CV Luigi Lombardo

I have a background in Geology, with both Bachelor and Master degrees obtained at University of Palermo. While studying, I worked for a geotechnical company first as a driller and as an Engineering Geologist after graduation. There, I have learned to link my academic knowledge to real-life engineering solutions. The same mentality, I brought it with me in my academic journey, with a PhD dedicated to landslide susceptibility modeling. The three-years doctoral experience exposed me to various research themes and directions. At University of Palermo (my primary affiliation) I scratched the surface of what statistical models could do. At University of Tuebingen, I delved into remote sensing and satellite data could support natural hazard research. But, I never felt satisfied with the tools I learned to use and for this reason, I applied for a postdoc in a department of statistics, at King Abdullah University of Science and Technology. There, I finally developed a unique perspective on what can be achieved when multidisciplinary research is brought forward in the context of Natural Hazard. Thanks to the niche I have built, I was later offered an Assistant Professorship at ITC, Faculty of Geo-Information Science and Earth Observation, where I am currently working.

This journey has widened my scope, and as a result, I am now working at the interface between natural hazards and advanced statistics, with a touch of geophysics, artificial intelligence, remote sensing and more. I am lucky enough to have a job that is also my hobby and viceversa. My longterm vision and ambition are directed to make an impact in disaster risk reduction, insurances and policy making initiatives. I started to work with Giacomo Titti and Lisa Borgatti as co-supervisor of the Giacomo's PhD in 2019. We developed a new process to evaluate the uncertainty in statistical models for landslide susceptibility and then we collaborated to implement the SZ-plugin for QGIS and the STGEE tool for Google Earth Engine. We published togheter several times and we are currently working on new papers related to the Romagna flood of last May:

- G. Titti, C. van Westen, L. Borgatti, A. Pasuto, L .Lombardo, 2021. When enough is really enough? On the minimum number of landslides to build reliable susceptibility models. Geosciences 11 (11), 469
- G Titti, A Sarretta, L Lombardo, S Crema, A Pasuto, L Borgatti, 2022. Mapping susceptibility with open-source tools: a new plugin for QGIS. Frontiers in Earth Science 10
- G Titti, GN Napoli, C Conoscenti, L Lombardo, 2022. Cloud-based interactive susceptibility modeling of gully erosion in Google Earth Engine. International Journal of Applied Earth Observation and Geoinformation 11
- Ahmed, M., Tanyas, H., Huser, R., Dahal, A., Titti, G., Borgatti, L., ... & Lombardo, L. (2023). Dynamic rainfall-induced landslide susceptibility: a step towards a unified forecasting system. International Journal of Applied Earth Observation and Geoinformation, 125, 103593.

Luigi Lombardo recent projects

- Project Leader of the NaHaC project. This is a CRG (Competitive Research Grant) fund from KAUST for a total of 1M$
- PI of the ESA Project ID: 14151: A REMOTE SENSING BASED APPROACH FOR STORM TRIGGERED DEBRIS FLOW HAZARD MODELLING
- CO-PI of the MLIS (MITIGATING LANDSLIDES IMPACT IN SCOTLAND) project (20k€): NCR - University of Glasgow