

# L MAP LABORATORY OF MATHEMATICS AND ITS APPLICATIONS

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MAP / UMR CNRS  
5142

Fields of application  
Oil & gas industry  
Aeronautics  
The environment  
Operating dependability

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Research themes and know-how

Partial differential equation analysis and optimization

Numerical simulation and scientific computing, high performance computing

Applied statistics and probability

Geometry and topology

Modeling, scientific computing, high-performance computing, development of codes for numerical and stochastic simulation of physical phenomena in: petroleum engineering, depth imaging, aerothermodynamics, combustion, pollutant transportation, complex flows, the environment, etc.

Statistical decision-making tools: predictive reliability and operating dependability, survival analysis, design of experiments, data analysis

Shape control and optimization

Main equipment

Computer clusters

MAVERIC test bench:  
model for validating  
and experimenting on  
refrigeration by controlled  
injection.

## Partnerships

Industrial partnerships: TOTAL, Safran  
Helicopter Engines, GDF SUEZ, ALSTOM, EDF,  
SNCF, Groupe PSA, GDTech

Institutional partnerships: IFP, IFREMER,  
ONERA, IRSN, CEA

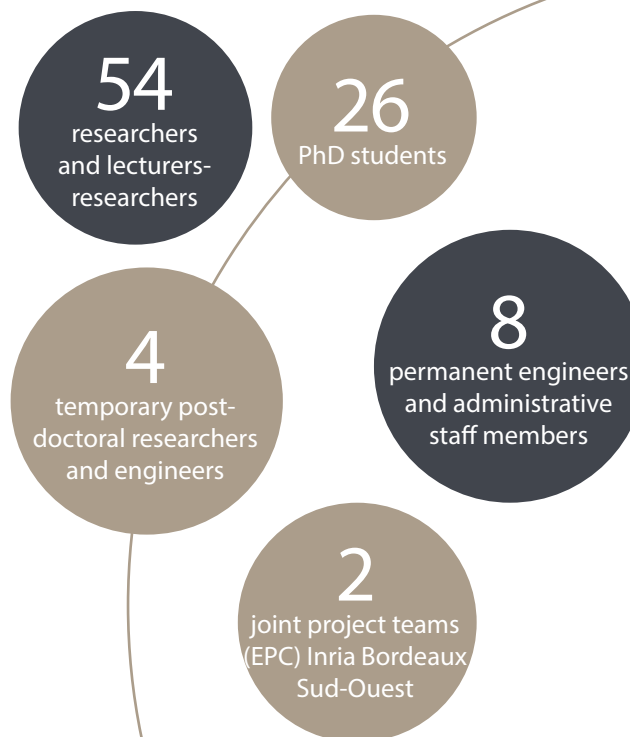
Spearheaded by



IN PARTNERSHIP WITH



## LMAP in figures



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