

## **Research Activity**

His main research area is Combinatorial and Network Optimization. Research activity is focused on optimization algorithms, both for computationally hard and for tractable problems, at the theoretical as well as experimental level.

His long-standing research interests include theory and application of graphs and oriented hypergraphs, computational logics, routing in dynamic networks and multi-objective optimization. Past research topics include optimization models for fair allocation, in particular for the electoral apportionment problem. His on-going research is mostly focused on MCDA (Multiple Criteria Decision Analysis).

## **Areas of Expertise**

- project, implementation and improvement of exact solution methods for computationally hard problems, both in the optimization and in the enumeration/ranking version;
- devising polynomially solvable cases of hard combinatorial problems, and in general, improving theoretical computational complexity for tractable problems;
- modeling tools exploiting graphs and oriented hypergraphs;
- support tools and applications of MCDA.