

Cloud

computing

SIMULATION

Cloud

MODELING

Big Data

HPC

computing

Big Data

SIMULATION

HPC

MODELING



AT THE HEART OF DIGITAL INNOVATION

[www.teratec.eu](http://www.teratec.eu)



# Numerical Simulation

Vector of Innovation and Competitiveness



## MASTERING TECHNOLOGY

Teratec participates actively in initiatives to improve industrial mastery in the numerical simulation and HPC sector, which is crucial to keeping Europe competitive and innovating. One such initiative is ETP4HPC, an European platform to accelerate the development of European technologies at every step of the HPC chain, these technologies being now essential to almost all industry sectors.

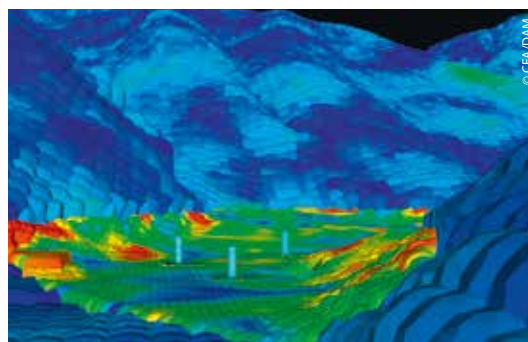


## INDUSTRIAL RESEARCH

Teratec helps set up and promote French and European research projects by industrial companies, technology suppliers, and major research centers via R&D programs in France (competitiveness clusters including Systematic Paris-Région, and the French National Research Agency) and Europe (PCRD, H2020, ITEA2).

## DISSEMINATION ACROSS INDUSTRIES AND SERVICES

Teratec helps companies, especially small and medium-sized businesses, gain access to the high-performance computing technologies they need to develop new products and services. A major initiative is underway for widely accessible Cloud simulation services.



The Teratec Forum is the annual leading HPC event in Europe, a gathering of international experts who meet to discuss the technological and economic issues around high performance computing and numerical simulation.

## SUPPORT FOR SME'S

Teratec supports technological SME's and start-ups in their actions to value their expertise and their offers. It also facilitates their access to industry leaders and helps them set up and finance their R&D projects.

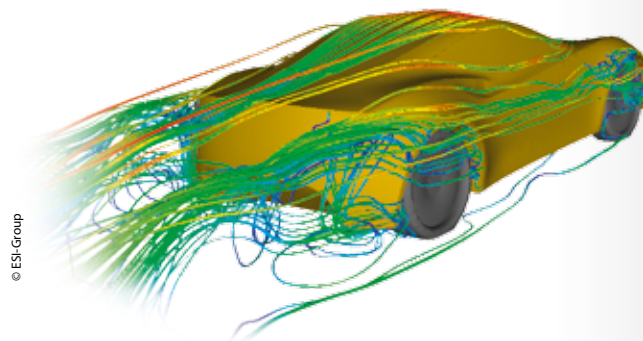
Teratec and the Essonne Chamber of Commerce and Industry provide them offices and support services on the Teratec Campus, an area dedicated to simulation and HPC.

## TEACHING AND TRAINING

Teratec has joined forces with universities and major engineering schools to design programs in initial and continuing education that cover the entire spectrum of high performance simulation and modeling. These initiatives will be expanded and reinforced to form a European training institute.

## INTERNATIONAL COOPERATIONS

Teratec develops international cooperations in many fields: European research programs, exchange programs with major industrialized countries and some emerging countries that have decided to rapidly develop their HPC capacities, and also international partnerships.



# The Teratec Campus

## European Ecosystem for Simulation and HPC

### INCUBATOR AND BUSINESS CENTER

The Essonne Chamber of Commerce and Industry accommodates SMEs and innovative companies, offering adapted solutions, custom tailored support and high-quality service to best support their growth in a technology-rich environment favorable to the development of their simulation and modeling activities.

### INDUSTRIAL RESEARCH LABORATORIES

The Teratec Campus is home to several research laboratories on topics such as future architectures and exaflop systems (Exascale Computing Research Lab, Extreme Computing), developing and parallelizing simulation software, and designing complex systems.

### TRAINING INSTITUTE

Through partnerships with universities, engineering schools and industrial firms, the Teratec Campus will provide training and education and give students, engineers and researchers access to the skills and expertise available on the site. «A la carte» continuing education will also be offered, depending on companies' needs.

### TECHNOLOGY COMPANIES

Large companies and small businesses, systems suppliers, software providers and service companies are all present on the Teratec Campus, where they perform technical and commercial activities related to HPC. The industrial expertise present there covers the entire value chain, from components and systems up to software and services.

### SERVICES PLATFORMS

The role of these platforms, which combine sectorial expertise and simulation expertise, is to help the companies in a given sector perform their design and simulation work. More specifically, they provide small businesses and industrial firms with the computing resources, software and technical expertise they need to carry out their projects, thus allowing them to develop new products or services more quickly and easily.



### The CEA's Very Large Computing Center

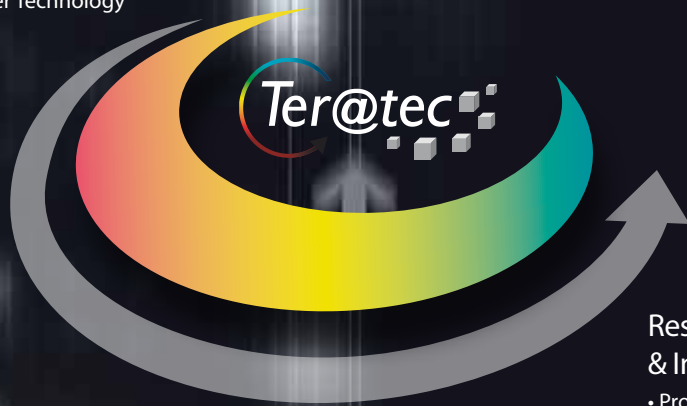
The CEA's Very Large Computing Center is home to the CCRT (Center for Computing Research and Technology), where the Airain supercomputer offers 420 teraflops of secured computing power to major industrial firms which share skills, costs, and risks with the CEA through long-term partnerships. It also hosts CURIE, a 2 petaflops supercomputer, which is France's contribution to Europe's PRACE infrastructure.





## Industrial Companies

- Competitiveness
- Master Technology



## Technology Companies

- Simulation
- Design

## Research & Innovation

- Processes
- Products & Services

## Teratec Members

### Industrial companies

Airbus  
Air Liquide  
ArcelorMittal  
CEA  
CGG  
Dassault Aviation  
EADS  
Electricité de France  
Faurecia  
L'Oreal  
Safran  
Total

### Technology companies

ActiveEon  
Alineos  
Alliance Service Plus  
Allinea Software  
Altair Engineering France  
Altran  
Alyotech  
Ansys  
Bull / Atos  
Carri Systems  
CD Adapco  
Cenaero  
ClusterVision  
Communication et Systèmes  
Comsol  
Cray Computer  
Cybeletech  
DataDirect Networks  
Dell  
Distène  
EnginSoft  
ESI Group  
Fujitsu  
Hewlett Packard  
Intel  
Kalray  
Kitware  
Mathworks  
Mellanox  
Nice Software  
Noesis Solutions  
Numscale  
Numtech  
NVidia  
OpenText  
Optis  
Oxalya Groupe OVH  
Panasas  
Paratools  
Quasardb  
Samtech  
Scilab Enterprises  
Seagate  
Serveware  
SGI  
Silkan  
Sogeti High Tech  
Totalinux  
Transtec

### Teaching and Research

Andra  
Cerfacs  
CNRS  
CSTB  
Digiteo  
Ecole Centrale de Paris  
Ecole Nationale Supérieure des Mines de Paris  
Ecole Polytechnique  
Ecole Normale Supérieure de Cachan  
Ecole Supérieure d'Ingénieurs Léonard de Vinci  
GENCI  
Genopole  
IFP Energies nouvelles  
Institut Telecom  
INRIA  
Nafems  
Onera  
Supélec  
Université de Versailles St-Quentin-en-Yvelines

### Local Authorities

Chambre de Commerce et d'Industrie de l'Essonne  
Conseil Général de l'Essonne  
Communauté de Communes de l'Arpajonnais  
Ville de Bruyères-le-Châtel  
Ville d'Ollainville

## Contacts

Gérard ROUCAIROL,  
Chairman  
gerard.roucairol@teratec.fr

Hervé MOUREN,  
Managing Director  
herve.mouren@teratec.fr

Jean-Pascal JÉGU,  
Operations Manager  
jean-pascal.jegu@teratec.fr

TERATEC  
Campus Teratec  
2 rue de la Piquetterie  
91680 BRUYÈRES-LE-CHÂTEL  
FRANCE  
Tel. +33 (0)9 70 65 02 10  
infos@teratec.fr  
www.teratec.eu