



Hervé Mouren
Managing Director of Teratec



Where we are

■ A larger scope confirmed

- From Classical Supercomputing to Systems Design, Big Data, Multimedia Creation, Life science applications....

■ New activities

- Launch of HPC Cloud initiatives
- Preparation of dedicated Services platforms for Engineering, Multimedia, Health, Agriculture, etc.

■ R&D

- Creation of the SystemX IRT
- Launch of the HPC European Technology Platform, ETP4HPC

■ Training

- HPC & Simulation Masters Degrees for students and engineers
- Continuous training programs and ad-hoc seminars





Campus Teratec

Operational - 10 000 m²

■ Technology Companies

- Bull - CS SI - ESI - Silkan

■ Incubator and Business Center

- The Essonne Chamber of Commerce and Industry accommodates SME's and innovative companies
- Alliance service plus - Atem - Distène - Eagocom - Energy Innovation, Scilab Enterprises - Numtech - Xedix
- Adapted solutions, custom tailored support and high quality service in a technology-rich environment

■ Industrial Labs

- Extreme Computing (Bull et CEA)
- Exascale Computing Research (Intel, CEA, GENCI and UVSQ)
- Four dedicated HPC labs in Research and Technology Institute SystemX





Where we go

**Simulation is essential for industrial competitiveness
and will be the main key for re-industrialization**

- **Support dissemination across all industries and services**
 - Facilitate access to HPC and simulation
 - Participation in Cloud initiatives
- **Creation of Services platforms**
 - Combine sectorial expertise and simulation expertise
 - Help the companies perform their design and simulation work
 - Provide computing ressources, software and technical expertises
- **Help creation and development of technological SME'S**
 - Hardware, Software and Services
 - In cooperation with Competitiveness clusters and Technical Centers



Where we go

■ **Teratec Campus**

- Covering the whole value chain, from components and systems to software and services
- Promotion and training activities on the Campus

■ **Increase collaborative research**

- In France : Investissements d'avenir, FUI, ANR
- In Europe : Horizon 2020, Structural funds, ITEA2

■ **Active promotion of the strategic importance of HPC and Simulation** (public authorities, industry, press, etc.)

■ **Teaching and training**

- Strengthening of partnerships with universities, major engineering schools and industrial firms
- Development of new education and training programs



European Reference in Modeling & Simulation High Performance Computing

With permanent industrial objectives



Innovation



Competitiveness



Job creations

8th edition

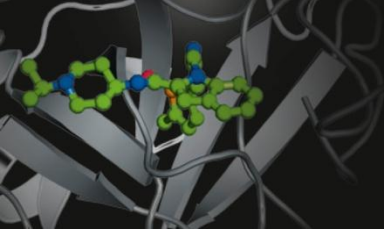
1 150 professionals participating

90 international speakers testify

65 companies and organizations exhibit

Forum Ter@tec





Plenary sessions

09h00 **Opening of the 8th TERATEC Forum**

Gérard ROUCAIROL, Chairman, and Hervé MOUREN, Managing Director , TERATEC

09h15 *David ROS, Vice-président du Conseil Général de l'Essonne*

09h30 **Game-changing computational engineering technology**

Charbel FARHAT, Depart. of Aeronautics & Astronautics, Army HPC Research Center, Stanford University

10h00 **Exascale and Big Data at NERSC**

Sudip DOSANJH, Division Director, NERSC (National Energy Research Scientific Computing Center)

10h30 **Presentations of the Forum Sponsors**

Platinum Sponsors : BULL – HP – INTEL - Gold Sponsors : CEA – OXALYA - PANASAS

11h00 Coffee Break & Visit of the exhibition & Networking

11h45 **Evolution and challenges of engineering simulation**

Stefano ODORIZZI, CEO, ENGINSOFT

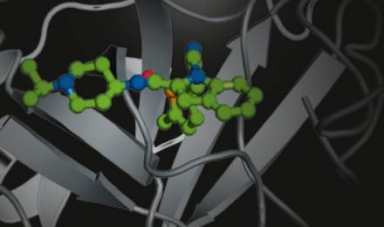
12h15 **Paving the road ahead for software development in HPC**

Dr David LECOMBER, COO, ALLINEA SOFTWARE

12h45 **Presentations of the Forum Sponsors**

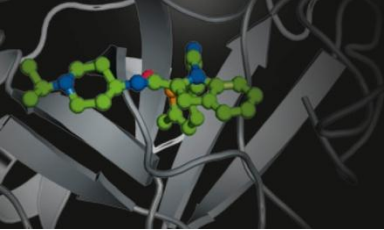
Silver Sponsors : ALTRAN – CS – FUJITSU - DELL – DDN – EMC

13h00 Lunch & Visit of the exhibition & Networking



Plenary sessions

- 14h30 **High Performance Computing, a strategic tool for a company**
Jean-François MINSTER, directeur Scientifique de TOTAL
- 15h00 **Numerical simulation and optimization contributions for Air Liquide activities**
Régis REAU, directeur Scientifique d'AIR LIQUIDE
- 15h20 **Computational challenges in Life Sciences Research Infrastructures**
Alvis BRAZMA, Senior Team Leader, Functional Genomics, EMBL/EBI (European Bioinformatics Institute)
- 15h40 **Presentations of the Forum Sponsors**
Silver Sponsors : GENCI - NETAPP - NVIDIA - OPENSIDES - SGI. Partner : SYSTEMATIC
- 16h00 Coffee Break & Visit of the exhibition & Networking
- 16h50 **HPC Challenges**
Marie-Pierre de BAILLIENCOURT, DGA de BULL
- 17h10 **La simulation au service de la compétitivité des entreprises**
Gérard ROUCAIROL, Président de TERATEC
- 17h30 **Louis GALLOIS, Commissaire général à l'investissement**
- 18h00 **Cocktail & Visit of the exhibition & Networking**



3 Workshops Technology Oriented

A1 - 09h00-12h30 - Embedded and Mechatronics Complex Systems: Trends and Challenges

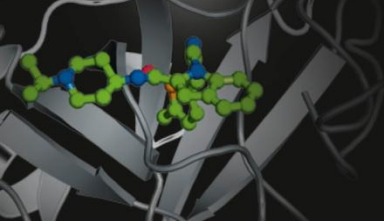
Chaired by Jacques DUYSENS (SILKAN), Gérard POIRIER (DASSAULT AVIATION) and Christian SAGUEZ (TERATEC) with the participation of Clément FORTIN (CRIAQ), Bruno MONSUEZ (ENSTA ParisTech), Laurent JULIARD (KALRAY), Philippe RAVIER (SILKAN) and Thierry CHEVALIER (AIRBUS)

A2 - 09h00-12h30 - Big Data and HPC

Chaired by Ange CARUSO (EDF), Georges HEBRAIL (EDF) and Guillaume COLIN DE VERDIERE (CEA) with the participation of Fernando VELEZ (SAP), Bob JONES (CERN), Marie-Luce PICARD (EDF R&D), Julien LAUGEL (MFG LABS), Parviz PEIRAVI (INTEL Corporation) and Philippe GIBERT (ORANGE Labs R&D)

A4 - 14h00-17h45 - Energy Efficiency of HPC systems

Chaired by Marie-Christine SAWLEY (INTEL Exascale Labs) with the participation of John SHALF (NERSC - Lawrence Berkeley Labs), Vincent KELLER (EPFL - Center for Advanced Modeling Science), Rosa BADIA (BARCELONA SUPERCOMPUTING CENTRE), Benoit PRADELLE (UNIVERSITE DE VERSAILLES SAINT-QUENTIN-EN-YVELINES), Daniele TAFANI (LEIBNIZ SUPERCOMPUTING CENTRE) and Sébastien CABANIOLS (HP)



3 Workshops Usage Oriented

A2 - 09h00 /12h30 - **Materials Simulation**

Chaired by Gilles ZERAH (CEA) with the participation of Laurent SOULARD (CEA), Massimo NORO (UNILEVER), Dominic TILDESLEY (CECAM) and Benoit SCHNELL (MICHELIN)

A5 - 14h00/17h30 - **HPC in Biology and Health**

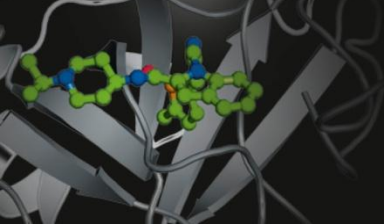
Chaired by François BALLET (MEDICEN) and Christian SAGUEZ (TERATEC) with the participation of François IRIS (BIO-MODELING SYSTEMS), Philippe GUILLET (SANOFI), Denis LE BIHAN (CEA) and Luc SOLER (IRCAD)

A6 - 14h00/17h45 - **Modeling and simulation to support sustainable cities**

Chaired by Vincent COUSIN (ADVANCITY) and Etienne DE POMMERY (ESI Group) with the participation of Hervé CHARRUE and Souheil SOUBRA (CSTB), Jean-Marc CREPEL (RENAULT), Franck BOUTTE (Agence Franck Boutté Consultants), Fabienne TROLARD (INRA) Trino BELTRAN (BOUYGUES BATIMENT International), Fabien BROCHETON (NUMTECH) and Philippe BISCH (SYNTEC Ingénierie)

09h00/17h30 – **ScilabTEC'13, the fifth edition of the Scilab Users' Day**

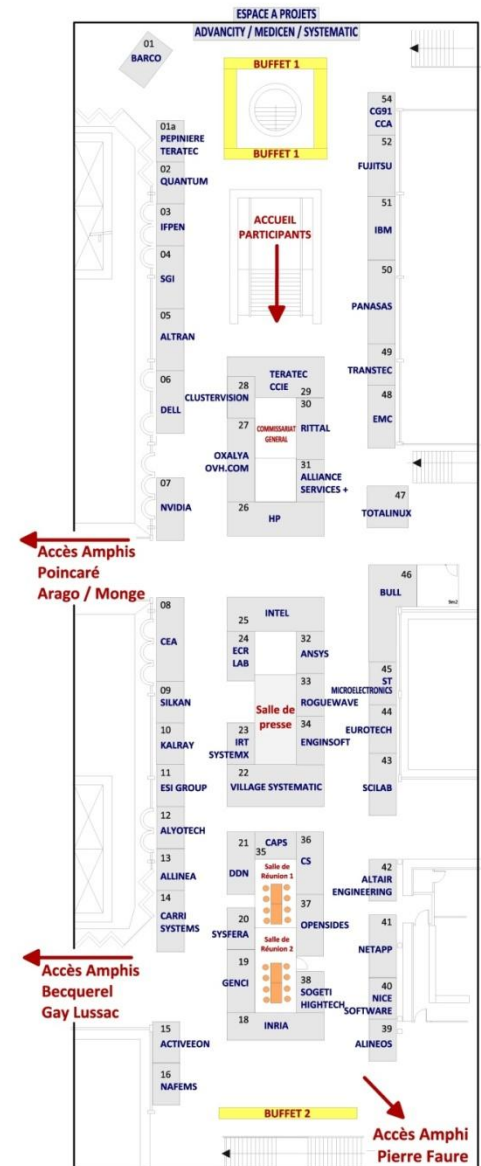
with the participation of Thierry MAROT (DGA), Jean-Louis NICKS (CNES), Mickaël BAUDIN (EDF), Sophie RAPENNE (EDF), Stéphane JIMENEZ (ARCELORMITTAL), Guillaume DUTILLEUX (CETE), Silvia POLES (OPENEERING), Jean-Pierre BOVEE (SANOFI), Emmanuel SOHM (SDI), Stéphane CHAUVEAU (CAPS ENTREPRISE), Claude GOMEZ (SCILAB ENTERPRISES) and Gérard POIRIER (DASSAULT AVIATION)



Exhibition

- ACTIVEON
- ALINEOS
- ALLIANCE SERVICES PLUS
- ALLINEA SOFTWARE
- ALTAIR ENGINEERING
- ALTRAN
- ALYOTECH
- ANSYS FRance
- BARCO
- BULL
- CAPS ENTREPRISE
- CARRI SYSTEMS
- CCI DE L'ESSONNE
- CEA
- CLUSTERVISION
- COMMUNICATION & SYSTEMES
- CONSEIL GENERAL DE L'ESSONNE
- CC DE L'ARPAJONNAIS
- DATADIRECT NETWORKS
- DELL
- EMC
- ENGIN SOFT
- ESI GROUP
- EUROTECH
- EXASCALE COMPUTING RESEARCH LAB
- FUJITSU
- GENCI
- HEWLETT PACKARD

- IBM
- IFPEN
- INRIA
- INTEL
- KALRAY
- NAFEMS
- NETAPP
- NICE SOFTWARE
- NVIDIA
- OPENSIDES
- OXALYA
- PANASAS
- PEPINIERE TERATEC
- QUANTUM
- RITTAL
- ROGUE WAVE
- SCILAB
- SGI
- SILKAN
- SOGETI HIGH TECH
- ST MICROELECTRONIC
- SYSFERA
- SYSTEMATIC
- SYSTEMX IRT
- TERATEC
- TOTALINUX
- TRANSTEC



Thank you for your attention
&
Welcome !

Forum Ter@tec

A complex 3D molecular model of a protein structure, rendered in gray, with a rainbow-colored circular arrow and a small molecular structure at the bottom.