UNIVERSITÀ DEGLI STUDI DI PADOVA

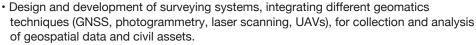**Dipartimento Territorio e Sistemi Agro-Forestali**

TESAF
Università di Padova
Viale dell'Università 16 - AGRIPOLIS
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Surveying and mapping

Research Area

Geomatics

Topics

- Design and development of surveying systems, integrating different geomatics techniques (GNSS, photogrammetry, laser scanning, UAVs), for collection and analysis of geospatial data and civil assets.
- Development of optimal solutions for the use of GNSS devices in forestry and environmental field.
- Development of GIS tools, based on propietary and Open Source software, for managing georeferenced databases and implementing numerical models to be applied to the environmental field.
- Testing and development of photogrammetry-laser scanner integrated systems for different application sectors:
  - Environment: 3D reconstruction of detailed morphology of landslide slopes and instability areas.
  - Architectural and Cultural Heritage: 3D modelling, solid modelling and development of virtual visits for preservation, restoration and structural analysis activities.
  - Forensic: road accident and crime scene analysis through 3D reliable reconstruction of the scene.
- Development, testing and quality assessment of airborne LiDAR data post -processing tecniques.
- Development of low cost positioning systems for indoor mapping applications.
- Development of software platforms for managing geospatial data using Open Source technologies and WebGIS portals for data access and analysis.

People

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Research Projects

- Development of a low-cost mobile mapping system, FSE-Regione Veneto.
- Low-cost system for estimating and monitoring of buildings energy efficiency, FSE-Regione Veneto.
- Dams safety: a new approach for the monitoring of the dams with the use of remote sensing, CEI-KEP Italy.
- URBAN GEOmatics-Bulk Information Generation, Data Assessment and Technology Awareness, PRIN-Italy.
- Development of a landslide monitoring system based on photogrammetry and multiple cooperating devices, TESAF-Unipd.

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