansione (SEM) e microanalisi (EDX). Dipartimento di Fisica, Università del Salento, Lecce.

10 November, 2005 Corso di formazione “La sicurezza nei laboratori scientifici e didattici”. Dipartimento di Fisica, Università del Salento, Lecce.

10-15 October, 2005 Scuola Nazionale di Astrofisica VIII Ciclo, “Il sistema solare esterno e la missione Cassini-Formazione Stellare”. Centro Studi S. Maria Maddalena, Volterra, Pisa.

PERSONAL SKILLS

Mother tongue(s) Italian

Other language(s)	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	B2	B2	B2	B2	B2
French	A2	A2	A2	A2	A2

Computer skills

Operating systems: good command of Windows, Document processing: Microsoft Word, Microsoft package: PowerPoint, Excel. Technical software: good command of R and IGOR.

Projects

I was actively involved in various scientific monitoring campaigns and national/international projects:

OT4Clima: Advanced Earth Observation Technologies for studying climate change impacts on the environment. National Industrial Research program PON 2014-2020.

ECOMOBILITY: “ECOLOGical supporting for traffic Management in cOastal areas By using an InteLLigenT sYstem” call “Standard+” Italia-Croazia 2018-2020 3

ISMAEL: Integrated System for the Assessment of Environmental impacts in Logistics activities. Environmental monitoring and prediction for green ports (2017-2019).

ENEL: source apportionment of PM10 collected simultaneously in four sites located in the Puglia region, South-Eastern Italy (2013-2016)

I-AMICA: Progetto PONa3_00363 Infrastruttura di Alta Tecnologia per il Monitoraggio Integrato Climatico-Ambientale (I-AMICA) – CUP B61D1100020007 (2013-2017).

POSEIDON: POLLution monitoring of Ship Emissions, an Integrated approach for harbours of the Adriatic basin. European Territorial Cooperation MED (2014-2015).

CESAPO: Contribution of Emission Sources on Air quality of the Port-cities in Greece and Italy. Interreg Greece and Italy (2011-2014).

MARS: Monitoraggio Atmosferico tramite Remote Sensing” A study on the potential applications of satellite data on air quality. Avviso 19/2009 “Ritorno al Futuro” del P.O. FSE Puglia 2007-2013, Asse VI (2011-2012).

SIMPA: Sistema Integrato per il Monitoraggio del Particolato Atmosferico. Progetto strategico Regione Puglia (2004-2007).

PUBLICATIONS

- 1) D. Cesari, E. Merico, F.M. Grasso, A. Dinoi, M. Conte, A. Genga, M. Siciliano, E. Petralia, M. Stracquadanio, D. Contini. Analysis of the contribution to PM₁₀ concentrations of the largest coal-fired power plant of Italy in four different sites. *Atmospheric Pollution Research* **2021**, 12, 8, <https://doi.org/10.1016/j.apr.2021.101135>.
- 2) Lionetto, M.G.; Guascito, M.R.; Giordano, M.E.; Caricato, R.; De Bartolomeo, A.R.; Romano, M.P.; Conte, M.; **Dinoi, A.**; Contini, D. Oxidative Potential, Cytotoxicity, and Intracellular Oxidative Stress Generating Capacity of PM₁₀: A Case Study in South of Italy. *Atmosphere* **2021**, 12, 464. <https://doi.org/10.3390/atmos12040464>.
- 3) Donateo, A.; **Dinoi, A.**; Pappaccogli, G. Impact on Ultrafine Particles Concentration and Turbulent Fluxes of SARS-CoV-2 Lockdown in a Suburban Area in Italy. *Atmosphere* **2021**, 12, 407.
- 4) **A. Dinoi**, D. Gulli, I. Ammoscato, C.R. Calidonna, D. Contini. Impact of the Coronavirus Pandemic Lockdown on Atmospheric Nanoparticle Concentrations in Two Sites of Southern Italy. *Atmosphere* **2021**, 12 (3), 352.
- 5) R. Cesari, A. Genga, R. Buccolieri, S. Di Sabatino, M. Siciliano, T. Siciliano, **A. Dinoi**, A. Maurizi, P. Ielpo. Combining Chemical Composition Data and Numerical Modelling for the Assessment of Air Quality in a Mediterranean Port City. *Applied Sciences* **2021**, 11 (5), 2181.
- 6) D. Chirizzi, M. Conte, M. Feltracco, **A. Dinoi**, E. Gregoris et al. SARS-CoV-2 concentrations and virus-laden aerosol size distributions in outdoor air in north and south of Italy. *Environment International*, **2021**, 146, 106255.
- 7) **A. Dinoi**, K. Weinhold, A. Wiedenschler, D. Contini. Study of new particle formation events in Southern Italy. *ATMENV* **2021**, 244, 117920, [10.1016/j.atmosenv.2020.117920](https://doi.org/10.1016/j.atmosenv.2020.117920).
- 8) **A. Dinoi**, M. Conte, F. M. Grasso, D. Contini. Long-Term Characterization of Submicron Atmospheric Particles in an Urban Background Site in Southern Italy. *Atmosphere* **2020**, 11(4), 334; <https://doi.org/10.3390/atmos11040334>.
- 9) M. Conte, E. Merico, D. Cesari, **A. Dinoi**, F. M. Grasso, A. Donateo, M.R. Guascito, D. Contini. Long-term characterisation of African dust advection in south-eastern Italy: Influence on fine and coarse particle concentrations, size distributions, and carbon-content. *Atmospheric Research*. Volume 233, 1 March 2020, 104690.
- 10) Lionetto, M. G., Guascito, M. R., Caricato, R., Giordano, M. E., De Bartolomeo, A. R., Romano, M. P., Conte, M., **Dinoi, A.**, Contini, D. Correlation of oxidative potential with ecotoxicological and cytotoxicological potential of PM₁₀ at an urban background site in Italy. *Atmosphere* **2019**, 10(12), 733; <https://doi.org/10.3390/atmos10120733>.
- 11) Vidorni, G., Sardella A., De Nuntiis P., Volpi F., **Dinoi A.**, Contini D., Comite V., Vaccaro C., Fermo P., and Bonazza A. Air pollution impact on carbonate building stones in Italian urban sites. *European Physical Journal Plus*, Volume 134, Number 9, (2019).
- 12) Merico, E., **Dinoi A.**, and Contini D. Development of an integrated modelling-measurement system for near-real-time estimates of harbour activity impact to atmospheric pollution in coastal cities. *Transportation Research Part D: Transport and Environment*, Volume 73, p.108-119, (2019).
- 13) A. Donateo, T. Lo Feudo, A. Marinoni, **A. Dinoi**, E. Avolio, E. Merico, C. R. Calidonna, D. Contini, P. Bonasoni. Aerosol optical properties on three GAW observatories in the Central Mediterranean. *Atmosphere* **2018**, 9(10), 369; doi:10.3390/atmos 9100369.
- 14) **A. Dinoi**, D. Cesari, A. Marinoni, P. Bonasoni, A. Riccio, E. Chianese, G. Timberio, A. Naccarato, F. Sprovieri, V. Andreoli, S. Moretti, D. Gulli, C. R. Calidonna, I. Ammoscato, D. Contini. Inter-comparison of carbon content in PM_{2.5} and PM₁₀ collected at five measurement sites in Southern Italy. *Atmosphere* **2017**, 8(12), 243; doi:10.3390/atmos 8120243.
- 15) D. Cesari, E. Merico, **A. Dinoi**, A. Marinoni, P. Bonasoni, D. Contini. Seasonal variability of carbonaceous aerosols in an urban background area in Southern Italy. *Atmospheric Research* **2018**, Volume 200, p.97-108.
- 16) R. Cesari, R. Buccolieri, **A. Dinoi**, A. Maurizi, T.C. Landi, S. Di Sabatino. Influence of Ship Emissions on Ozone Concentration in a Mediterranean Area: A Modelling Approach. *International Technical Meeting on Air Pollution Modelling and its Application ITM 2016: Air Pollution Modeling and its Application XXV*, pp 317-321.
- 17) Cesari, D., De Benedetto G.E., Bonasoni P., Busetto M., **Dinoi A.**, Merico E., Chirizzi D., Cristofanelli P., Donateo A., Grasso F.M., et al. Seasonal variability of PM_{2.5} and PM₁₀ composition and sources in an urban background site in Southern Italy. *Science of the Total Environment* **2018**, Volume 612, p.202-213

- 18) D. Chirizzi, D. Cesari, M.R Guascito, **A. Dinoi**, L. Giotta, A. Donateo, D. Contini. Influence of Saharan dust outbreaks and carbon content on oxidative potential of water-soluble fractions of PM_{2.5} and PM₁₀, *Atmospheric Environment* 2017, Volume 163, p.1-8.
- 19) P. Cristofanelli, M. Busetto, F. Calzolari, I. Ammoscato, D. Gulli, **A. Dinoi**, C. R. Calidonna, D. Contini, D. Sferlazzo, T. Di Iorio, S. Piacentino, A. Marinoni, M. Maione and P. Bonasoni. Investigation of reactive gases and methane variability in the coastal boundary layer of the central Mediterranean basin. Ref.: Ms. No. ELEMENTA-D-16-00035R1, Vol 5. 2017.
- 20) E. Merico, A. Gambaro, A. Argiriou, A. Alebic-Juretic, E. Barbaro, D. Cesari, L. Chasapidis, S. Dimopoulos, **A. Dinoi**, A. Donateo, C. Giannaros, E. Gregoris, A. Karagiannidis, A.G. Konstandopoulos, T. Ivošević, N. Liora, D. Melas, B. Mifka, I. Orlić, A. Poupkou, K. Sarovic, et al. Atmospheric impact of ship traffic in four Adriatic-Ionian port-cities: Comparison and harmonization of different approaches. *Transportation Research Part D: Transport and Environment*, Volume 50, p. 431-445 (2017).
- 21) D. Chirizzi, D. Cesari, M.R Guascito, **A. Dinoi**, L. Giotta, A. Donateo, D. Contini. Characterization of the oxidative potential of water soluble fraction of atmospheric aerosol and its correlation with carbon concentrations, 6th IMEKO TC19 Symposium on Environmental Instrumentation and Measurements 2016, p.17-21, (2016).
- 22) E. Merico, A. Donateo, A. Gambaro, D. Cesari, E. Gregoris, E. Barbaro, **A. Dinoi**, G. Giovannelli, S. Masieri, D. Contini. Influence of in-port ships emissions to gaseous atmospheric pollutants and to particulate matter of different sizes in a Mediterranean harbour in Italy. *Atmospheric Environment*, Volume 139, p. 1-10 (2016).
- 23) R. Buccolieri, R. Cesari, **A. Dinoi**, A. Maurizi, F. Tampieri, S. Di Sabatino. Impact of ship emissions on local air quality in a Mediterranean city's harbour after the European sulphur directive. *International Journal of Environment and Pollution*, Volume 59, Issue 1, p.30-42, (2016) ISSN 0957-4352.
- 24) **A. Dinoi**, A. Donateo, F. Belosi, M. Conte, D. Contini. Comparison of atmospheric particle concentration measurements using different optical detectors: Potentiality and limits for air quality applications. *Measurement* (2016) ISSN 0263-2241.
- 25) M. Conte, A. Donateo, **A. Dinoi**, F. Belosi, D. Contini. Case Study of Particle Number Fluxes and Size Distributions during Nucleation Events in Southeastern Italy in the summer. *Atmosphere* 2015, 6(7), 942-959; doi:10.3390/atmos6070942 ISSN 2073-4433.
- 26) D. Contini, A. Donateo, A. Gambaro, A. Argiriou, D. Melas, D. Cesari, A. Poupkou, A. Karagiannidis, A. Tsakis, E. Merico, R. Cesari, **A. Dinoi**. Impact of Ship Traffic to PM_{2.5} and Particle Number Concentrations in Three Port-Cities of the Adriatic/Ionian Area. *International Journal of Chemical, Molecular, Nuclear, Materials and Metallurgical Engineering*, vol. 9 n.4, pp 21-25(2015) ISSN 1307-6892.
- 27) M.R. Perrone, **A. Dinoi**, S. Becagli, R. Udisti. Chemical composition of PM₁ and PM_{2.5} at a suburban site in southern Italy. *International Journal of Environmental Analytical Chemistry* 94 (2014), 127-15 DOI:10.1080/03067319.2013.791c978 ISSN 0306-7319.
- 28) MR Perrone, S Becagli, JA Garcia Orza, R Vecchi, **A Dinoi**, R Udisti, M Cabello. The impact of long-range-transport on PM₁ and PM_{2.5} at a Central Mediterranean site. *Atmospheric Environment* 71 (2013) 176-186 DOI:10.1016/j.atmosenv.2013.02.006 ISSN1352-2310.
- 29) **A. Dinoi**, M. R. Perrone, P. Burlizzi. Application of MODIS Products for Air Quality Studies Over Southeastern Italy. *Remote Sensing* (2010), 2, 1767-1796; doi: 10.3390/rs2071767 ISSN 2072-4292

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