PROF. SILVANA DI SABATINO

PERSONAL INFORMATION

Work Address: Dipartimento di Fisica e Astronomia viale Berti Pichat, 6/2, 40127 - Bologna -

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EDUCATION

Oct 2000 – Apr 2005: **Doctor of Philosophy (Ph.D.)** Thesis Title: **'Flow and pollutant dispersion in urban areas'**, University of Cambridge (Engineering Department, Pembroke College) Cambridge, UK

Oct 1999 - Sept 2000: Master of Philosophy (M.Phil.) Thesis Title: 'Mathematical models for urban air quality', University of Cambridge (Engineering Department, Pembroke College) Cambridge, UK

Nov 1987 – Jul 1995: Master of Science degree (Laurea – full marks, 110/110) in Physics Thesis Title: 'Analisi e modellistica di flussi turbolenti non omogenei con riferimento allo strato limite atmosferico' (Analysis and modelling of non-homogeneous turbulent flows with reference to the atmospheric boundary layer), University of Bologna, Bologna, Italy

RESEARCH INTERESTS

 Environmental fluid mechanics; atmospheric pollutant dispersion & urban air quality: numerical modelling (including CFD approaches) and field measurements; flow in complex terrain, urban climatology; atmospheric turbulence, urban heat island, flow and building interaction, effect of vegetation on air quality

QUALIFICATIONS

- Qualified for Associate Professor in *Physics of the Atmosphere* since December 2013 – based on the Italian National Evaluation (2012)
- Qualified for Associate Professor in *Geophysics* since February 2014 based on the Italian National Evaluation (2012)

EMPLOYMENT HYSTORY

 15 Sep 2014 - : University of Bologna, Department of Physics and Astronomy – Atmospheric Physics Group

Associate Professor in Atmospheric Physics: duties involve both research and teaching undergraduate and post-graduate (Master and Ph.D.) degree courses and theses supervision. Research focuses broadly on flow and dispersion modelling in the urban atmospheric boundary layer and boundary layer data analysis from both laboratory and field experiments. In the past seven years, experimental field investigations of atmospheric

turbulent flows in complex and heterogeneous terrain have been initiated in collaboration with US Universities (mainly in connection with Prof. H.J.S. Fernando at Notre Dame University, IN, US)

 Nov 2001- 14 Sep 2014: University of Salento, Laboratorio di Micrometeorologia, Dipartimento di Scienza dei Materiali (2001-2012), Dipartimento di Scienze e Tecnologie Biologiche ed Ambientali (2012-present) Lecce, Italy

Assistant Professor (tenure position since 2004) in Atmospheric Physics: duties involve both research and teaching undergraduate and post-graduate (Master and Ph.D.) degree courses and theses supervision. She was group leader of the Micrometeorology Laboratory.

 Feb 1999 - Sep 1999: Cambridge Environmental Research Consultants (CERC) Ltd, Cambridge, UK

Research Associate: the research focused on modelling dispersion of pollutants in the urban environment. Research sponsored by the European Training and Mobility of Researchers (EU -TMR) – 'Optimisation of Modelling Methods for Traffic Pollution in Streets' (TRAPOS) project. Research activity: Implementation of novel algorithms in the operational dispersion model ADMS-Urban (a model developed by CERC Ltd) to account for pollution dispersion in street canyons during calm wind conditions.

 Feb 1997 - Jan 1999: Two-year Fellowship awarded by National Research Council (National competition), Institute for the Study of the Atmosphere and the Climate (ISAC-CNR), Lecce, Italy

Research Associate: the research focused on stable atmospheric boundary layer data analysis and modelling using linearized perturbation models.

May 1998 – Aug 1998: Finnish Meteorological Institute, Helsinki, Finland

Research Scientist: Research tailored to the determination of dispersion parameters from wind and turbulence measurements from masts placed in complex terrain.

• July 1995 - Jan 1997: National Research Council, Institute for the Study of the Atmosphere and the Climate (ISAC-CNR), Bologna, Italy

Research Assistant: Focusing on atmospheric boundary layer data analysis and modelling. Supervision of undergraduate student's research work.

Oct 1996 - Dec 1996: Risoe National Laboratory Roskilde, Denmark

Young Visiting Scientist: Focusing on the effect of small topographies on wind flow with reference to wind energy production. Research sponsored by the European project 'Wind Resources in the Baltic Sea' (EU-JOULE2).

Aug 1996 – Sep 1996: Finnish Meteorological Institute, Helsinki, Finland

Young Visiting Scientist: Focusing on the parameterisation of the atmospheric stable boundary layer using meteorological measurements from tall masts. Research sponsored by the European project 'Wind Modelling and Climatology Studies above Inhomogeneities with

Regard to Wind Energy and Air Pollution with Special Emphasis on Coastal Mediterranean Areas' (EU-TMR).

• Feb 1996 - Mar 1996: Risoe National Laboratory Roskilde, Denmark

Young Visiting Scientist: Focusing on the effect of small topographies on wind flow with reference to wind energy production. Research sponsored by the European project 'Wind Resources in the Baltic Sea' (EU-JOULE2).

Oct 1995 – Dec 1995: Finnish Meteorological Institute, Helsinki, Finland

Young Visiting Scientist: Focusing on the parameterisation of the atmospheric stable boundary layer using meteorological measurements from tall masts. Research sponsored by the European project 'Wind Modelling and Climatology Studies above Inhomogeneities with Regard to Wind Energy and Air Pollution with Special Emphasis on Coastal Mediterranean Areas' (EU-TMR).

- July 1998: winner (National competition) of a one-year studentship awarded by the Italian National Research Council. The focus area was on modelling of the stable boundary layer over complex topography. (Not used, because already employed)
- February 1997: winner (National competition) of a one-year studentship awarded by the Italian National Research Council. The focus area was on turbulence modelling in complex terrain. (Not used because already employed)

VISITING ACADEMIC POSITIONS

July- September 2014 - Notre Dame University, Department of Civil Engineering, Environmental Fluid Dynamics Laboratories - South Bend (IN)

Visiting Associate Professor (Invited): The scope of this visit was to carry out research related to the US-MATERHORN project

Nov 2013 – Hong Kong University

Visiting Professor (Invited): The scope of this visit was to initiate common research in the field of urban climate.

Jun 2012 – Sep 2013: Notre Dame University, Department of Civil Engineering, Environmental Fluid Dynamics Laboratories - South Bend (IN)

Visiting Associate Professor (Invited): The scope of this visit is to carry out research related to the US-MATERHORN project

(http://www3.nd.edu/~dynamics/materhorn/index.php). One of my role has been to act as field manager during the field experimental campaigns in Utah (Sep-Oct. 2012 & May 2013).

Jan-Feb 2012: Notre Dame University, Department of Civil Engineering, Environmental Fluid Dynamics Laboratories - South Bend (IN)

Visiting Professor (Invited): The scope of this visit was to complete initiated common research in the field of turbulence decay associated to flow transition phenomena.

Jun 2011 – Sep 2011: Notre Dame University, Department of Civil Engineering, Environmental Fluid Dynamics Laboratories - South Bend (IN)

Visiting Professor (Invited): The scope of this visit was to investigate flow nocturnal transition and turbulence characteristics in heterogeneous terrain through field experimental research.

Jun 2010 – July 2010: Notre Dame University, Department of Civil Engineering, Environmental Fluid Dynamics Laboratories - South Bend (IN)

Visiting Professor (Invited) The scope of this visit was to test and evaluate instrumentation for new field experiments in the lower ABL.

Nov 2009 – Dic. 2009: Arizona State University, Department of Mechanical and Aerospace Engineering, Center for Environmental Fluid Dynamics. Tempe (AZ), USA.

Visiting Professor (Invited) During this period I had shared responsibility in the set-up and realization of a field experiment in the South Phoenix area. The scope of the experiment was to investigate thermal flow circulation interaction with buildings. Of particular interest was to understand thermal stable stratification within the canopy layer.

Jan 2008 - Apr 2008: Arizona State University, Department of Mechanical and Aerospace Engineering, Environmental Fluid Dynamics Unit. Tempe (AZ), USA.

Visiting Professor (Invited), During this period I have been instructor of a graduate specialist course "Fluid Mechanics of the Sustainable Environment" (shared responsibility with prof. J. Hunt). During this period I was involved in the design and realization of the Phoenix Urban Heat Island experiment in April 2008. My task was the measurement of temperature of building facades of the Phoenix CBD (Central Business District) using IR thermography.

Nov 2007: National Environmental Research Institute, Roskilde, Denmark

Visiting Scientist - Short Term Mobility fellowship sponsored by ESF (European Science Foundation). The activity concerned the "Analysis of numerical simulations of the MUST exercise" promoted by COST 732 project.

Mar 2007 - Apr 2007: Arizona State University, Department of Mechanical and Aerospace Engineering, Environmental Fluid Dynamics Unit. Tempe (AZ), USA.

Visiting Professor (Invited): Study of upstream flow modifications due to cluster of buildings. Design and analysis of lab PIV measurements.

Jan 2006 - Apr 2006: Arizona State University, Department of Mechanical and Aerospace Engineering, Environmental Fluid Dynamics Unit. Tempe (AZ), USA.

Visiting Professor (Invited): research is devoted to data analysis from a field experiment recently performed in the Phoenix Valley to understand evening transitional flows. My focus was on the development of a new parameterisation for gentle slope flows under low synoptic winds.

August 2005 - September 2005: University of Cambridge, Department of Engineering

Visiting Scientist (Invited): the activity concerned the simulation of London Heathrow pollution concentration from airplanes using the EDMS numerical model

MAIN RESEARCH GRANTS AND PROJECTS

- H2020-EU- "Improving the Smart Control of Air Pollution in European Cities" (ISCAPE). (6 M Euro share for UNIBO 500 KEURO). Partner coordinator and WP6 leader.
- TELECOM "Devoloping methods for measuring CO2 in atmosphere using smart phones" (20 kEuro)
- SLAir-Project –Safe Landfill Air 2014-2015. Scientific coordinator for University of Salento. Regional Project (Apulia Region) Funds (20 kEuro) – Programma Operativo Regional FESR 2007-2013
- EU-RESCUE Project 2012-2015; Scientific coordinator for University of Salento duration (200 KEuro). Long Life Learning Project of the European Union (http://rescueproject.wordpress.com/).
- National Operational Project (PON) Research and Competitivity 2007-2013, Asse 1: "Sostegno ai mutamenti strutturali", Objective 4.1.1.4. National funds for the acquisition of new competitive and technologically innovative instrumentation in the framework of the construction of a new Department devoted to Sustainability, Transport and Energy (duration: 5 years) (220 KEuro).
- International Project EUROPEAN TERRITORIAL COOPERATION PROGRAMME (Interreg) GREECE -ITALY 2007-2013. Project Title CESAPO "Contribution of Emission Sources on the Air quality of the POrt-cities in Greece and Italy" Start date January 2012 (duration: 2 years) (50 KEuro).
- COST ACTION ES1006 European Project on "Evaluation, improvement and guidance for the use of local-scale emergency prediction and response tools for airborne hazards in built environments". (2011-2015) - Italian substitute member. – workgroup member on modelling. This project funds travel costs and subsidence from 2 to 4 meetings within Europe each year.
- Biferno Valley International Project "Evaluation of meteo-diffusivity in a narrow valley and its implications on air quality" Italian National Funds (2008-2010) (27 KEuro)
- URB ACT II European Project "Building Healthy Communities (BHC)" P.I. and Scientific Consultant for the Lecce Municipality within the European Project BHC (2008–2011) (17 KEuro)
- COST ACTION 732 European Project on 'Quality Assurance and Improvement of Micro-Scale Meteorological Models'. (2005-2009). Italian representative in the project management committee (only 2 country members are allowed). This project funded all travel costs and subsidence for 2 people (myself and post-doc) for all project meetings (more than 10) within Europe.
- Grant for the "Evaluation of Air quality associated to the installation of a new Power Plant in South Italy" (26 KEuro).
- Grant (2006-2009) for the Project entitled "Sistema Intergrato per il Monitoraggio del Particolato Atmosferico" (SIMPA), (An Integrated System for Atmospheric Particulate Monitoring). Project funded by Puglia Region (BURP- n. 107 del 25-8-2005). Role: P.I. for the dispersion modelling activity WP. (35KEuro)
- Jul 2005 June 2006. Project developed for the University of Cambridge, Cambridge UK Project title: Project for the sustainable development of London Heathrow Airport (PSDH)

- Model intercomparison study using the Emissions and Dispersion Modelling System (EDMS). (10KEuro)
- Grant from the Italian Minister of University and Research (MURST) for the years 2003-2005. Project title "Sviluppo e validazione di procedure per la valutazione delle statistiche di eventi meteo-marini estremi" (Development and validation of methods for the statistical evaluation of extreme meteorological-marine events). (10KEURO)
- Grant from the National Institute of Nuclear Physics for the year 2003-2004. Project title "Trasformazioni climatiche ed ambientali e la roadioattivita" (Climatic and environmental transformations and radioactivity). (2KEuro)
- Grant (2003-2004) from the Environmental Apulia Regional Authority for "Regional Environmental Sustainability". (The project involved providing scientific and technical support for setting-up strategies for future territorial planning and protection with a focus on air quality, urban environment and cultural heritage). (15KEuro)

PATENT

European Patent for the Invention "**Method for fluid-dynamics clustering of cities**" by S. Di Sabatino and L. Leo (2013)

ROLES IN INTERNATIONAL PROJECTS, SCHOOLS AND WORKSHOPS

Local Organiser (shared responsibility with S. Trini Castelli) of the 18th HARMO Conference, Bologna, 9-12 October 2017.

Member of the Scientific Committee of the Rome Symposium on Climate 19-20 November, 2015. Fao – Rome 2015

Local Organiser (as former responsible of RESCUE for UniSalento) of the international Intensive program linked to RESCUE project. This was a pilot course to demonstrate the feasibility a new international Master degree in the field of urban climate, urban planning and management – Lecce (IT), 9-19 February 2015. The school was organised as part of the RESCUE Project. It had about 10 international teachers, 17 international students and about 10 auditors.

Local Organiser of the international workshop "Intelinks between climate change, education and economic growth" – Lecce (IT), May, 13th 2013. Workshop organised as part of the RESCUE Project. (The workshop had about 40 participants).

Italian Representative (substitute member elected) of the European Project COST ES 10-06 'Evaluation, improvement and guidance for the use of local-scale emergency prediction and response tools for airborne hazards in built environments'. (2011-2015).

Italian Representative (elected) of the European Project COST 732 'Quality Assurance and Improvement of Micro-Scale Meteorological Models'. (2005-2009). Italian Representative. Member of the management committee.

Local organiser of the International winter AEROSOL school 2007 "Sorgenti, tecniche di monitoraggio e caratterizzazione – Sources, monitoring and characterization" Lecce, 3-7 December, 2007.

Local organiser of the International summer AEROSOL school 2008 "Monitoring Investigation and physical and chemical characterization of atmospheric particulate matter". Bari, 9-11 October 2008.

Local organiser of the 9th COST 732 Meeting. Lecce, 15-16 October 2007.

Member of the Organiser Committee of the Summer School on Atmospheric Science (From Microscale to Mesoscale Processes), Castro Marina (IT), September 2005, University of Lecce and ISAC-CNR.

CHAIR, INVITED LECTURES

- Keynote Lecture (invited) on "Progress on local scale flow and dispersion modelling" at the 35th ITM (International Technical Meeting on Air quality Modelling and its Applications) Conference 4-7 October 2016, Chana, Crete, Greece
- Invited seminar at ISAC-CNR: "Urban fluid mechanics and implications for urban-scale environmental design". 18 June 2015
- Invited speaker to the national workshop "SonicLib una libreria per gestire dati sonici" Talk title: "Turbulent fluxes and urban ventilation: from field measurements to modelling" Bari. (IT) March 5-6 2014
- Co-Program Chair of the 18th AMS-CMAAP (Committee on Meteorological Applications of Air Pollution), Atlanta, US, February 2014
- Organiser and Chairman of the special session devoted to the MATERHORN project –as part of the AMS-CMAAP Conference- Atlanta, February 2014
- Chairman of a Session on urban pollution: AMS Annual Conference, New Orleans, January 2012.
- Chairman of a Session on CFD modelling at the CWE conference, Chapel Hill, May 2010
- Invited speaker to the International Conference "Local air quality and its interaction with vegetation" 21-22 Jan 2010, Antwerp. Belgium.
- Invited lecturer: (Geographic Information Systems (GIS) 30 hours). Master Course for the formation of 18 "Experts in Rain analysis and management".
- Invited lecturer: (Urban atmospheric pollution -12 hours). International Master for "Transport and urban planning", Lecce, Sep-Oct 2007.
- Invited speaker and chairman of a session on turbulence modelling: Turbulent Mixing and Beyond. ("Turbulent Mixing in Evening Transition Flows"). International Workshop. Trieste 28-26 August 2007. ICCP, Trieste (Italy).
- Invited lecturer: International school of applied geophysics 13th course in "Geophysics and micro geophysics applied to the safeguard of cultural and archaeological patrimony". 25-30 Sep. 2006, Erice, Sicily (Italy).
- Invited lecturer: (4 hours). International Master for "Transport and Environment", Messina, May 2006.

ACADEMIC RESPONSABILITIES

Member of the Doctoral Committee in Geophysics of the University of Bologna, 2015-2018. Joint responsibility for the selection of new Ph.D. students and their annual assessment.

Group Leader of the Laboratory of Micrometeorology, Department of Biological and Environmental Sciences and Technologies, University of Salento (until Sep. 2014).

Member of the Doctoral Committee of the University Consortium Palermo-Messina-Lecce, 2003-2011. Joint responsibility for the selection of new Ph.D. students and their annual assessment.

Member of the Degree Committees in Physics and in Environmental Science (University of Salento) 2004-2014.

Member of the Committee for Curriculum Development for the degree in "Environmental Science" (undergraduate) and in "Environmental Impact, Assessment and Certification" (Master) (University of Salento) 2004-2014.

Member of the Committee for Ph.D. award in Environmental Engineering - Trento University (2012) (extra-departmental activity)

EDITORIAL ACTIVITY

Associate Editor of the international journal <u>Environmental Fluid Mechanics</u> (Springer) (since 2014);

Member of the Editorial Board of the journal <u>Boundary-Layer Meteorology</u> (Springer) since Sep 2010;

Member of the Editorial Board of the journal <u>Environmental Fluid Mechanics</u> (Springer) 2012-2014;

Guest Editor (2013-2015) – Special Issue on "Urban Flow and Dispersion" in the SPRINGER journal Environmental Fluid Mechanics.

Guest Editor (2014) – Special Issue on "Urban Climate" in the ELSEVIER journal "Urban Climate" papers from 12TH IAUC Conference, Dublin August 2012.

Guest Editor (2014-2015) – Special Issue on "Boundary-Layer Processes in Mountainous Terrain: Results from MATERHORN" – In Preparation

MEMBERSHIPS & AFFILIATIONS (ELECTED)

Member (elected) of the Board of the Italian Association of Geophysics

Member (elected) of the Board Committee of the International Association of Urban Climate (IAUC) (2010-2013)

Member (elected) of the AMS Committee on Meteorological Aspects of Air Pollution (CMAAP) (2011-2015)

Services

Reviewer for: Journal of Applied Meteorology and Climatology (JAMC); Boundary-Layer Meteorology; Atmospheric Environment, Building and Environment, Journal of Computational Fluid Dynamics, Environmental Engineering Science, International Journal of Environment and Pollution, Wind Engineering and Industrial Aerodynamics, Transport

Research Part C, Wind Energy, Physics of Fluids, Environmental Fluid Mechanics, International Journal of Climatology and some others.

Reviewer of National and International Projects:

- Italian National Research Council
- UK-NERC
- French Research Council

Reviewer of abstracts and papers for the International CWE Conferences, 2010 (Chapel Hill, NC, US) and 2011 (Amsterdam, The Netherlands)

ACADEMIC TEACHING

Teaching at the **University of Bologna** (since Sep. 2014):

- Boundary Layer Physics and Dispersion processes (6 credits); Autumn Semester -2014
- Dynamic Meteorology (6 credits): Spring Semester 2015
- Climatology (3 credits of actual teaching but main responsible for the entire course 3+3 credits): Spring Semester 2015

Teaching at the **University of Salento** (2001-2016) was done in the following degree courses: Physics, Environmental Science and Mathematics (only 2 years). Courses taught include:

- Atmospheric Physics and Oceanography (6 credits) Spring semester 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014
- Meteorology and Climatology (6 credits) Fall 2013, 2014
- Atmospheric Physics with lab experiences (8 credits) Spring semester 2006, 2008, 2011
- Fluid dynamics of Geophysical Flows (6 credits) Autumn semester 2007, 2008, 2009, 2010
- Introduction to C programming (2 credits) Autumn semester 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011
- Electromagnetism (problem resolution methods). Academic year 2002-2003, 2003-2004
- Physical Oceanography (6 credits) Autumn semester 2002

Supervision of Post-docs, PhD, Master and First level degree theses at University of Bologna (2014-2016)

Currently,

- Dr. Francesco Barbano, PhD student (2016-2019)
- Two Master students

Completed

- Dr. Roseane Alvez –post-doc (July 2015- June 2016)
- Arianna Valmossoi (Physics of the Earth System, UNIBO) Master degree Feb 2016
- Francesco Barbano (Physics of the Earth System, UNIBO) Master degree Feb 2016

Alessio Brunetti (Physics of the Earth System, UNIBO) – Master degree October 2016

Visiting PhD students

- Wang Yi (University of Hong Kong) urban heat island modelling Feb 2015 Jan 2016
- Leo Aragao (University of Rio de Janeiro) local circulation and air pollution June 2015-June 2016

Supervision of Post-docs, PhD, Master and First level degree theses at University of Salento (2004-2015)

PAST STUDENTS/Theses

PhD students/Theses (5)

- Giuseppe Maggiotto (Completed March 2014) Thesis Title: "Analysis of the thermal Urban Environement in a Mediterrenean city"
- Laura S. Leo (Completed June 2011) Thesis Title: "Flow and Dispersion in the Urban Atmosphere: Experimental and Morphometric Approaches"
- Riccardo Buccolieri (Completed March 2009) Thesis Title: "Computational Fluid Dynamics and Integral Models applied to pollution dispersion in urban areas"
- Federica Santese (Completed Feb 2008) Thesis Title: "Development of numerical techniques for the study of urban heat islands in Mediterranean cities"
- Pierpaolo Talamo (Completed Feb 2007) Thesis Title: "Analysis of meteorological data over south-eastern Italy with emphasis on precipitation over the Salento peninsula"

MASTER Students/Theses (16)

- Maria Lisa Vicenti (Physics) Master degree student "Determination of deposition velocity on building facades using a new PTV method based on infrared thermography
- Francesca Di Nicola M.Sc. (Laurea Specialistica in Environmental Science). (Environmental Science degree). Thesis Title: "Studio degli effetti della temperatura superficiale sulla deposizione di aerosol tramite analisi termografiche". (April 2015).
- Gianluca Pappaccogli M.Sc. (Laurea Specialistica in Environmental Science). (Environmental Science degree). Thesis Title: "The effect of urban trees on micrometeorology of a south (Lecce) and north (Helsinki) European city" (April 2015).
- Sabina Calogiuri M.Sc. (Laurea Specialistica in Environmental Science). Thesis
 Title "Applicazione e validazione di un modello integrale per lo studio della
 dispersione di inquinanti in un sito urbano (Oklahoma City, US) Application and
 validation of an integral-type model for the study of pollutant dispersion in an urban
 site (the case of Oklahoma City, US)" (April 2014)
- Maria Vittoria Guarino M.Sc. (Laurea Specialistica in Environmental Impact, Assessment and Certification). Thesis Title "Modelling of the Urban Heat Island in Lecce using the WRF model" (October 2013)
- Alessandro Loconsole M.Sc. (Laurea Specialistica in Environmental Impact, Assessment and Certification). Thesis Title "Modelling of the Urban Heat Island in the Clyde Valley Region (Scotland) and future green mitigation strategies" (April 2013)

- Laura Cezza M. Sc. (Laurea Specialistica in Environmental Impact, Assessment and Certification) – Thesis Tile: "Evaluation of emissions from ships in the Harbour of Brindisi" (April 2012).
- Marco Santo M.Sc. (Laurea Specialistica in Physics) (December 2011) "Analisi e Modellistica dell'isola di calore urbana" – Thesis Title: "Analysis and Modelling of the Urban heat island in London and a Southern European city".
- Raffaele Quarta M. Sc. (Laurea Specialistica in Environmental Impact, Assessment and Certification) (July 2011) "Analisi e Modellistica della Qualità dell'aria nella città di Lecce – Analyses and Modelling of Air Quality in Lecce (IT)"
- Giorgia Verri M. Sc. (Laurea Specialistica in Physics) (July 2009) "Misure ed analisi
 di flussi turbolenti in topografia reale complessa "Measurements and analyses of
 turbulent flows over real complex topography"
- Raffaele Corrado M. Sc. (Laurea Magistrale in Physics) (July 2008) "Sviluppo e verifica di un modello fisico-matematico per il calcolo delle concentrazioni di inquinanti in atmosfera urbana – "Development and verification of a mathematicalphysical model for the computation of pollutant concentration in the urban atmosphere"
- Michela Ciccarese M. Sc. (Laurea Magistrale in Physics) (July 2007) "Studio di eventi di transizione notturno su terreno complesso – A study of evening transition events over complex terrain"
- Irene Marenaci M. Sc. (Laurea Specialistica in Environmental Impact, Assessment and Certification) (July 2006) "Studio della qualità dell'aria mediante il modello ADMS-Urban su orografia complessa: la Val d'Adige – An air quality study over complex orography using the ADMS-Urban model: the application to the Adige Valley, Italy"
- Riccardo Buccolieri M. Sc. (Laurea Specialistica in Environmental Impact, Assessment and Certification) (April 2005) "Modellistica del flusso e della dispersione urbano con applicazioni alla città di Lecce – Urban flow and dispersion modelling with application to Lecce city"
- Efisio Solazzo M. Sc. (Laurea Magistrale in Physics) (April 2004) "Sviluppo di un modello numerico per l'analisi del flusso e del trasporto turbolenti in canopy urbana Development of a numerical model for the analysis of flow and turbulent transport in urban canopy"
- Daniela Miglietta M. Sc. (Laurea Magistrale in Physics) (April 2004) "Studio dello strato limite atmosferico su topografia complessa – A study of the atmospheric boundary layer over complex topography"

FIRST degree (B.Sc.) students/Final Theses (6)

- Chiara Conte (Laurea in Environmental Science and Technology) (March 2013) Thesis Title: "Analisi della trasparenza atmosferica a Lecce mediante confronto di
 serie annuali di radiazione solare globale Analyses of atmospheric clearness in
 Lecce by comparison of global solar radiation annual series".
- Sara Vitali (Laurea in Physics) (Oct 2012) Thesis Title: "Stenosi tracheale: Analisi
 di Immagini TAC e simulazioni CFD Tracheal Sthenosis: Analyses of CAT
 (computer axial tomography) images and CFD simulations"
- Eleonora Cucurachi (Laurea in Environmental Science) (July 2007) Thesis Title:
 "Stima delle sorgenti emissive in atmosfera nella città di Lecce An estimate of emission sources in the city of Lecce"
- Alessandro Agrimi (Laurea in Environmental Science) (Feb 2006) Thesis Title:
 "Studio meteorologico della Valle della Cupa tramite analisi dati e modellistica A

- meteorological study of the Cupa Valley through data analysis and numerical modelling ¹
- Chiara Chirizzi (Laurea in Environmental Science) (Dic 2005) Thesis Title: "Realizzazione ed analisi di modelli digitali di elevazione (DEM) per lo studio della qualità dell'aria - Construction and analysis of digital elevation models (DEMs) for air quality studies"
- Antonella Cavallo (Laurea in Environmental Science) (Feb 2005) Thesis Title: "Modelli di diffusione del particolato atmosferico in ambiente urbano - Numerical models for atmospheric particulate diffusion in the urban environment"

SPIN-OFF

Founder member and President of RESEAUX (RESearch Environmental Applications Using experiments and simulations) s.r.l. - Spin-Off University of Salento founded in February 2012. (http://www.reseuax.it)

INTERNATIONAL CONFERENCES ATTENDED

1.	October 2016	ITM Conference, Chania, Crete, Greece
2.	MAY 2016	Harmo Conference, Budapest
3.	Jan 2016	Annual Meeting of the American Meteorological Society, New Orleans, USA
4.	July 2015	9 th International Conference on Urban Climate (ICUC9), Toulouse (F)
5.	Sep. 2014	16th Harmonisation Conference, Varna (Bulgaria)
6.	August 2014	AMS Mountain Meteorology Conference, San Diego (CA, US)
7.	August 2014	ASME Conference 2014, Chicago, (IL, US)
8.	April-May 2014	EGU General Assembly, Vienna (A)

- 9. Feb 2014 Annual Meeting of the American Meteorological Society, Atlanta, USA
- 10. 2012 Annual Meeting of the American Meteorological Society, New Orleans, Jan USA
- 11. April 2011 European Geophysical Union. Vienna (A)
- The 5th International Symposium on Computational Wind Engineering, 12. May Chapel Hill, (NC), USA. Reviewer and Session Chair for one of the "Dispersion of pollutants" sessions
- 1ST International Conference on "Local Air Quality and its Interaction 13. Jan 2010 with Vegetation" (Invited Speaker). Antwerp, Belgium
- 14. Sept 2009 6th International Symposium on "Heat, Turbulence and Mass Transfer", Rome, Italy.
- October 2008 12th Harmonisation Conference, Cavtat, (Croatia).

- 16. August 2007 Turbulent and Mixing and Beyond. (Invited speaker and Chair of a session.) ICCP. Trieste (Italy).
- 17. July 2007 11th Harmonisation Conference, Cambridge, (UK).
- 18. May 2006 ITM Conference, Leipsiz, Germany.
- 19. Sep 2005 EAGE Near Surface 2005, Palermo (Italy).
- 20. Mar 2005 Fifth International Conference on Urban Air Quality, Valencia (Spain).
- 21. Oct 2004 First International Conference on Applied Geophysics for Engineering (AGE), Messina (Italy).
- 22. May 2002 Fourth Symposium on the Urban Environment, AMS (American Meteorological Society) Conference, Norfolk Virginia, USA.
- 23. Apr 2001 Annual URGENT (UK National Programme) meeting. Birmingham UK.
- 24. Mar 2001 Third International Conference on Urban Air Quality. Loutraki (Greece)
- 25. Aug 2000 Third Symposium on the Urban Environment AMS Conference, University of California, Davis (California, US).
- 26. Oct 1999 Harmonisation within Atmospheric Dispersion Modelling for Regulatory Purposes. INSA de Rouen (France).
- 27. Aug 1999 SATURN Conference, Aveiro (Portugal).
- 28. Apr 1998 International Conference XXIII General Assembly of the European Geophysical Society, Nice (France).
- 29. June 1997 International Conference 2nd European African Conference on Wind Engineering (2EACWE), Genova, Italy.
- 30. Apr 1997 European Seminar "Offshore Wind Energy in Mediterranean and other Seas" (OWEMES97), La Maddalena, Sardinia, Italy.
- 31. Mar 1996 BOREAS III. International Conference on Energy Prediction and Production in Cold Climate, Saariselka (Finland).
- 32. Sep 1995 ERCOFTAC Workshop "Data on Turbulence and Dispersion in Complex Atmospheric Flows", Bologna, Italy.

Full List of Publications (updated Nov 2016)

(current h factor: 17, citations: 993 - source SCOPUS, 1680; h=21 source Google Scholar)

Books

 Berkowicz, R., R. Britter and <u>S. Di Sabatino</u> – Eds. (2004): "Optimisation of Modelling Methods for Traffic Pollution in Streets. TRAPOS" pp.125. Self-published, available from Editors.

Peer-Reviewed Articles in International Journals (ISI)

- 44 Zampieri, M., Russo, S., Di Sabatino, S., Michetti, M., Scoccimarro, E., Gualdi, S. (2016) Global assessment of heat wave magnitudes from 1901 to 2010 and implications for the river discharge of the Alps. *Science of the Total Environment. Volume 571, 15 November 2016, Pages 1330-1339*
- 43 Buccolieri, R., Cesari, R., Dinoi, A., Maurizi, A., Tampieri, F., Di Sabatino, S. (2016) Impact of ship emissions on local air quality in a Mediterranean city's harbour after the European sulphur directive. *Int. J. Environment and Pollution. Volume 59, Issue 1, 2016, Pages 30-42*
- 42 Silvana Di Sabatino (2016) Boundary-Layer Atmospheric Processes in Mountainous Terrain: Results from MATERHORN-X. Preface. *Boundary-Layer Meteorology* (Special Issue BLAMT) Volume 159, Issue 3, 1 June 2016, Pages 465-467.
- 41 Laura S. Leo, M. Y. Thompson, S. Di Sabatino, H.J.S. Fernando (2016) "Stratified flow past a hill: dividing streamline concept revisited". *Boundary-Layer Meteorology* (Special Issue BLAMT). Volume 159, Issue 3, 1 June 2016, Pages 611-634
- 40 Andrey A. Grachev, L. S. Leo, <u>S. Di Sabatino</u>, H. J. S. Fernando, E R. Pardyjak, C. W. Fairall (2016) "Structure of Turbulence in Katabatic Flows below and above the Wind-Speed Maximum". *Boundary-Layer Meteorology* (Special Issue BLAMT). Volume 159, Issue 3, 1 June 2016, Pages 469-494
- 39. R. Dimitrova, Z. Silver, T. Zsedrovits, C. Hocut, L. S. Leo, <u>S. Di Sabatino</u>, H. J. S. Fernando (2016) "Application of MATERHORN Data to Assess WRF Boundary-Layer Schemes". *Boundary-Layer Meteorology* (Special Issue BLAMT). Volume 159, Issue 3, 1 June 2016, Pages 589-609
- 38. Fernando, H.J.S., Pardyjak, E., <u>Di Sabatino S.</u> et al. (2015) "The MATERHORN Unraveling the Intricacies of Mountain Weather". *Bullettin of American Meteorological Society (BAMS)*. Volume 96, Issue 11, November 2015, Pages 1945-1968
- 37. Hang, J.J., Wang, Q., Chen, X., Sandberg, M., Zhu, M., Buccolieri, R., <u>Di Sabatino, S.</u>, (2015). "City breathability in medium density urban-like geometries evaluated through the pollutant transport rate and the net escape velocity". *Building and Environment*, 94 (Part 1), 166-182.
- 36. Buccolieri, R., Salizzoni, Soulhac, and <u>Di Sabatino</u>, S. (2015) "The breathability of compact cities". *Urban Climate*, 13, 73-93
- 35. Lehner, M., Whiteman, C.D., Hoch, S., Jensen, D., Pardyjak, E.R., Leo, L.S., <u>Di Sabatino, S.</u>, Fernando, H.J.S. (2015) "A case study of the nocturnal boundary-layer evolution on a slope at the foot of a desert mountain". *Journal of Applied Meteorology and Climatology*, 54, 732-751.
- 34. Kumar, P., L. Morawska, C. Martani, G. Biskos, M. Neophytou, <u>S. Di Sabatino</u>, M. Bell, L. Norford, R. Britter (2015) "The rise of low-cost sensing for managing air pollution in cities". *Environment International*. 75, 199–205
- 33. Maggiotto, G., Santo, M., Buccolieri, R., Leo, L.S. and <u>Di Sabatino, S.</u> (2014) "Validation of temperature-perturbation and CFD-based modelling for the prediction of the thermal

- urban environment: the Lecce (IT) case study". *Environmental Modeling and Software* 60, 69-83.
- 32. T. Pratt, Z. Lin, <u>S. Di Sabatino</u>, L.S. Leo, N. Dodson; S. Silliman, H.J.S. Fernando, P. Yang (2015) "Field-scale remote sensing of soil moisture based on polarimetric characterization of microwave reflections". *Measurement Science and Technology. Volume 26, Issue 10, 15 September 2015, Article number 105801*
- 31. Leo, L.S., Fernando H.J.S., and <u>Di Sabatino S.</u> (2015) "Near-surface flow in Complex Terrain with Coastal and Urban Influence". *Environmental Fluid Mechanics: Volume 15, Issue 2, 2015, Pages 349-372*
- 30. Maggiotto, G., Santo, M., Buccolieri, R., Leo, L.S. and <u>Di Sabatino</u>, S. (2014) "Study of the urban heat island in Lecce (Italy) by means of ADMS and ENVI-MET". *Int. J. Environment and Pollution*. Vol. 55, Nos. 1/2/3/4, 41-49
- 29. <u>Di Sabatino, S.,</u> Buccolieri, R., and Salizzoni, P. (2013) "Recent advancements in numerical modelling of flow and dispersion in urban areas: a short review". *Int. J. Environment and Pollution*, *52*, 172-191.
- 28. Dallman, A., <u>S. Di Sabatino</u> and H.J.S. Fernando (2013) "Flow and turbulence in an industrial/suburban roughness canopy". *Environmental Fluid Mechanics*, 13, 279-307.
- 27. Fernando, H.J.S, Verhoef, B., <u>Di Sabatino, S.</u>, L.S. Leo and Park, S. (2013) "The Phoenix Evening Flow Transition Experiment (TRANSFLEX)". *Boundary-Layer Meteorology*, 147, 443-468.
- 26. Hang, Y. Li, M. Sandberg, R. Buccolieri, <u>S. Di Sabatino</u> (2012) "The influence of building height variability on pollutant dispersion and pedestrian ventilation in idealized high-rise urban areas". *Building and Environment*, 56, 346-360.
- 25. Hang, J., Y. Li, R Buccolieri, M. Sandberg and <u>S. Di Sabatino</u> (2012) "On the contribution of mean flow and turbulence to city breathability: the case of long streets with tall buildings". *Science of the Total Environment*, 416, 362-373.
- 24. <u>Di Sabatino, S.,</u> Olesen H., Berkowicz R., Franke J., Schatzmann M., Britter R., Schlünzen H., Martilli, A., Carissimo, B. "Towards a model evaluation protocol for urban scale flow, dispersion models (2011)". *International Journal of Environment and Pollution*. Vol. 47, No. 1 / 2 /3 / 4, pp. 336-346.
- 23. Buccolieri R., Sandberg M., <u>Di Sabatino S.</u> (2011) "An application of ventilation efficiency concepts to the analysis of building density effects on urban flow and pollutant concentration. *International Journal of Environment and Pollution*. Vol. 47, No. 1 / 2 / 3 / 4, pp. 248-256.
- 22. <u>Di Sabatino, S.</u>, Buccolieri R., Paradisi P., Palatella L., Corrado R. "A fast model for pollutant dispersion at the neighbourhood scale (2011)". *International Journal of Environment and Pollution*. Vol. 47, No. 1 / 2 /3 / 4, pp. 207-215.
- 21. Buccolieri, R., S. M. Salim, L. S. Leo, <u>S. Di Sabatino</u>, A. Chan, P. Ielpo, G. de Gennaro and C. Gromke (2011). "Analysis of local scale tree–atmosphere interaction on pollutant concentration in idealized street canyons and application to a real urban junction". *Atmospheric Environment*, 45, 1702-1713.

- 20. Salim, S. M., R. Buccolieri, A. Chan, <u>S. Di Sabatino</u> (2011) "Numerical simulations of atmospheric pollutant dispersion in an urban street canyon: Comparison between RANS and LES". *Journal of Wind Engineering and Industrial Aerodynamics*, 99, 103-113.
- 19. <u>Di Sabatino, S.</u>, Solazzo, E. and Britter R. (2011). "Sustainable development of Heathrow airport: model intercomparison study". *International Journal of Environment and Pollution*, 44, No.1/2/3/4 pp. 351 358.
- 18. <u>Di Sabatino, S.</u> et al. (2011). "COST 732 in practise: the MUST model evaluation exercise". *International Journal of Environment and Pollution*. 44, No.1/2/3/4 pp. 403 418.
- 17. Buccolieri, R. and <u>S. Di Sabatino</u> (2011). "MUST experiment simulations using CFD and integral models". *International Journal of Environment and Pollution*, 44, No.1/2/3/4 pp. 376- 384.
- Solazzo, E., <u>Di Sabatino, S.</u>, Dudek, A., Aquilina, N., R.E. Britter (2010) "Coupling the mesoscale model MM5 with a simple urban model. The Lisbon case study. *Boundary-Layer Meteorology*, 137, 441-457.
- 15. <u>Di Sabatino S.</u>, L. S. Leo, R. Cataldo, C. Ratti and R. Britter. (2010) "On the construction of DEMs of a Southern European City and a comparative morphological analysis with respect to Northern European and North American cities". *Journal of Applied Meteorology and Climatology*, 49, 1377–1396.
- 14. Fernando, H.J.S., D. Zajic, <u>S. Di Sabatino</u>, R. Dimitrova, B. Hedquist, and A. Dallman, (2010). "Flow, turbulence and pollutant dispersion in the urban atmospheres". *Physics of Fluids*, 22, 051301-051320.
- Buccolieri R., Sandberg M. and <u>Di Sabatino, S.</u> (2010). "City breathability and its link to pollutant concentration distribution within urban-like geometries". *Atmospheric Environment.* 44, 1894-1903. (Top-50 most cited article as published in Atmospheric Environment 2010-2011)
- 12. Buccolieri, R., C. Gromke, S. Di Sabatino and B. Ruck (2009). "Aerodynamic effects of trees on pollutant dispersion in street canyons". Science of the Total Environment, 407, 19, 5247-5256.
- 11. Gromke, C., R. Buccolieri, S. Di Sabatino and B. Ruck (2008). "Dispersion modeling in a street canyon with tree planting Evaluation of CFD simulations with wind tunnel data". *Atmospheric Environment*, 42, 8640-8650.
- 10. <u>Di Sabatino, S.</u>, R. Buccolieri, B. Pulvirenti and R. Britter (2008). "Flow and Pollutant Dispersion in Street Canyons using FLUENT and ADMS-URBAN". *Environmental Modeling and Assessment*, 13, 368-381.
- 9. <u>Di Sabatino, S.</u>, E. Solazzo, P. Paradisi and R. Britter (2008). "Modelling spatially-averaged wind profiles at the neighbourhood scale". Boundary-Layer Meteorology. 127, 131-151.
- 8. <u>Di Sabatino, S.</u>, R. Buccolieri, B. Pulvirenti and R. Britter (2007) "Simulations of pollutant dispersion within idealised urban-type geometries using CFD and integral models".

Atmospheric Environment. 41, 37, 8316-8329. (Top-50 most cited article as published in Atmospheric Environment 2007-2010)

- 7. Ratti, C., <u>S. Di Sabatino</u> and R. Britter (2006): "Urban Texture Analysis with image processing techniques: winds and dispersion". *Theoretical and Applied Climatology*, 84, 77-90.
- 6. <u>Di Sabatino, S.</u>, P. Kastner-Klein, R. Berkowicz, R. Britter, and E. Fedorovich (2003): "The Modelling of Turbulence from Traffic in Urban Dispersion Models – Part I: Theoretical Considerations". *Environmental Fluid Mechanics*, 3, 129-143.
- 5. Britter, R., <u>S. Di Sabatino</u>, F. Caton, K. Cooke, P. Simmonds and G. Nickless (2002): "Results from three field tracer experiments at neighbourhood scales in the city of Birmingham, UK". *Water, Air and Soil Pollution Focus*, 2, 79-90.
- 4. Ratti, C., <u>S. Di Sabatino</u>, F. Caton, R. Britter, M. Brown, and S. Burian (2002): "Analysis of 3-D urban databases with respect to pollution dispersion for a number of European and American cities". *Water, Air and Soil Pollution Focus* 2, 459-469.
- 3. <u>Di Sabatino S.</u>, B. Tammelin, F. Trombetti and F. Tampieri (1998): "The Vertical Structure of the Stable Boundary Layer over Small Topographic Features". *Wind Engineering and Industrial Aerodynamics*, 74-76, 199-208.
- 2. Maurizi A., <u>S. Di Sabatino</u>, F. Trombetti and F. Tampieri (1997): "A method of analysis for turbulent flows using the streamline coordinate system". *Boundary-Layer Meteorology* 82, 379-397.
- 1. Maurizi A., F. Trombetti, <u>S. Di Sabatino</u> and F. Tampieri (1997): "Reliability of third-order moments parameterizations for models of turbulent boundary layer over gentle topography". *Il Nuovo Cimento 20C*, n. 3, 273-286.

Peer-Reviewed Articles in International Journals (NON-ISI: n. 3)

- 1. Salim, S. M., Buccolieri R., Chan A., <u>Di Sabatino S.</u>, Cheah S.C. (2011) "Large Eddy Simulation of the aerodynamic effects of trees on pollutant concentration in street canyons" Procedia Environmental Sciences (Invited Paper), 4, 17-24.
- 2. Franke J., Bartzis J., Barmpas F., Berkowicz R., Brzozowski K., Buccolieri R., Carissimo B., Costa A., <u>Di Sabatino S.</u>, Efthimiou G., Goricsan I., Hellsten A., Ketzel M., Leitl B., Nuterman N., Olesen H., Polreich E., Santiago J., Tavares R. (2008) "The MUST model evaluation exercise: statistical analysis of modelling results". Hrvatski Meteoroloski Casopis/Croatian Meteorological Journal.
- 3. <u>Di Sabatino S.</u>, B. Tammelin, F. Tampieri and F. Trombetti (1997): "Coastal Wind Profiles in stable conditions". *Wind Engineering*, Vol.XXI n. 3, 181-196.

Book Chapters (N. 9)

Britter R.E. and <u>S. Di Sabatino</u> (2012). "Flow through urban canopies". In Fernando HJS (Ed) Handbook of Environmental Fluid Dynamics, Vol 2. CRC Press, pp 85-96. ISBN: 978-1-4665-5601-0.

- 8. Carruthers, D., <u>Di Sabatino, S.</u>, and J. Hunt (2012). "Urban Air Quality: Meteorological Processes". **Encyclopedia of Sustainability Science and Technology**. Ed. R. Meyers Publisher Springer. Article n. 00427. ISBN: 978-0-387-89469-0.
- 7 Mammarella M.C., Di Sabatino and Coauthors, 2012: "New Atmospheric Pollution Indicators and Tools to Support Policy for Environmental Sustainable Development". National Security and Human Health Implications of Climate Change. H.J.S. Fernando, Z. B. Klaić, Z. B. and J. L. McCulley, Eds., Springer, 191-197. ISBN:
- Salim, S.M., Buccolieri, R., Chan, A. and <u>Di Sabatino, S.</u> (2011) "A CFD study on the role of trees on airflow and pollutant dispersion within urban street canyons". CFD Application on the Energy and Environmental Sectors (Eds. A.R. Sadiq Al-Baghdadi and Hashim R. AhdolHamid), Chapter 6, pp. 175-204. International Energy and Environment Foundation. ISBN: 13: 978-1466230651.
- 5. <u>Di Sabatino, S.</u>, R. Buccolieri, B. Pulvirenti and R. Britter (2007). "Application and validation of flow and dispersion CFD modelling within complex geometries". Developments in Environmental Sciences, Chapter 1.1., Volume 6, 3-11. ISBN: 978-0-444-52987-9. ISSN: 1474-8177.
- 4. F. Santese, <u>S. Di Sabatino</u>, E. Solazzo and R. Britter (2007). "Modelling an Urban heat island in the context of a Mediterranean city". Developments in Environmental Sciences. Chapter 1.6. Volume 6, 55-63. ISBN: 978-0-444-52987-9. ISSN: 1474-8177.
- 3. Kastner-Klein, P., <u>S. Di Sabatino</u>, M. Ketzel, A. Kovar-Panskus, P. Louka, S. Trini-Castelli, R. Berkowicz, R. Britter, E. Fedorovich and J.-F. Sini (2004): "The Modelling of Traffic Produced Turbulence". Section 1.2 in *Optimisation of Modelling Methods for Traffic Pollution in Streets, TRAPOS.*
- 2. Sini,J-F., A. Abdelqari, R. Britter, <u>S. Di Sabatino</u>, A. Kovar-Panskus, P. Louka, P.G. Mestayer, L. Moulinneuf, A. Robins, J.-M. Rosant, E. Savory, G. Vachon (2004): "The influence of thermal effects on flow and dispersion in street canyons". Section 1.3 in *Optimisation of Modelling Methods for Traffic Pollution in Streets. TRAPOS*.
- 1. Trini Castelli, S., <u>S. Di Sabatino</u>, G. Clai, I. Düring, R. Britter, D. Carruthers, A. Lohmeyer, P. Zandveld (2004). "The Modelling of Tunnel entrances and exits". Section 1.4 in *Optimisation of Modelling Methods for Traffic Pollution in Streets. TRAPOS*.
- Proceedings of International Conferences (with referees) (These are typically 4 to 8-page long articles submitted after acceptance of the abstract reviewed). N. 66
- <u>Di Sabatino S. 2016</u>. Progress in Local Scale Flow and Dispersion Modelling. Proc. 35th NATO/CCMS International Technical Meeting on Air Pollution Modelling and its Application (ITM). 3-7 October 2016, Chania, Crete (Greece). Invited keynote speaker
- 2. Di Nicola F., Vincenti M.L., Conry P., Buccolieri R., Ielpo P., Genga A., Giotta L., Fernando H.J.S., <u>Di Sabatino S.</u>, 2016. Dry deposition onto vertical surfaces in the urban environment. Proc. 17th Int. Conf. on Harmonisation within Atmospheric Dispersion Modelling for Regulatory Purposes, Budapest (Hungary), 9-12 May
- 3. Conry P., <u>Di Sabatino S.</u>, Di Nicola F., Vincenti M.L., Buccolieri R., Ielpo P., Giotta L., Genga A., Valli L., Rispoli G., Fernando H.J.S., 2016. The role of surface building materials in air quality applications. Proc. 17th Int. Conf. on Harmonisation within

- Atmospheric Dispersion Modelling for Regulatory Purposes, Budapest (Hungary), 9-12 May
- 4. Albani R.A.S., Pulvirenti B. and <u>Di Sabatino S.</u>, 2016. SIMULATIONS OF TRAFFIC RELATED POLLUTANTS IN A MAIN STREET OF RIO DE JANEIRO CITY (BRAZIL) USING COMPUTATIONAL FLUID DYNAMICS MODELLING. Proc. 17th Int. Conf. on Harmonisation within Atmospheric Dispersion Modelling for Regulatory Purposes, Budapest (Hungary), 9-12 May
- Aragão Ferreira da Silva L., <u>Di Sabatino S.</u>, Gomes Pimentel L., and Pereira Duda F. 2016. ANALYSIS OF THE INTERNAL BOUNDARY LAYER FORMATION ON TROPICAL COASTAL REGIONS USING SODAR DATA IN SANTA CRUZ REGION OF MRRJ. Proc. 17th Int. Conf. on Harmonisation within Atmospheric Dispersion Modelling for Regulatory Purposes, Budapest (Hungary), 9-12 May
- 6. Buccolieri R., Wigö H., Sandberg M., <u>Di Sabatino S.</u>, 2016. On the assessement of the drag force due to cube arrays exposed to different boundary layers. Proc. 10th International Conference on Air Quality Science and Application, Milan (Italy), 14-18 March
- 7. <u>Di Sabatino S.</u>, Buccolieri R., Leo L.S., Pappaccogli G., 2015. On the exchange velocity in street canyons with tree planting. Proc. ICUC9 9th International Conference on Urban Climate jointly with 12th Symposium on the Urban Environment, Toulouse (France), 20-24 July.
- 8. Buccolieri R., Maggiotto G., <u>Di Sabatino S.</u>, 2015. Evaluation of mitigation strategies to improve pedestrian comfort in a typical Mediterranean city. Proc. ICUC9 9th International Conference on Urban Climate jointly with 12th Symposium on the Urban Environment, Toulouse (France), 20-24 July
- 9. Pappaccogli, G., Buccolieri, R., Maggiotto, G., Leo, L.S., Rispoli, G., Micocci, F., <u>Di Sabatino, S.</u> (2014) "The effects of trees on micro-meteorology in a medium-size Mediterranean city: in-situ experiments and numerical simulations". Proc. ASME 4th Joint US-European Fluids Engineering Division Summer Meeting and 11th International Conference on Nanochannels, Microchannels, and Minichannels. FEDSM2014, August 3-7, 2014, Chicago, Illinois, USA
- 10. Guarino, M.-V., Martilli, A., <u>Di Sabatino, S.</u>, Leo, L.S. (2014) "Modelling the urban boundary-layer over a typical Mediterranean city using WRF: assessment of UHI and thermal comfort". Proc. ASME 4th Joint US-European Fluids Engineering Division Summer Meeting and 11th International Conference on Nanochannels, Microchannels, and Minichannels. FEDSM2014, August 3-7, 2014, Chicago, Illinois, USA
- Buccolieri R., Cesari R., <u>Di Sabatino S.</u>, Dinoi A., Maurizi A., Tampieri F., 2014. Impact of European Sulfur Directive on ship emissions in a Mediterranean port. Proc. 16th Int. Conf. on Harmonisation within Atmospheric Dispersion Modelling for Regulatory Purposes, Varna (Bulgaria), 8-11 September.
- Di Sabatino S., Buccolieri R., Leo L.S., Pappaccogli G., 2014. On thermal stratification in real street canyons with trees: consequences for local air quality. Proc. 16th Int. Conf. on Harmonisation within Atmospheric Dispersion Modelling for Regulatory Purposes, Varna (Bulgaria), 8-11 September.
- 13. Cesari R., Buccolieri R., Maurizi A., Quarta R., <u>Di Sabatino S.</u>, 2014. Impact of shipping emissions from a Mediterranean port city by coupling of the meso-scale

- model BOLCHEM with the micro-scale model ADMS-URBAN. Proc. 9th International Conference on Air Quality Science and Application, Garmisch-Partenkirchen, 24-28 March
- 14. Buccolieri R., <u>Di Sabatino S.</u>, Donateo A., Cesari R., Maurizi A., Dinoi A., Merico E., Genga A., Contini D., 2014. Experimental and modelling evaluation of the shipping emission contribution to local air pollution in a port city in the south Adriatic coast of Italy. 94th Annual Meeting 18th Joint Conference on the Applications of Air Pollution Meteorology with the A&WMA, Atlanta, 1-6 February
- 15. Aarrevaara E., Emmanuel R., Buccolieri R., Gallagher C., Kostia A., Rosenlund H., <u>Di Sabatino S.</u>, Thomson C., 2013. Sustainable urban growth and climate change challenges to the future education. Proc. 3rd International Conference The Future of Education, Florence (Italy), 13-14 June.
- 16. G. Maggiotto, M. Santo, R. Buccolieri, <u>S. Di Sabatino</u> (2013). Study of the urban heat island in Lecce (Italy) by means of ADMS and ENVI-MET. Proc. 15th Int. Conf. on Harmonisation within Atmospheric Dispersion Modelling for Regulatory Purposes, Madrid (Spain), May 6-9.
- 17. <u>S. Di Sabatino</u>, L. Cezza, R. Quarta and R. Buccolieri (2013) Contribution of emission sources from shipping in the port area of Brindisi, Italy. Proc. 15th Int. Conf. on Harmonisation within Atmospheric Dispersion Modelling for Regulatory Purposes, Madrid (Spain), May 6-9.
- 18. <u>Di Sabatino, S.</u>, Buccolieri, R. Salizzoni, P. (2012) "Recent advancement from flow and dispersion studies around bluff bodies for urban environment applications". The Seventh International Colloquium on Bluff Body Aerodynamics and Applications (BBAA7) Shanghai, China; September 2-6. (Invited paper).
- 19. Leo, L.S. <u>Di Sabatino</u> and Buccolieri, R., (2012). "A novel approach for urban mean flow parameterisation using morphometric analyses". Proc. of 8th International Conference on Urban Climate (ICUC8), Dublin, August 6-10.
- 20. Santo, M. Maggiotto, G., Stocker, J., Carruthers, D., <u>Di Sabatino, S.</u> (2012) "Comparison of ADMS-Temperature and Humidity model and ENVI-met with measured temperature values" Proc. of 8th International Conference on Urban Climate (ICUC8), Dublin, August 6-10.
- 21. Salim, S.M., Buccolieri, R., <u>Di Sabatino, S.</u>, Chan, A. and Cheah S.C. (2012) "Large Eddy Simulation of the aerodynamic role of trees on airflow and pollutant dispersion in urban street canyons". 8th International Conference on Air Quality Science and Application, Athens, 19-23 March.
- 22. Leo, L.S., Solazzo, E. and <u>Di Sabatino, S.</u> (2012) "Towards synthetic cities: consequences for urban flow and dispersion modelling". 8th International Conference, Air Quality Science and Application, Athens, 19-23 March.
- 23. Salim, S.M., Chan A., Buccolieri R., <u>Di Sabatino S.</u>, Cheah S.C. (2010). "Large eddy simulations of the aerodynamic effects of trees on pollutant concentration in street canyons". Proc. Urban Environmental Pollution Overcoming Obstacles to Sustainability and Quality of Life, Boston (USA), June 20-23. (**Invited paper**).
- 24. Buccolieri R., Salim M.S., <u>Di Sabatino S.</u>, Chan A., Ielpo P., de Gennaro G., Placentino C.M., Caselli M., Gromke C., (2010). Study of tree-atmosphere interaction and assessment of air quality in real city neighbourhoods. Proc. 13th Int. Conf. on

- Harmonisation within Atmospheric Dispersion Modelling for Regulatory Purposes, Paris (France), June 1-4. (Best poster –winner award).
- 25. <u>Di Sabatino, S.,</u> J. Bartzis, G. Efthimiou, R. Berkowicz, M. Ketzel, H. Olesen, R. Buccolieri, A. M. Costa, R. Tavares, J. Franke, B. Leitl, R. Nuterman and A. Baklanov, (2010) Analyses, critical issues and outcome from COST732 CFD evaluation exercise. The 5th Symposium on Computational Wind Engineering (CWE), Chapel Hill, (NC, USA) 23-27 May.
- 26. <u>Di Sabatino, S.</u>, Buccolieri, R. and Gromke, C. (2010). CFD modelling of tree-atmosphere interaction and assessment of air quality in street canyons. Proc. of the 1st International Conference "Local Air quality and its interaction with vegetation". Anterwerp, 20-21 January. (**Invited paper**).
- 27. Salim, S.M., Buccolieri R., Chan A., <u>Di Sabatino S.</u>, Gromke C., (2009.) Urban air quality management: effects of trees on air pollution concentration in urban street canyons. Proc. Universitas 21 Postgraduate Conference: Sustainable cities of the future, Melbourne & Brisbane, November 30 December 4.
- 28. Pulvirenti, B., <u>Di Sabatino S.</u> and R. Buccolieri (2009). Thermal effects on flow and dispersion in street canyons. Proc. of the 6th International Symposium on "Turbulence, Mass and Heat Transfer". Rome, 14-19 September.
- 29. Leo, L., <u>Di Sabatino, S.</u>, Britter, R., Ratti, C., Dallman, A., Fernando, HJS. (2009). Parameterisation of in-canopy and exchange velocities based on the morphometric analysis of real urban canopies. Proc. of the 7th International Conference on Urban Climate (ICUC7)., Yokohama (Japan), 28 Jun 3 July
- 30. Hedquist BC, <u>Di Sabatino S.</u>, Fernando, HJS, Leo, S. and Brazel, (2009). Results from the Phoenix urban heat island experiment. Proc. of the 7th International Conference on Urban Climate (ICUC7)., Yokohama (Japan), 28 Jun 3 July.
- 31. <u>Di Sabatino S.</u>, Buccolieri R., Paradisi P., Palatella L., Corrado R. and Solazzo E. (2009). A fast model for flow and pollutant dispersion at the neighbourhood scale. Proc. of the Urban Air Quality Conference, Istanbul (Turkey), March 24-27.
- 32. <u>Di Sabatino S.,</u> L. S. Leo, R. Cataldo, C. F. Ratti and R. E. Britter (2009). Morphometric characterization of real cities and its role on wind and dispersion modelling. Proc. of the Urban Air Quality Conference, Istanbul (Turkey), March 24-27.
- 33. <u>Di Sabatino S</u>, Hedquist, B.C., Carter W, Leo, L., Fernando, H.J.S. (2009). Phoenix urban heat island experiment: effects of built elements. Proc. of the Eighth Symposium on the Urban Environment, Phoenix, Arizona. *The conference is part of the 89th American Meteorological Society Annual Meeting (Phoenix, AZ); 10-16 January 2009*.
- 34. Hedquist, B.C., Brazel, A.J., <u>Di Sabatino, S.</u>, Carter, W. and Fernando, H.J.S. (2009): Phoenix urban heat island experiment: micrometeorological aspects. Proc. of the Eighth Symposium on the Urban Environment. *The conference is part of the 89th American Meteorological Society Annual Meeting (Phoenix, AZ); 10-16 January 2009.*
- 35. <u>Di Sabatino S.</u>, Olesen H., Berkowicz R., Franke J., Schatzmann M., Britter R., Schlünzen H., Martilli A and Carissimo B. (2008). A model evaluation protocol for urban scale flow and dispersion models. Proc. 12th Int. Conf. on Harmonisation

- within Atmospheric Dispersion Modelling for Regulatory Purposes, Cavtat (Croatia), October 6-9.
- 36. Olesen H.R., Baklanov A., Bartzis J., Barmpas F., Berkowicz R., Brzozowski K., Buccolieri R., Carissimo B., Costa A., <u>Di Sabatino S.</u>, Efthimiou G., Franke J., Goricsan I., Hellsten A., Ketzel M., Leitl B., Nuterman R., Polreich E., Santiago J. and Tavares R. (2008). The MUST model evaluation exercise: Patterns in model performance. Proc. 12th Int. Conf. on Harmonisation within Atmospheric Dispersion Modelling for Regulatory Purposes, Cavtat (Croatia), October 6-9.
- 37. Franke J., Bartzis J., Barmpas F., Berkowicz R., Brzozowski K., Buccolieri R., Carissimo B., Costa A., <u>Di Sabatino S.</u>, Efthimiou G., Franke J., Goricsan I., Hellsten A., Ketzel M., Leitl B., Nuterman R., Olesen H., Polreich E., Santiago J. and Tavares R. (2008). The must model evaluation exercise: statistical analysis of modelling results. Proc. 12th Int. Conf. on Harmonisation within Atmospheric Dispersion Modelling for Regulatory Purposes, Cavtat (Croatia), 6-9 October.
- 38. <u>Di Sabatino S.</u>, Buccolieri R., Paradisi P., Palatella L., Corrado R. and Solazzo E. (2008). A fast model for flow and pollutant dispersion at the neighbourhood scale. Proc. 12th Int. Conf. on Harmonisation within Atmospheric Dispersion Modelling for Regulatory Purposes, Cavtat (Croatia), October 6-9.
- 39. Buccolieri R., Pulvirenti B., <u>Di Sabatino S.</u>, Britter R. (2008). The influence of buoyancy on flow and pollutant dispersion in street canyons. Proc. 12th Int. Conf. on Harmonisation within Atmospheric Dispersion Modelling for Regulatory Purposes, Cavtat (Croatia), October 6-9.
- 40. Gromke C., Buccolieri R., <u>Di Sabatino S.</u>, Ruck B. (2008). Evaluation of numerical flow and dispersion simulations for street canyons with avenue-like tree planting by comparison with wind tunnel data. Proc. 12th Int. Conf. on Harmonisation within Atmospheric Dispersion Modelling for Regulatory Purposes, Cavtat (Croatia), October 6-9.
- 41. <u>Di Sabatino, S.</u>, E. Solazzo and Britter R. (2007). "Sustainable development of Heathrow airport: model intercomparison study". Proc. 11th International Conference on Harmonisation within Atmospheric Dispersion Modelling for Regulatory Purposes, Cambridge, United Kingdom, July 2-5, 2007.
- 42. <u>Di Sabatino, S.</u>, Joerg, Olesen, Ketzel, and Buccolieri R. (2007). "First results from the model validation exercise within COST Action 732". Proc. 11th International Conference on Harmonisation within Atmospheric Dispersion Modelling for Regulatory Purposes, Cambridge, United Kingdom, July 2-5, 2007.
- 43. <u>Di Sabatino, S.</u> and Buccolieri R. (2007). "MUST experiment simulations using CFD and integral models". Proc. 11th International Conference on Harmonisation within Atmospheric Dispersion Modelling for Regulatory Purposes, Cambridge, United Kingdom, July 2-5, 2007.
- 44. <u>Buccolieri, R.</u> and Di Sabatino S. (2007). "Flow and pollutant dispersion in urban arrays for the standardization of CFD modelling practise". Proc. 11th International Conference on Harmonisation within Atmospheric Dispersion Modelling for Regulatory Purposes, Cambridge, United Kingdom, July 2-5, 2007.
- 45. <u>Santese, F.</u>, Buccolieri R., Di Sabatino S. and Britter R. (2007). "CFD simulations for the study of thermal effects on flow and pollutant dispersion in urban geometries".

- Proc. 11th International Conference on Harmonisation within Atmospheric Dispersion Modelling for Regulatory Purposes, Cambridge, United Kingdom, July 2-5, 2007.
- 46. Marenaci, I., <u>S. Di Sabatino</u> and F. Predicatori (2007). Proc. 11th International Conference on Harmonisation within Atmospheric Dispersion Modelling for Regulatory Purposes, Cambridge, United Kingdom, July 2-5, 2007.
- 47. <u>Di Sabatino, S.</u>, R. Buccolieri, B. Pulvirenti and R. Britter (2006). "Application and validation of flow and dispersion CFD modelling within complex geometries". 28th NATO/CCMS International Technical Meeting on Air Pollution Modelling and its Application (ITM). 15-19 May 2006 Leipzig (DE).
- 48. F. Santese, <u>S. Di Sabatino</u>, E. Solazzo and R. Britter (2006). "Modelling an Urban heat island in the context of a Mediterranean city". 28th NATO/CCMS International Technical Meeting on Air Pollution Modelling and its Application (ITM). 15-19 May 2006 Leipzig (DE).
- 49. <u>Di Sabatino, S.,</u> E. Solazzo and R. E. Britter (2005): "Modelling Techniques for Flow and Dispersion Characteristics Prediction in Urban Areas". EAGE Near Surface Conference. 4-8 September, Palermo (IT)
- 50. <u>Di Sabatino, S.</u> and R. Britter (2005): "Modelling the flow over an urban roughness". Fifth International Conference on Urban Air Quality. 29-31 March, Valencia (ES)
- 51. <u>Di Sabatino, S.,</u> R. Buccolieri, B. Pulvirenti and R. Britter (2005): "Flow and dispersion in street a street canyon using with FLUENT and ADMS-URBAN". Fifth International Conference on Urban Air Quality. 29-31 March, Valencia (ES)
- 52. Solazzo, E., <u>S. Di Sabatino</u>, and R. Britter (2005): "Transfer processes in a simulated urban street canyon using morphological parameters from DEM analysis". Fifth International Conference on Urban Air Quality. 29-31 March, Valencia.
- 53. Talamo, P., <u>Di Sabatino, S.</u> and Ruggiero, L. (2004): "The influence of Appenine on precipitation along the Adriatic coast of Puglia". 6th Plinius Conference on Mediterrenean Storms. 17-24 October, 2004.
- 54. <u>Di Sabatino, S., E. Solazzo, P. Paradisi and R. E. Britter (2004): "Modelling the flow field for environmental applications". First International Conference Applied Geophysics for Engineering. 13-15 October, Messina (IT).</u>
- 55. <u>Di Sabatino, S.,</u> C. Ratti and R. Britter (2002): "Modelling the Urban Flow Field and Pollution Dispersion using Digital Elevation Models". Fourth Symposium on the Urban Environment. 20-24 May, Norfolk Virginia, USA.
- 56. Kastner-Klein, P., M. Ketzel, <u>S. Di Sabatino</u>, R. Britter and E. Fedorovich (2002): "Significance of traffic produced turbulence for urban dispersion modeling". Fourth Symposium on the Urban Environment. 20-24 May, Norfolk Virginia, USA..
- 57. Ratti, C., <u>S. Di Sabatino</u>, F. Caton, R. Britter, M. Brown and S. Burian (2001): "Analysis of 3-D urban databases with respect to pollution dispersion for a number of European and American cities". Third International Conference on Urban Air Quality. 19-23 March 2001, Loutraki, Greece.
- 58. Britter, R., Caton, F., <u>Di Sabatino, S.</u>, Cooke, K., Simmonds, P. and Nickless, G. (2001): "Results from three field tracer experiments at neighbourhood scales in the

- city of Birmingham, UK". Third International Conference on Urban Air Quality. 19-23 March 2001, Loutraki, Greece.
- 59. Britter, R., Caton, F., <u>Di Sabatino, S.</u>, Cooke, K., Simmonds, P. and Nickless, G. (2001): "Analysis of measurements from three tracer experiments in the city of Birmingham UK". Annual URGENT Meeting. 4-6 April 2001 Birmingham, UK.
- 60. Ratti, C., <u>S. Di Sabatino</u>, F. Caton, and R. Britter (2000): "An application of Digital Elevation Model data to urban dispersion modelling". Third Symposium on the Urban Environment. 14-18 August, Davis, California.
- 61. Britter, R., F. Caton, K. Cooke, <u>S. Di Sabatino</u>, P. Simmonds, and G. Nickless (2000): "Dispersion of a passive tracer within and above an urban canopy: Birmingham, UK, experiment". Third Symposium on the Urban Environment, 14-18 August Davis, California.
- 62. Ratti, C., F. Caton, S. Di Sabatino and R. Britter (2000): Morphological parameter for urban dispersion models. Proceedings PLEA (Passive and Low Energy Architecture) Conference. 2-5 July, Cambridge, UK. (**Best poster winner award**).
- 63. Cooke, K., P. G. Simmonds, G. Nickless, F. Caton, <u>S. Di Sabatino</u>, R. Britter (2000): "Tracers and Dispersion of Gaseous Pollutants within an Urban Canopy". EUROTRAC-2-Symposium. 27-31 March, Garmisch-Partenkirchen (DE).
- 64. <u>Di Sabatino S.</u>, B. Tammelin, F. Trombetti and F. Tampieri (1997): "The Vertical Structure of the Stable Boundary Layer over Small Topographic Features". 2nd European and African Conference on Wind Engineering, 22-26 June, Genova (IT).
- 65. <u>Di Sabatino S.</u>, B. Tammelin, F. Tampieri and F. Trombetti (1997): "Coastal Wind Profiles in stable conditions". OWEMES97 Conference, April 10-11, La Maddalena, Sardinia (IT).
- 66. <u>Di Sabatino S.</u>, B. Tammelin and F. Tampieri (1996): "Measurements of wind profiles and turbulence features in the stable boundary layer". BOREAS III Conference on Energy Prediction and Production in Cold Climate. March 19-22, Saariselka (Finland).

Abstracts & Presentations at International Conferences without proceedings (N. 37)

- <u>Di Sabatino S.</u>, Leo L.S., Fernando HJS, Pardyjak E., Hocut C., 2016. Turbulence sources in mountain terrain: results from MATERHORN program. EGU, Wien, 17-22 April 2016.
- 2. <u>Di Sabatino S.</u>, Pulvirenti B., Municchi F and Kumar P. 2016. Predictions of nanoparticles concentrations at Marylebone Road in London (UK). AMS 96TH Annual Meeting, New Orleans (Lousiana, US),10-14 January 2016
- 3. <u>Di Sabatino S.</u>, L. Leo, H.J.S. Fernando, E. Pardyjak, M. Lehner, D. Whiteman, S. Hoch, F. Barbano, Aldo Brandi. Observations of evening and morning transition in valleys and slopes. AMS 96TH Annual Meeting, New Orleans (Lousiana, US),10-14 January 2016
- 4. Buccolieri R., Rizzo A., <u>Di Sabatino S.</u>, Lionello P., 2015. Variability of solar radiation in a Mediterranean city (Lecce, Southern Italy). 15th EMS Annual Meeting & 12th

- European Conference on Applications of Meteorology (ECAM), Sofia (Bulgaria), 07-11 September
- 5. Grachev, Andrey; Leo, Laura; Di Sabatino, Silvana; Fernando, Harindra; Pardyjak, Eric; Fairall, Christopher 2015. The turbulence structure of katabatic flows below and above wind-speed maximum. EGU General Assembly, Wien, 12-17 April 2015.
- 6. Genga A., Ielpo P., Siciliano M., Buccolieri R., Di Sabatino S., 2014. PM2.5 in the port city of Brindisi (IT): characterization, source assessment and dispersion modeling. Proc. 5th CMA4CH Mediterraneum Meeting, Rome (Italy, 14-17 December.
- 7. Cesari R., Buccolieri R., Maurizi A., Quarta R., Di Sabatino S., 2014. Impact of shipping emissions from a Mediterranean port city by coupling of the meso-scale model BOLCHEM with the micro-scale model ADMS-URBAN. Proc. 9th International Conference on Air Quality Science and Application, Garmisch-Partenkirchen, 24-28 March
- 8. Leo, L.S., <u>Di Sabatino, S.</u> et al. Turbulence characteristics in katabatic flows: some results from MATERHORN-1. EGU General Assembly 2014, Wien, 28 April -2 May 2014
- 9. Hocut, C., <u>Di Sabatino, S.</u>, et al. Observations and analysis of slope-valley flow interactions in MATERHORN-1 EGU General Assembly 2014, Wien, 28 April -2 May 2014
- 10. Thomson, M., Fernando, H.J.S., <u>Di Sabatino, S.</u>, Leo, L.S. (2013) "Effects of complex terrain on atmospheric flows: dividing streamline observations and quantifications". American Physics Society APS Division of Fluid Dynamics Meeting Abstracts. 24-26 November 2013.
- 11. Fernando et al. 94th American Meteorological Society Annual Meeting 18th Conference on Air Pollution Meteorology with the A&WMA. Atlanta, Georgia, US, February, 2-6.
- 12. T.G. Pratt, Z. Lin, <u>S. Di Sabatino</u>, and L. Leo (2014) "Towards Estimation of Soil Moisture Using RF Polarimetric Responses with Topographical Data and Electromagnetic Scattering Models" 94th American Meteorological Society Annual Meeting 18th Conference on Air Pollution Meteorology with the A&WMA. Atlanta, Georgia, US, February, 2-6.
- 13. L.S. Leo, <u>S. Di Sabatino</u>, A.A. Grachev, H.J.S. Fernando, C.M. Hocut, E.R. Pardyjak, D. Jensen (2014). "Structure and dynamics of katabatic flows: results from MATERHORN X -1" 94th American Meteorological Society Annual Meeting 18th Conference on Air Pollution Meteorology with the A&WMA. Atlanta, Georgia, US, February, 2-6.
- 14. R. Buccolieri, <u>S. Di Sabatino</u>, A. Donateo, R. Cesari, A. Maurizi, A. Dinoi, E. Merico, A. Genga, and D. Contini (2014). "Experimental and modelling evaluation of the shipping emission contribution to local air pollution in a port city in the south Adriatic coast of Italy". 94th American Meteorological Society Annual Meeting 18th Conference on Air Pollution Meteorology with the A&WMA. Atlanta, Georgia, US, February, 2-6.
- 15. J.C.R. Hunt, H.J.S. Fernando, <u>S. Di Sabatino</u>, L.S. Leo, D.J. Carruthers, and M. Thompson (2014). "Modelling atmospheric flows over isolated orography: stable

- stratification and separation effects" 94th American Meteorological Society Annual Meeting 18th Conference on Air Pollution Meteorology with the A&WMA. Atlanta, Georgia, US, February, 2-6.
- 16. R. Dimitrova, Z. Silver, H.J.S. Fernando, L. Leo, <u>S. Di Sabatino</u> (2014). "Intercomparison between different PBL options in WRF model. Modification of two PBL schemes for stable conditions" 94th American Meteorological Society Annual Meeting 18th Conference on Air Pollution Meteorology with the A&WMA. Atlanta, Georgia, US, February, 2-6.
- 17. <u>S. Di Sabatino</u>, L. S. Leo, H. J. S. Fernando, A. Grachev, R. Dimitrova, Z. Silver, R. Quarta, T. Zsedrovits, T. Pratt, Z. Lin, D. Zajic, J. C. Pace, E. Pardyjak, D. Jensen, and S. W. Hoch (2014). "Observations of flow and turbulence in complex terrain during evening transition" 94th American Meteorological Society Annual Meeting 18th Conference on Air Pollution Meteorology with the A&WMA. Atlanta, Georgia, US, February, 2-6.
- 18. Z. Silver, R. Dimitrova, H.J.S. Fernando, L. Leo, <u>S. Di Sabatino</u>, T. Zsedrovits (2013) "High Resolution WRF Modeling for MATERHORN Field Campaign" AGU Fall Meeting, San Francisco, CA, US, 9-13 December.
- M. Jeglum, H. J. S. Fernando, E. R. Pardyjak, D. Zajic, S. F. J. De Wekker, J. C. Pace, <u>S. Di Sabatino</u>, S. W. Hoch, J. Steenburgh, Z. Pu, C. D. Whiteman, J. D. Massey, Y. Wang, L. S. Leo, C. M. Hocut, H. Zhang, and D. Jensen (2014) "The Mountain Terrain Atmospheric Modeling and Observations (MATERHORN) Program: Observations and Results" AMS-15th Conference on Mesoscale Processes, Portand, OR, US, August 6-9.
- Z. Pu, X. Zhang, H. Zhang, E. R. Pardyjak, W. J. Steenburgh, D. Zajic, Y. Wang, S. <u>Di Sabatino, S.</u>, W. Hoch, S. F. J. De Wekker, J. D. Massey, M. E. Jeglum, C. D. Whiteman, and H. J. S. Fernando (2013) "A real-time WRF forecast during the Mountain Terrain Atmospheric Modeling and Observations (MATERHORN) Program: Performance and evaluation with observations". AMS-15th Conference on Mesoscale Processes, Portand, OR, US, August 6-9.
- 21. E. R. Pardyjak, S. Hoch, D. Jensen, N. Gunawardena, S. Di Sabatino, C. D. Whiteman, C. Higgins, L. S. Leo, C. Hocut, and H. J.S. Fernando (2013) "First observations of the effects of shadow fronts on surface layer dynamics during morning and evening transitions: MATERHORN-X Fall". Atmosphere and Cryosphere Assembly 2013 Air, Ice & Process Interactions, July 8-12, Davos, Switzerland, Abstract 1080. Oral Presentation.
- 22. L. S. Leo, <u>S. Di Sabatino</u>, A. A. Grachev, C. M. Hocut, H. J.S. Fernando, E. R. Pardyjak, D. Jensen, S. W. Hoch and C. D. Whiteman (2013) "Spatial and Temporal Evolution of katabatic flows in MATERHORN-1". Atmosphere and Cryosphere Assembly 2013 Air, Ice & Process Interactions, July 8-12, Davos, Switzerland. Abstract 1230. Oral Presentation.
- 23. C. Hocut, R. Dimitrova, Z. Silver, <u>S. Di Sabatino</u>, L. S. Leo, S. Hoch, Y. Wang, E. Pardyjak, H. J.S. Fernando (2013) "Slope and valley flow interactions in MATERHORN-1". Atmosphere and Cryosphere Assembly 2013 Air, Ice & Process Interactions, July 8-12, Davos, Switzerland. Abstract 1258. Oral Presentation.
- 24. <u>S. Di Sabatino</u>, Leo L.S., Leiberzon D., Retallack C., Coppersmith R., Sentic S., Hocut C., Huq P., S. Fernando and H.J.S. Fernando (2012) "Evening Transition of Atmospheric Boundary Layer (ABL) in Heterogeneous Flat Terrain". 92nd American

- Meteorological Society Annual Meeting New Orleans (January 22-26). 17th Conference on Air Pollution Meteorology with the A&WMA. Oral Presentation.
- 25. Leo L.S., <u>Di Sabatino S.</u> and Fernando H.J.S. (2012) "Flow in Complex Terrain with Coastal and Urban Influence". 92nd American Meteorological Society Annual Meeting New Orleans (January 22-26). 17th Conference on Air Pollution Meteorology with the A&WMA. Oral Presentation.
- 26. A. Dallman, <u>Di Sabatino S.</u>, Leo L.S. and Fernando H.J.S (2012). "Flow Characteristics in an Urban Area Located in Complex Terrain". 92nd American Meteorological Society Annual Meeting New Orleans (January 22-26) 17th Conference on Air Pollution Meteorology with the A&WMA. Oral Presentation. Winner of 2nd Best Student Presentation Award.
- 27. Buccolieri R., Salim, S.M. and <u>Di Sabatino S.</u> (2012) "The Aerodynamic Role of trees on City Breathability in Urban-Like Geometries". 92nd American Meteorological Society Annual Meeting New Orleans (January 22-26) 17th Conference on Air Pollution Meteorology with the A&WMA. Oral Presentation.
- 28. Fernando H.J.S, L. Leo, <u>S. Di Sabatino</u>, A. Dallman (2011). "Evening transition in inland and coastal mountainous terrain". Proc. AMS-Special Symposium on Applications of Air Pollution Meteorology. Seattle, WA (USA) 23-27 January
- 29. Leo L.S., Buccolieri R., <u>Di Sabatino S.</u> (2009) "The combined effect of UHI and complex urban texture on pollutant concentration in real city street canyons". International workshop on Atmospheric Composition Changes: Climate-Chemistry Interactions, 2-4 November 2009, Lecce, Italy. Oral presentation.
- 30. Buccolieri R., Corrado R., <u>Di Sabatino S.</u>, Palatella L., Paradisi P. and Solazzo E. (2009). EGU Conference. Wien (Austria). Poster presentation.
- 31. <u>Di Sabatino S</u>, Hedquist BC, Carter W, Leo LS, Brazel, Fernando HJS. (2009). EGU Conference, Wien (Austria). Poster presentation.
- 32. <u>Di Sabatino, S.</u>, R. Britter, R. Cataldo, C. Chirizzi and C. Ratti (2005): "Derivation and analysis of flow and dispersion parameters from urban DEMs". EGU Conference, Wien (Austria), 29-31 April. Poster presentation.
- 33. <u>Di Sabatino, S.</u>, R. Britter and D. Carruthers (1999):" Definition of a Scientific Evaluation Concept for Urban Dispersion Models". SATURN *Conference*, Aveiro, Portugal 23-25 August 1999. Oral presentation.
- 34. <u>Di Sabatino, S.</u>, Britter, R. and Carruthers, D. (1999): "The Traffic and Heat Turbulence Term in Operational Dispersion Models". SATURN Conference, Aveiro, Portugal 23-25 August 1999. Oral presentation.
- 35. Delitala, A., <u>S. Di Sabatino</u> and F. Tampieri (1999): "Nocturnal boundary layers on complex orography and related local circulations". XXIV General Assembly of the European Geophysical Society. April 19-23 1999, The Hague, The Netherlands. Oral presentation.
- 36. Di <u>Sabatino S.</u>, F. Tampieri and F. Trombetti (1998): "The Growth of the Internal Boundary Layer in Different Stability Conditions". XXIII General Assembly of the European Geophysical Society. April 20-24 1998, Nice, France, Annales Geophysicae C616. Oral presentation.

- 37. Maurizi A., <u>S. Di Sabatino</u>, F. Trombetti and F. Tampieri (1996): "Analysis of turbulent flows in streamline coordinate system", XXI General Assembly of the European Geophysical Society, May 6-10 1996 The Hague, The Netherlands, Annales Geophysicae Supplement II to Vol. 14, C p. 459. Oral presentation.
- 38. Tampieri F., F. Trombetti, A. Maurizi and <u>S. Di Sabatino</u> (1995): "The RUSHIL and RUSVAL wind tunnel data sets for studies of flow in complex terrain". ERCOFTAC Workshop "Data on Turbulence and Dispersion in Complex atmospheric Flows", Bologna, September 7, 1995, Book of Abstracts, p. 38.