The GrAMA group develops research activity in two domains: Graphs and Multi-Agent Systems. Besides research contribution in these specific research areas, the group research addresses issues raised by algorithms scalability to large amount of data, the development of self-* features, distributed and dynamic reasoning, emergence of structures and behaviours and their effective exploitation in the proposed models.

Our application domains are: the future web and internet templates of communication, large data systems and digital societies.
Research Objectives

- Models and Algorithms for Distributed Large-Scale Systems (data mining, social networks, internet, etc.)
- Intelligent and Distributed Solutions for Complex Problems in Open, Dynamic and Uncertain Environments
- Models and Algorithms for Dynamic and Intelligent Decentralized Control in Large-Scale Systems with Self-* Features (Self-adaptation, Self-organization, etc.)

Achievements

- Patent for a generic multi-criteria negotiation process in a dynamic environment
- Platform for matching large graphs of data
- Involvement in the foundation of a self-* systems community and its associated conference SASO

Activities

- International
  - Editorial board of International Journals, Steering Committee and Program Committee of International Conferences
  - Chairing and Organization of International Conferences (ex.: IEEE SASO 2012) and workshops
  - Visiting researchers, Invited lectures, research evaluation committees of several foreign Universities
  - International evaluation committees (Europe, Deutschland, Netherlands, Canada, Norway, etc.)
  - International Projects Partnership (Europe, Bilateral-Partnership, …)
- National
  - Active participation in national Research Working Groups: GDR IM, ASR, GT AFIA, GDR I3
  - Organization of National and French-Speaking Conferences and Workshops
  - National Evaluation (AERES, ANR projects, Rhône-Alpes Region Projects, etc.)
  - Animation of Research Networks (RNSC, …)
  - National Projects Partnership (ANR AOC, PEPS CNRS, PREDIT ALF, …)
- Regional
  - Collaboration with IFFSTAR, COOPER A Project, ARC 6, ARC 7, IXXI, IMU (Excellence Lab.), and Industrial Poles of Competitiveness (LUTB)

International collaborations

- Algeria, Australia, Austria, Canada, Greece, Ireland, UK, Romania, Spain, Switzerland, USA, Vietnam.