

List of Publications

1. Santoro M, Costabile F, Gualtieri M, Rinaldi M, Paglione M, Busetto M, Di Iulio G, Di Liberto L, Gherardi M, Pelliccioni A, Monti P, Benassi B, Grollino MG (2024) Associations between fine particulate matter, gene expression, and promoter methylation in human bronchial epithelial cells exposed within a classroom under air-liquid interface. *Environmental Pollution* **358**, 124471.
2. Pini A, Leuzzi G, Pelliccioni A, Querzoli G, Monti P (2024) Laboratory-scale modeling of air velocity and pollutant concentration fields in an amphitheatre classroom. *PHYSMOD 2024 – International Workshop on Physical Modelling of Flow and Dispersion Phenomena*. Lyon, France – August 28-30, 2024.
3. Ravizza Garibaldi G, Di Bernardino A, Leuzzi G, Querzoli G, Monti P (2024) Bottom roughness effects on mixing properties of a gravity current. *PHYSMOD 2024 – International Workshop on Physical Modelling of Flow and Dispersion Phenomena*. Lyon, France – August 28-30, 2024.
4. Ravizza Garibaldi G, Di Bernardino A, Monti P, Leuzzi G, Querzoli G (2024) Measurements of turbulence parameters at a density interface. *10th International Symposium on Environmental Hydraulics - ISEH2024 - 25 - 27 June 2024*, Aberdeen, Scotland.
5. Russo M, Ravanelli R, Pini A, Flenghi G, Martelli L, Monti P, Crespi M (2024) Multimedia photogrammetry 2.0. a first step for underwater cultural heritage application. *The International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences, Volume XLVIII-2/W4-2024 10th Intl. Workshop 3D-ARCH “3D Virtual Reconstruction and Visualization of Complex Architectures”*, 21–23 February 2024, Siena, Italy.
6. Grandoni L, Pini A, Pelliccioni A, Salizzoni P, Mees L, Leuzzi G, Monti P (2024) Numerical dispersion modelling of droplets expired by humans while speaking. *Air Quality, Atmosphere & Health* **17**, 1033-1052.
7. D’Amico A, Currà E, Bergonzoni G, Pini A, Monti P, Confessore G, Rinaldi, D (2023) BIM for Healthy Buildings: an integrated approach to architectural design based on IAQ prediction. In *Transition: challenges and opportunities for the build heritage*, 979-12-81229-02-0.
8. Palusci A, Cecere C, Monti P, Montazeri H, Blocken B (2023) Numerical Investigation of the Impact of Morphological Parameters on Urban Ventilation in Compact Cities. *Environmental Science and Engineering*. Pages 2817 – 2820. *2023. 5th International Conference on Building Energy and Environment*, COBEE 2022 Montreal, 25 July 2022 - 29 July 2022. Code 300379.
9. Di Bernardino A, Monti P, Leuzzi G, Querzoli G (2023) Turbulent Schmidt number measurements in a density current flowing over surface roughness. *Proceedings PPNW 2023, International Workshop on Physical Processes in Natural Flows*. Brescia, 19-23 June, Italy.
10. Di Bernardino A, Monti P, Leuzzi G, Querzoli G (2023) Turbulence Parameters in Stably Stratified Flows Over Surface Roughness: A Laboratory Study. *Atti 15th International Symposium on Particle Image Velocimetry – ISPIV 2023*, June 19–21, 2023, San Diego, California, USA.
11. Grandoni L, Mees L, Grosjean N, Leuzzi G, Monti P, Pelliccioni A, Salizzoni P (2023) Interferometric laser imaging for respiratory droplets sizing. *Experiments in Fluids* **64**:80.
12. Pini A.;Zazzini S.;Bello P.;Monti P.;Leuzzi G. (2022) Numerical investigation of microplastic dispersion in the water column. *2022 IEEE International Workshop on Metrology for the Sea; Learning to Measure Sea Health Parameters, MetroSea 2022*, Milazzo Castle, Italy.
13. Di Bernardino A, Monti P, Leuzzi G, Querzoli G (2022) On the Lagrangian and Eulerian time scale of turbulence within a two-dimensional array of obstacles. *Boundary-Layer Meteorology* **184**, 375-379.
14. Palusci A, Cecere C, Monti P, Montazeri H, Blocken B (2022) Impact of morphological parameters on urban ventilation in compact cities: The case of the Tuscolano-Don Bosco district in Rome. *Science of The Total Environment* **807**, 150490.
15. Zazzini S, Pini A, Bello P, Monti P, Leuzzi G (2022) 3D pathways and distribution of microplastics in the Ocean Surface Boundary Layer. *EGU General Assembly 2022, Vienna*, 10.5194/egusphere-egu22-9935.
16. Zazzini S, Pini A, Bello P, Monti P, Leuzzi G (2022). Studio della dispersione verticale di microplastiche in ambiente marino. *Atti del XXXVIII Convegno Nazionale di Idraulica e Costruzioni Idrauliche, IDRA 2022*, 4-7 Settembre, Reggio Calabria, Italy.
17. Pini A, Monti P, Leuzzi G, Grandoni L, Pelliccioni A, Seoni A, Querzoli G (2022). Modellazione su scala di laboratorio della circolazione dell'aria e della dispersione di inquinanti in ambienti

- confinati. *Atti del XXXVIII Convegno Nazionale di Idraulica e Costruzioni Idrauliche, IDRA 2022*, Reggio Calabria, 4-7 Settembre, Italy.
18. Bello P, Pini A, Zazzini S, Monti P, Leuzzi G (2022) Discrete multivariate probability distributions of microplastic settling/rising velocity in the marine environment. *IEEE International Workshop on Metrology for the Sea; Learning to Measure Sea Health Parameters, MetroSea 2022 - Proceedings* - (978-1-6654-9942-2).
 19. Pini A, Vigilante T, Grandoni L, Leuzzi G, Pelliccioni A, Monti P (2022). Analysis of the influence of geometric and ventilation factors on indoor pollutant dispersion: a numerical study. *Atti del 21st International Conference on Harmonisation within Atmospheric Dispersion Modelling for Regulatory Purposes, HARMO 2022*, Aveiro, Portugal.
 20. Grandoni L, Pini A, Pelliccioni A, Salizzoni P, Mees L, Leuzzi G, Monti P (2022). Numerical dispersion modelling of the droplets expired by humans. *Atti del 21st International Conference on Harmonisation within Atmospheric Dispersion Modelling for Regulatory Purposes, HARMO 2022*, Aveiro, Portugal.
 21. Di Bernardino A, Palusci O, Pini A, Leuzzi G, Cacciani M, Pelliccioni A, Monti P (2021) Air Circulation in Urban Areas. In Palme M & Salvati A (Editors), *Urban Microclimate Modelling for Comfort and Energy Studies*, pp: 195-221. Springer Nature Switzerland.
 22. Conigliaro E, Monti P, Leuzzi G, Cantelli A (2021) A three-dimensional urban canopy model for mesoscale atmospheric simulations and its comparison with a two-dimensional urban canopy model in an idealized case. *Urban Climate* **37**, 100831.
 23. Pelliccioni A, Monti P, et. al. (2020) Integrated Evaluation of Indoor Particulate Exposure: The VIEPI Project. *Sustainability* **12**, 9758.
 24. Di Bernardino A, Monti P, Leuzzi G, Querzoli G (2020) Eulerian and Lagrangian time scales of the turbulence above staggered arrays of cubical obstacles. *Environmental Fluid Mechanics* **20**, 987-1005.
 25. Pini A, Musa I, Monti P, Leuzzi G, Di Bernardino A, Cattani G, Di Menno Di Bucchianico A, Gherardi M, Pelliccioni A (2020) Numerical and experimental analysis of flow and particulate matter dispersion in indoor environment. *IOP Conference Series: Earth and Environmental Science* **489**, Article number 012007.
 26. Pini A, Grandoni L, Leuzzi G, Monti P, Di Bernardino A, Pelliccioni A, Gherardi M, Cattani G, Di Menno Di Bucchianico A (2020) A simplified analytical model of ultrafine particle concentration within an indoor environment. *IOP Conference Series: Earth and Environmental Science* **489**, Article number 012009.
 27. De Serio F, Armenio E, Ben Meftah M, Capasso G, Corbelli V, De Padova D, De Pascalis F, Di Bernardino A, Leuzzi G, Monti P, Mossa M, Pini A, Velardo R (2020) Detecting sensitive areas in confined shallow basins. *Environmental Modelling and Software* **126**, 104659.
 28. Di Bernardino A, Monti P, Leuzzi G, Querzoli G (2020) Turbulent Schmidt number measurements over three-dimensional cubic arrays. *Boundary-Layer Meteorology* **174**, 231-250.
 29. Pelliccioni A, Tofful L, Catrambone M, et al. (2019) The integrated evaluation of indoor particulate exposure (viepi) project: main goals and campaign description. *Proc. 19th Int. Conf. Harmonisation within Atmospheric Dispersion Modelling for Regulatory Purposes*, 3-6 June, Bruges, Belgium.
 30. Pini A, Musa I, Di Bernardino A, et al. (2019) Analysis of the exchange of pollutant and momentum between outdoor and indoor environments. The case of a classroom in the framework of the VIEPI project. *Proc. 19th Int. Conf. Harmonisation within Atmospheric Dispersion Modelling for Regulatory Purposes*, 3-6 June, Bruges, Belgium.
 31. Di Bernardino A, Pini A, Nardecchia F, Conigliaro E, Monti P, Leuzzi G, Pelliccioni A (2019) Evaluation of ansys-fluent model against field data in the framework of the VIEPI project. *Proc. 19th Int. Conf. Harmonisation within Atmospheric Dispersion Modelling for Regulatory Purposes*, 3-6 June, Bruges, Belgium.
 32. Di Bernardino A, Monti P, Leuzzi G, Sammartino F, Querzoli G (2019) Turbulent Schmidt number estimate over urban canopies. *Proc. 19th Int. Conf. Harmonisation within Atmospheric Dispersion Modelling for Regulatory Purposes*, 3-6 June, Bruges, Belgium.
 33. Pini A, Tomassetti P, Matiddi M, de Lucia GM, Bello P, Zazzini S, Leuzzi G, Monti P (2019) Microplastic detection and Lagrangian modelling in the Tyrrhenian Sea. *Proceedings of 2019 IMEKO TC-19 International Workshop on Metrology for the Sea*, October 3-5, Genoa, Italy.

34. Zazzini S, De Dominicis M, Pini A, Leuzzi G, Monti P, O'Hara Murray R, Li X (2019) Turbulence changes due to a tidal stream turbine operation in the Pentland Firth (Scotland, UK). *Proceedings of 2019 IMEKO TC-19 International Workshop on Metrology for the Sea*, October 3-5, Genoa, Italy.
35. Salvati A, Monti P, Coch Roura H, Cecere C (2019) Climatic performance of urban textures: analysis tools for a Mediterranean urban context. *Energy and Building* **185**, 162-179.
36. Di Bernardino A, Pelliccioni A, Monti P, Leuzzi G, Querzoli G (2018) Evaluation of parametric laws for computing the wind speed profile in the urban boundary layer. comparison to two-dimensional building water channel experiment. *International Journal of Environment and Pollution* **64**, 4-21.
37. Pini A, Leuzzi G, Monti P, Manfredi M (2018) Modelling of short-term dispersion in the sea surface layer. *Proceedings of 2018 IEEE International Workshop on Metrology for the Sea*, 8-10 Ottobre, Bari, Italia.
38. Pini A, Tomassetti P, Matiddi M, de Lucia GA, Zampetti G, Lattanzi C, Leuzzi G, Monti P (2018) Microplastic samplings and inverse trajectory recognition in the Mediterranean Sea. *Proceedings of 2018 IEEE International Workshop on Metrology for the Sea*, 8-10 Ottobre, Bari, Italia.
39. Ravanelli R, Nascetti A, Cirigliano RV, Di Rico C, Leuzzi G, Monti P, Crespi M (2018) Monitoring the impact of land cover change on surface urban heat island through Google Earth Engine: proposal of a global methodology, first applications and problems. *Remote Sensing* **10**, 1488.
40. Pini A, Leuzzi G, Monti P (2018) Modellazione della dispersione di inquinanti galleggianti nella fase iniziale del rilascio. *Atti del XXXVI Congresso Nazionale di Idraulica e Costruzioni Idrauliche*, 12-14 Settembre, Ancona, Italia.
41. Di Bernardino A, Mastrangelo M, Monti P, Leuzzi G, Querzoli G (2018) Analisi sperimentale del flusso e della dispersione di traccianti passivi in canopie urbane tridimensionali. *Atti del XXXVI Congresso Nazionale di Idraulica e Costruzioni Idrauliche*, 12-14 Settembre, Ancona, Italia.
42. Conigliaro E, Di Bernardino A, Monti P, Leuzzi G (2018) Simulazione numerica dell'evento alluvionale nell'area romana del dicembre 2008. *Atti del XXXVI Congresso Nazionale di Idraulica e Costruzioni Idrauliche*, 12-14 Settembre, Ancona, Italia.
43. Pini A, Leuzzi G, Monti P (2018) Statistical analysis of turbulent dispersion in the sea surface layer based on satellite-tracked drifter data. *International Journal of Offshore and Polar Engineering* **28**, 240-247.
44. Nardecchia F, Di Bernardino A, Pagliaro F, Monti P, Leuzzi G, Gugliermetti L (2018) CFD analysis of urban canopy flows employing the V2F model: impact of different aspect ratios and relative heights. *Advances in Meteorology* **2018**, Article ID 2189234.
45. Di Bernardino A, Monti P, Leuzzi G, Querzoli G (2018) Pollutant fluxes in two-dimensional street canyons. *Urban Climate* **24**, 80-93.
46. Ravanelli R, Nascetti A, Cirigliano RV, Di Rico C, Monti P, Crespi M (2018) Monitoring urban heat island through Google Earth Engine: potentialities and difficulties in different cities of the united states. *Proceedings of ISPRS, Development, Technologies and Applications in Remote Sensing*, May 7-10, Beijing, China.
47. Di Bernardino A, Monti P, Leuzzi G, Querzoli G (2017) Pollutant removal mechanism in two-dimensional street canyons: a laboratory study. *International Journal of Environment and Pollution* **62**, 291-304.
48. Di Bernardino A, Monti P, Leuzzi G, Sammartino F, Ferrari S (2017) Experimental investigation of turbulence and dispersion around an isolated cubic building. *Proc. 18th Int. Conf. Harmonisation within Atmospheric Dispersion Modelling for Regulatory Purposes*, 9-12 October, Bologna, Italy.
49. Di Bernardino A, Monti P, Leuzzi G, Sammartino F, Querzoli G (2017) Lagrangian time scales of the turbulence above two-dimensional canopies. *Proc. 18th Int. Conf. Harmonisation within Atmospheric Dispersion Modelling for Regulatory Purposes*, 9-12 October, Bologna, Italy.
50. Di Bernardino A, Pelliccioni A, Monti P, Leuzzi G, Sammartino F (2017) Performances of parametric laws for computing the wind speed profile in the urban boundary layer. Comparison to two-dimensional building water channel experiment. *Proc. of 18th Int. Conf. Harmonisation within Atmospheric Dispersion Modelling for Regulatory Purposes*, 9-12 October, Bologna, Italy.
51. Di Bernardino A, Monti P, Leuzzi G, Querzoli G (2017) Water-channel estimation of Eulerian and Lagrangian time scale of the turbulence in idealized two-dimensional urban canopies. *Boundary-Layer Meteorology* **165**, 251-276.
52. Pini A, Grandoni L, Maicu F, De Pascalis F, Leuzzi G, Monti P (2017) Evaluation of Lagrangian time

- scales and turbulent diffusivities by GPS equipped drifters. Proceedings of *2017 EESMS Workshop on Environmental, Energy, and Structural Monitoring Systems*, July 24-25, Milan, Italy.
53. Palusci O, Montazeri H, Blocken B, Monti P, Cecere C (2017) Numerical modeling of urban microclimate in a real compact area in the Mediterranean region: impact of urban morphology. *7th European and African Conference on Wind Engineering*, 4-7 July 2017, Liege, Belgium.
 54. Pini A, Leuzzi G, Monti P (2017) Evaluation of horizontal diffusivity in the sea surface layer. Proceedings of *Twenty-seventh (2017) International Ocean and Polar Engineering Conference*. San Francisco, CA, USA, June 25-30.
 55. Valerio G, Cantelli A, Monti P, Leuzzi G (2017) A modeling approach to identify the effective forcing exerted by wind on a prealpine lake surrounded by a complex topography. *Water Resources Research* **53**, 4036-4052.
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 57. Amicarelli A, Leuzzi G, Monti P, Alessandrini S, Ferrero E (2017) A stochastic Lagrangian micromixing model for the dispersion of reactive scalars in turbulent flows: role of concentration fluctuations and improvements to the conserved scalar theory under non-homogeneous conditions. *Environmental Fluid Mechanics* **17**, 715-753.
 58. Di Bernardino A, Monti P, Leuzzi G, Querzoli G (2016) Turbulence properties of the urban boundary layer. *Atti del XXXV Congresso Nazionale di Idraulica e Costruzioni Idrauliche*, 14-16 Settembre, Bologna, Italia.
 59. Pini A, Leuzzi G, Monti P (2016) Relative dispersion analysis of GLAD surface drifters in the Gulf of Mexico. *Atti del XXXV Congresso Nazionale di Idraulica e Costruzioni Idrauliche*, 14-16 Settembre, Bologna, Italia.
 60. Valerio G, Pilotti M, Cantelli A, Monti P, Leuzzi (2016) Sensitivity of the basin-scale internal wave structure in a prealpine lake to wind distribution. *Atti del XXXV Congresso Nazionale di Idraulica e Costruzioni Idrauliche*, 14-16 Settembre, Bologna, Italia.
 61. Palusci O, Montazeri H, Blocken B, Monti P, Cecere C (2016) Numerical modelling of urban microclimate in a compact urban area: a case study for Rome. Proceedings of the *XIV Conference of the Italian Association for Wind Engineering*, 25-28 September 2016, Terni, Italy.
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 63. Pelliccioni A, Monti P, Leuzzi G (2016). Wind-speed profile and roughness sublayer depth modelling in urban boundary layers. *Boundary-Layer Meteorology* **160**, 225-248.
 64. Pini A, Leuzzi G, Monti P (2016) Estimates of turbulence parameters from satellite-tracked drifters. Proceedings of *2016 EESMS Workshop on Environmental, Energy, and Structural Monitoring Systems*, June 13-14 2016, Bari, Italy.
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 67. Di Bernardino A, Monti P, Leuzzi G, Querzoli G (2016) Water channel investigation of flow and dispersion in street canyons. *Atti del 17th International Conference on Harmonisation within Atmospheric Dispersion Modelling for Regulatory Purposes*, 8-12 May, Budapest, Hungary.
 68. Amicarelli A., Leuzzi G, Monti P, Pepe N, Pirovano G (2015) Lagrangian micromixing modelling of reactive scalar statistics: surface pollutant sources in decaying grid turbulence. *International Journal of Environment and Pollution* **58**, 251-267.
 69. Di Bernardino A, Monti P, Leuzzi G, Querzoli G (2015) On the effect of the aspect ratio on flow and turbulence over a two-dimensional street canyon. *International Journal of Environment and Pollution* **58**, 27-38.
 70. Cantelli A, Monti P, Leuzzi G (2015) Numerical study of the urban geometrical representation impact in a surface energy budget model. *Environmental Fluid Mechanics* **15**, 251-273.
 71. Di Bernardino A, Monti P, Leuzzi G, Querzoli G (2015) Water-channel study of flow and

- turbulence past a 2D array of obstacles. *Boundary-Layer Meteorology* **155**, 73-85.
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 75. Cantelli A, Monti P, Leuzzi G (2014) Development and integration of a subgrid urban surface scheme in a limited area model. *International Journal of Environment and Pollution* **55**, 230-237.
 76. Di Bernardino A, Monti P, Leuzzi G, Querzoli G (2014) A laboratory investigation of flow and turbulence over a two-dimensional urban canopy. *Atti del 16th International Conference on Harmonisation within Atmospheric Dispersion Modelling for Regulatory Purposes*, 8-11 September, Varna, Bulgaria.
 77. Amicarelli A, Leuzzi G, Monti P (2014) Modelling pollutant reactions depending on instantaneous concentrations: a direct estimation of the segregation coefficient. *Atti del 16th International Conference on Harmonisation within Atmospheric Dispersion Modelling for Regulatory Purposes*, 8-11 September, Varna, Bulgaria.
 78. Di Bernardino A, Monti P, Leuzzi G, Querzoli G, Iannetta S (2014) Simulazione di laboratorio di canopie urbane bidimensionali. *Atti del XXXIV Congresso Nazionale di Idraulica e Costruzioni Idrauliche*, 7-10 Settembre, Bari, Italia.
 79. Pini A, Leuzzi G, Monti P (2014) Simulazione della dispersione marina di petrolio in caso di sversamenti accidentali da fondo pozzo. *Atti del XXXIV Congresso Nazionale di Idraulica e Costruzioni Idrauliche*, 7-10 Settembre, Bari, Italia.
 80. Valerio G, Pilotti M, Monti P, Leuzzi G (2014) Effetto della forzante anemologica nei processi di mescolamento e trasporto nel lago di Iseo. *Atti del XXXIV Congresso Nazionale di Idraulica e Costruzioni Idrauliche*, 7-10 Settembre, Bari, Italia.
 81. Monti P, Fernando HJS, Princevac M (2014) Waves and turbulence in katabatic winds. *Environmental Fluid Mechanics* **14**, 431-450.
 82. Monti P, Leuzzi G, Viotti P (2014) An integrated hydrodynamic dispersion modeling system for marine discharge analysis. *Proc. Of the 7th Int. Symp. On Environmental Hydraulics*, 7-9 January, Singapore.
 83. Leuzzi G, Monti P, Panebianco A, Molinaro A (2014) Numerical simulation of oil spill blowout episodes in the Adriatic Sea. *Proc. Of the 7th Int. Symp. On Environmental Hydraulics*, 7-9 January, Singapore.
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 86. Pelliccioni A, Monti P, Leuzzi G (2013) On the role of the roughness length in urban boundary layers. *Atti del 15th International Conference on Harmonisation within Atmospheric Dispersion Modelling for Regulatory Purposes*, 6-9 May, Madrid, Spain.
 87. Leuzzi G, Monti P, Purini R (2013) The dispersion of passive tracers in marine environment: a case study for the Tyrrhenian Sea. *Bollettino Geofisico* **36**, 53-62.
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- vehicular emissions in urban coastal areas of the Messina Strait. *International Journal of Environment and Pollution* **50**, 274-282.
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 100. Cantelli A, Leuzzi G, Monti P, Viotti P, Villanova M, Majetta S (2011) An inverse modeling method to identify vehicular emissions in urban complex areas. *Atti del 14th International Conference on Harmonisation within Atmospheric Dispersion Modelling for Regulatory Purposes*, 2-6 October, Kos, Greece.
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 102. De Serio F, Leuzzi G, Monti P, Mossa M (2011) Profile measurements of turbulence properties in coastal currents using acoustic doppler methods. *Proc. VII Int. Symp. On Stratified Flows*, 22-26 Agosto, Roma, Italia.
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 106. Petenko I, Mastrantonio G, Viola A, Argentini S, Coniglio L, Monti P, Leuzzi G (2011) Local circulation diurnal patterns and their relationship with large-scale flows in a coastal area of the Tyrrhenian Sea. *Boundary-Layer Meteorology* **139**, 353-366.
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