

In the context of the PhD Program in “Security, Risk and Vulnerability” (<https://sicurezza.unige.net/>), Curriculum “Risk and Resilience Engineering of Natural, Industrial and Built Environments”, the University of Genoa (Italy) opens a PhD position on **Damage survey, analysis and prediction of windstorms** (http://dottorato.dicca.unige.it/eng/rrenib/grants_xxxvii_cycle.html Grant B). A description of the research proposal can be found below.

This research topic is part of the activities developed in the framework of the ERC Project THUNDERR (www.thunderr.eu/) “Detection, simulation, modelling and loading of thunderstorm outflows to design wind-safer and cost-efficient structures”, Advanced Grant No. 741273

Link to the call <https://unige.it/en/usg/en/phd-programmes>
Deadline for application **June 15, 2021 at 12 p.m. CET**

Grant B

Title: Damage survey, analysis and prediction of windstorms

Supervisor: Massimiliano Burlando

Curriculum: Risk and Resilience Engineering for the Natural, Industrialized and Built Environments



Description: In the context of the ERC Project THUNDERR (www.thunderr.eu), the PhD candidate will be asked to make a windstorm-related damage survey in the coastal area of the Ligurian and the Tyrrhenian Sea. The focus will be paid, in particular, on commercial seaports (Genova, Savona-Vado, Livorno), which are considered by EU strategic infrastructural gateways to the trans-European transport network (TEN-T). Port work is an occupation with a high risk of accidents and health implications for workers, and the wind is considered the most dangerous cause of disasters and malfunctions in port areas, directly affecting operation and safety. The research activity will consist of windstorm classification between mesoscale phenomena and local thunderstorms, analysis of the weather scenarios in which the most striking events occur, and development of a procedure to nowcast/forecast the most dangerous weather conditions.

For more information, please contact Prof. Massimiliano Burlando, massimiliano.burlando@unige.it

Link to the group or personal webpage:

Institutional website: gs-windyn.it

References:

1. Burlando M., D. Romanic, G. Boni, M. Lagasio and A. Parodi (2020) Investigation of the Weather Conditions During the Collapse of the Morandi Bridge in Genoa on 14 August 2018 using Field Observations and WRF Model. *Atmosphere* 11, 724
2. Solari G., M. Burlando, and M. P. Repetto (2020) Detection, simulation, modelling and loading of thunderstorm outflows to design wind-safer and cost-efficient structures. *J. Wind Eng. Ind. Aerodyn.* 200, 104142