



# Algoritmi Center @dps

Centro ALGORITMI is a research unit of the School of Engineering – University of Minho. The majority of PhD-level researchers of the Center are also Faculty members of four departments of the School of Engineering, including the Industrial Engineering & Management Department (DPS).



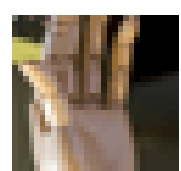
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<http://algoritmi.uminho.pt/>

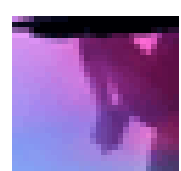
## Research Groups



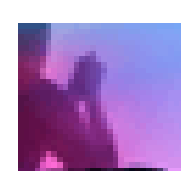
Computer Communications and Pervasive Media (CCPM)



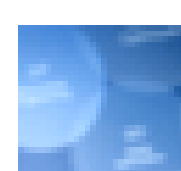
Industrial Electronics (IE)



Information Systems and Technologies (IST)



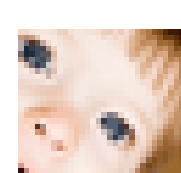
Micro/Nanotechnologies and Biomedical Applications (MNBA)



**Nonlinear Systems Optimization and Statistics (NSOS)** – 10 integrated researchers from DPS academic staff



**Systems Engineering, Optimization and Operations Research (SEOR)** – 13 integrated researchers from DPS academic staff



*Ad-hoc research group: EngageLab*

## Nonlinear Systems Optimization and Statistics (NSOS)

[algoritmi.uminho.pt/research-teams/nsos](http://algoritmi.uminho.pt/research-teams/nsos)

### Research Areas

- Continuous Nonlinear Optimization
- Derivative-Free Optimization
- Global Optimization
- Mixed Integer Programming
- Multi-objective Optimization
- Semi-Infinite Programming
- Statistics and Applications



### Some Integrated Researchers from DPS



### Objectives

- Conduct fundamental and applied research, aiming to publish the results in leading journals;
- Disseminate the obtained results in high level conferences, potentiating the impact of the research and possible collaborations;
- Cooperate with local and international industries increasing its competitiveness;
- Provide high quality public domain software;
- Promote collaborations with international leading research groups actuating in the same research areas;
- Offer high level educational courses either to MSc and PhD students in the programs supported by the research center.

## Systems Engineering, Optimization and Operations Research (SEOR)

[algoritmi.uminho.pt/research-teams/seor](http://algoritmi.uminho.pt/research-teams/seor)

### Research Areas

- **Optimization:** Large Scale Integer Programming and Meta-heuristics, and their application in Cutting and Packing, Scheduling and Manufacturing.
- **Supply Chain Management, Logistics and Transportation:** Supply Chain Management, Transportation Systems, Forecasting and Inventory.
- **Modeling and Simulation and Optimization:** Automatic translation and program generation, and their application in manufacturing.
- **Quality, Reliability and Maintenance:** Quality Management Systems, Certification and Accreditation, and Reliability.

### Integrated Researchers from DPS



### Objectives

- Conduct both fundamental and applied research, targeting to publish in the highest quality and flagship journals;
- Establish research mobility, exchange and cooperation programs with internationally renowned research centers;
- Establish high quality research contracts with surrounding industries and services, aiming at contributing to their development;
- Target the job placement of our PhD and MSc students in surrounding industries and services after they graduate;
- Develop a research environment attractive to international graduate students, particularly from Portuguese speaking countries, and to post-doctoral researchers;
- Encourage the involvement of postgraduate students in ongoing research projects.

**Dia do Departamento de Produção e Sistemas - 22 de fevereiro de 2013**