The GeoVis group

About
The Geospatial Data Analysis and Visualization (GeoVis, for short) group is with the Department of Geographical Sciences, University of Maryland, and the University of Maryland Institute for Advanced Computer Studies (UMIACS). It is also affiliated with the Department of Computer Science and the Center for Geospatial Information Sciences.

Please visit http://users.umiacs.umd.edu/~deflo/ or scan the QR code above for more information.

Research areas
- Geometric modeling and 3D shape analysis
- Spatial data structures and algorithms
- Topology-based machine learning
- Topology-based geospatial data visualization
- Mesh-based terrain and surface modeling
- Applications to environmental data modeling and analysis

Current projects
- Modular data structures for meshes and simplicial complexes
- Tree mapping and reconstruction from aerial and terrestrial LiDAR (Light Detection And Ranging) data
- Modeling and analysis of very large terrains reconstructed from LiDAR point clouds
- Topo-bathymetric data analysis and visualization for coastal ocean modeling
- Topology-based analysis and visualization of multi-field data
- Mesh-based sea ice surface topography mapping

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Team
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Collaborations
- Clemson University
- German Aerospace Agency (DLR)
- Italian National Research Council
- Lawrence Livermore National Lab
- University of Genova
- University of Rome at Tor Vergata
- University of Utah