Research topics:

- Algorithm
- Graph theory
- Distributed computing
  - Models & algorithms for spatial data

Main research projects:

- GEOSAFE (Geospatial Based Environment For Optimisation Systems Addressing Fire Emergencies - EU Project Funded by Marie Skłodowska-Curie Research and Innovation Staff Exchange, RISE - Project reference: 691161). The GEO-SAFE project aims at creating a network enabling the two regions to exchange knowledge, ideas and experience, thus boosting the progress of wildfires knowledge and the related development of innovative methods for dealing efficiently with such fires. More precisely, the GEO-SAFE project focuses on developing the tools enabling to set up an integrated decision support system optimizing the resources during the response phase.
- AMANDA (Algorithms for MAssive and Networked DAta) - National project partially funded by Italian Ministry of Education, Research, and University (MIUR). The project will investigate algorithmics for massive data sets. On one hand the project will study emerging and realistic computational models and general algorithm design techniques; on the other hand it will focus on algorithmic issues specific for networked data sets.
- ARRIVAL (Algorithms for Robust and online Railway optimization: Improving the Validity and reliability of Large scale systems) - European project funded by the Future and Emerging Technologies Unit of EC (IST priority - 6th FP), under contract no. FP6-021235-2. The main goal of ARRIVAL was to develop the necessary foundational algorithmic research in order to provide ingenious and sound answers to the fundamental efficiency and quality issues encapsulated in robust and online planning of complex, large-scale systems as those in railways.
- AMORE (Algorithmic Methods for Optimizing the Railways in Europe) - European project funded by the Human Potential Program of the EU, under contract n. HPRC-CT-1999-00104. The main goal of AMORE was to develop models for railway optimization problems, and to propose and implement algorithms for solving them.
- SPADA (Representation and Processing of Spatial Data in Geographic Information Systems) - Project funded by the Italian Ministry of University and Scientific and Technological Research.

Papers:

Book chapters


