

**NIVES**

**GRASSO**

## Personal informations

**Address:**

Via Antonio Gramsci, 12,  
10064, Pinerolo, TO, Italy

**Phone:**

+39 3493675017

**Email:**

nives.g@alice.it

## Personal statements

Great interest in multidisciplinary team activities that give the opportunity to analyze a problem from different points of view and allow an improvement of their skills thanks to the different professional figures involved. Predilection for the use of integrated survey techniques, monitoring, prevention and management of the built environment, cultural heritage, environmental emergencies and territorial instability and solutions for geospatial data analysis.

## Experience

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**Research Fellow - 06/2017 to date**

**Politecnico di Torino**, Department of Environmental, Land and Infrastructure Engineering (DIATI), Torino (Italy)

Geomatics, topographic and cartographic activities:

- Participation in international projects (Interreg Alpine Space and H2020) related to the harmonization of the natural risk of rock collapses, to the mapping of protective forests in the Alpine space and to the analysis of forest fire management techniques;
- Analysis of low-cost technologies, such as laser scanners (terrestrial and portable), action cams, webcams, structured light instruments and spherical cameras for 3D mapping of urban, woodland and indoor environments, in comparison with high-cost techniques, now consolidated;
- Implementation of mobile mapping tools through the integration of different types of sensors;
- Spatial analysis and information extraction starting from 3D point clouds;
- Teaching support activities (> 60 h / year).

**Research fellow - 06/2014 to 07/2017**

**Politecnico di Torino**, Department of Environmental, Land and Infrastructure Engineering (DIATI), Torino (Italy)

Geomatics, topographic and cartographic activities:

- Prototype mobile mapping system for visibility verifications on existing transport infrastructures in the Smart City area;
- Implementation of project activities (POR-FESR Axis I - action line 1.3) relating to the design of a GIS system for the traceability of agri-food products and environmental monitoring;
- Research activity related to navigation in real time using smartphones in indoor and outdoor environments, based on image localization techniques;
- Application of visual odometry algorithms for autonomous vehicles;
- teaching support activities (> 60 h / year).

**Chris mapper for Early Impact Activities - 10/2012 al 05/2013**

**ITHACA** (Information Technology for Humanitarian Assistance, Cooperation and Action), Torino (Italy)

Collaboration in the rapid mapping activity, aimed at supporting the first phase of disaster management and based on the use of remotely sensed images in a GIS environment.

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## Education and training

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**Ph.D.: Inter-University Doctorate Course in Urban and Regional Development - XXX cycle - 2014/2017**

**Politecnico di Torino, Torino (Italy)**

SSD: ICAR 06

Thesis: "Visibility analyses using 3D urban models generated by low-cost multi-sensor approaches".

Evaluation of algorithms for the analysis of visibility in indoor and outdoor urban environments, starting from three-dimensional models generated by means of 3D mobile mapping systems composed by the integration of low-cost sensors mounted on different types of vehicles.

Title achieved on 04/16/2018

**Research activity at the Delft University of Technology – from 02/2017 to 06/2017**

Research activity at the Faculty of Architecture and the Build Environment, OTB - Research for the Build Environment; under the supervision of Prof. Sisi Zlatanova and Ing. Edward Verbree.

Topics: visibility analysis in outdoor and indoor environments represented by 3D point clouds; use of low-cost sensors for surveying indoor environments.

**Qualification to exercise the profession of Engineer - 02/19/2015**

**Politecnico di Torino, Torino (Italy)**

**Master's Degree in Construction Engineering – 2011/2013**

**Politecnico di Torino, Torino (Italy)**

Master's Degree achieved with 109/110

Thesis entitled: "From the point clouds to the 3D City Model: the case study of Vernazza (La Spezia)".

**Bachelor's Degree in Construction Engineering - 2005/2011**

**Politecnico di Torino, Torino (Italy)**

Bachelor's degree achieved with 96/110

Thesis entitled: "LiDAR techniques for the metric survey of the Chapel of St. Bernard in the Comba village".

**Scientific high school diploma – 2000/2005**

**Liceo Scientifico Statale Marie Curie, Pinerolo (Italy)**

Vote 78/100

## Personal skills

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**Native language:** Italian

**Foreign languages:**

English	COMPREHENSION		SPOKEN		WRITING
	Listening	Reading	Interaction	Oral production	
	C1	C1	B2	B1	B2

Preliminary English Test (PET) (passed with Merit)

Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Advanced user  
Common European Framework of Reference for Languages

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**Communication skills:**

Excellent team spirit and cooperation skills shown in team activities.  
Skills in social relations, in the exchange and sharing of experiences.  
Good research communication skills, developed during participation in numerous national and international conferences, workshops and meetings.

**Organizational and management skills:**

Sense of organization and good ability to manage group projects.  
Good resistance to working under stress and pursuing goals with limited time.  
The undersigned has actively participated in the coordination and organization operations of two student teams (funded since March 2014), PoliCycle and Direct, presenting the projects in front of the committees and supporting the responsible teachers in organizing, managing students and reporting on the projects.

**Professional skills:**

Ability to use all the main topographic tools and three-dimensional mapping techniques:

- Use of robotic total stations and levels and excellent knowledge of compensation procedures for measurements and estimation of angles and distances, also through data processing software (eg StarNet);
- Use of different GNSS measurement techniques and data processing and management, using the LeicageoOffice LGO, Cartlab, Verto software;
- Excellent knowledge of terrestrial and aerial photogrammetry techniques, software based on classical photogrammetry and Structure from Motion algorithms for sensor calibration and the generation of three-dimensional point clouds and surface / mesh models (Leica Photogrammetry Suite LPS, Agisoft Metashape Professional, Pix4D, 3Df Zephyr, Bentley ContextCapture, VisualSfM, Calib3V);
- Excellent knowledge of the laser scanner systems and the various types present on the market, terrestrial and portable, and excellent management capabilities of the data acquisition and processing phases, as well as their analysis, through software such as FARO Scene, CloudCompare, 3D Reshaper, Meshlab, Rhinoceros-Grasshopper, RIEGL Riscan Pro and Riprocess, Leica Cyclone;
- Good knowledge of software for creating geographic information systems: ArcGIS and QGIS;
- Programming in Matlab language;
- Excellent knowledge of the main CAD 2D and 3D technical drawing software, such as AutoCAD and Revit;

**Other skills:**

Exam for drone pilot achieved on 04/2019.  
Lifeguard national patent (FIN), conferred in 2004 by the Municipal Pool of Pinerolo.

**Driving license: B****Privacy policy:**

I authorize the processing of personal data contained in my curriculum vitae based on art. 13 of Legislative Decree 196/2003 and art. 13 of EU Regulation 2016/679 concerning the protection of individuals with regard to the processing of personal data.