



## TERATEC 2014 Forum

**JULY 1 & 2, 2014 - ECOLE POLYTECHNIQUE - 91 PALAISEAU - 9<sup>th</sup> EDITION**

**THE INTERNATIONAL MEETING FOR SIMULATION AND HIGH PERFORMANCE COMPUTING**

### *HPC at the service of business competitiveness*

**T**he 2014 Teratec Forum will include presentations of the most advanced industrial projects from France, Europe and the United States, and also the strategic vision of leading industrial players on where the technology is going.

This year, this panorama will be completed by a major topic, the presentation of the French Supercomputing plan, part of "**The New face of Industry in France**" launched by the French government end of 2013. This plan has just been validated and its objective is to position France as a major player in High Performance Computing and to increase industrial competitiveness by developing the use of numerical simulation.

■ **PLENARY SESSIONS** on **Tuesday July 1<sup>st</sup>**, will underline the growing impact of HPC in many industry and research sectors, and its role in tackling scientific and technological challenges. Key industry figures will present their testimony on the challenges of high performance simulation, technological providers and innovating SMEs will show their latest creations, international organizations will present their vision and achievements.

#### **Plenary session's program:**

- **French Supercomputers Plan of "the New Face of Industry in France"**  
. Animated by: Gérard ROUCAIROL, Hervé MOUREN, Christian SAGUEZ, TERATEC
- **NASA Advanced Computing Environment for Science and Engineering**  
. Animated by: Rupak BISWAS, Deputy Director of Exploration Technology, NASA Ames Research Center
- **The Square Kilometre Array: Transformational Science Instrument and Big Data Challenge**  
. Animated by: Paul ALEXANDER, UK Science Director SKA Organisation , Professor in Astrophysics, UNIVERSITY OF CAMBRIDGE
- **2004-2014: a decade of generalization and industrialization of high performance computing at Airbus**  
. Animated by: Thierry CHEVALIER, Head of Airbus Aerodynamics Methods & Tools, AIRBUS
- **NVIDIA's Vision for Exascale**  
. Animated by: Cyril ZELLER, Director of Engineering and developer Technology, NVIDIA
- **The UberCloud - Simulations and High Performance Technical Computing in the Cloud**  
. Animated by: Wolfgang GENTZSCH, co-founder and President of The UberCloud Engineering
- **Simulation : Assessment and Challenges of Pre- & Post-processing**  
. Animated by: Laurent ANNE, Sales Director and co-founder DISTENE
- **HPC in Europe: challenges, R&D directions and ecosystem development**  
. Animated by: Jean-François LAVIGNON, président de l'ETP4HPC

**THE WORKSHOPS on Wednesday, July 2, with the main market players and recognized experts**, whose aim is to take on emerging technologies and new areas of application of HPC. These workshops will illustrate some major fields of action of the Supercomputers Plan, mastering technology and sectoral initiatives.

- **HPC & Big data applications and solution architectures: evolution and convergence**

- . Chaired by: Pascale BERNIER-BRUNA, BULL - Marie-Christine SAWLEY, INTEL - Jean-Philippe NOMINE, CEA
- . With the participation of Gabriele PACIUCCI, INTEL - Zhiqi TAO, INTEL - Torben KLING-PETERSEN, XYRATEX - Pierre PLEVEN, INSTITUT MINES TELECOM - Ascension VIZINHO-COUTRY, MATHWORKS - Emmanuel LECERF, IBM - Benoit VAUGON and Grégory POTDEVIN, ARMADILLO - IPGP.

- **Optimal design of complex systems: state of the art technology and locks**

- . Chaired by: Jacques DUYSSENS, SILKAN - Gérard POIRIER, SYSTEMATIC
- . With the participation of Samir BEN CHAABANE, SILKAN - Michel ROCHETTE, ANSYS - S. BOUABDALLAH, Ecole Supérieure d'Ingénieurs LEONARD DE VINCI - C. ADAM, Ecole POLYTECHNIQUE - M. ZARROUG, PSA PEUGEOT CITROËN - H. MAITOURNAM, Ecole POLYTECHNIQUE - Michael HOFFMANN, ALTAIR ENGINEERING - Gilbert ROGE, DASSAULT AVIATION

- **Scientific Computing & Open Source: industrial practices for open source software**

- . Chaired by: Jean-Marie DAVESNES, SCILAB ENTERPRISES - Julien JOMIER, KITWARE
- . With the participation of Christophe PRUD'HOMME, AMIES - Dinh QUANG, DASSAULT AVIATION - Sébastien DINOT, CS - Julien JOMIER, KITWARE - Ronan KERYELL, AMD

- **Material simulation: new materials, usage, and durability**

- . Chaired by: Gilles ZERAH, CEA
- . With the participation of Philippe FEYEL, Groupe SAFRAN - Christophe DOMAIN, EDF R&D - Matthieu SALANNE, UNIVERSITE PIERRE ET MARIE CURIE - Gregory GENESTE, CEA - Aurélien DE LA LANDE, UNIVERSITE PARIS SUD

- **HPC & Big Data – software components and tools**

- . Chaired by: Pascale BERNIER-BRUNA, BULL - Marie-Christine SAWLEY, INTEL - Jean-Philippe NOMINE, CEA
- . With the participation of Benoit PRADELLE, UVSQ - Dr. Luigi BROCHARD, IBM - Andrés S. CHARIF-RUBIA, LUVSQ / ECR Lab - William JALBY, UVSQ / ECR Lab - Patrick WOHLSCHLEGEL, ALLINEA - Eric BOYER, CINES

- **Digital technologies for plant**

- . Chaired by: Christian SAGUEZ, CYBELETECH
- . With the participation of Véronique LETORT, ECOLE CENTRALE PARIS - Olivier BALARD, TELESPAZIO - Valérie MAZZA, Groupe LIMAGRAIN - Emeline DEFOSSEZ, VEGEPOLYS

- **HPC and Healthcare: From therapeutic research to personalized medicine**

- . Chaired by: Etienne DE POMMERY and Claude CAMOZZI
- . With the participation of Silvia POLES, NOESIS SOLUTIONS - Benoit DA MOTTA, ALLIANCE SERVICES PLUS - Edouard DUCHESNAY, NEUROSPIN - Philippe RAVIX, SOGETI HIGH TECH - Manuel DAUCHEZ, UNIVERSITE DE REIMS CHAMPAGNE ARDENNE - Michel ROCHETTE, ANSYS - Frédéric TURQUIER, COVIDIEN Surgical Solutions

- **Modeling and simulating urban systems**

- . Chaired by: Gérard HEGRON, ADVANCITY
- . With the participation of Gérard HEGRON, IFSTTAR - Michel MORVAN, THE COSMO COMPAGNY - Trino BELTRAN, BOUYGUES CONSTRUCTION INTERNATIONAL - Luc FRAUCIEL, 1SPATIAL - Laurent LE BRETON, DASSAULT SYSTEMES - Bernard MATYJASIK, EGIS

**ON THE EXHIBITION SIDE:** During these two days, there will be an exhibition covering on the 65 stands, the whole HPC industry. Systems manufacturers and software vendors, integrators and distributors, service providers, academic and laboratory researchers, public and private sector developers will present their latest HPC innovations.

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## **Badges and registration on: Teratec Forum**

**9<sup>th</sup> Edition**

**July 1<sup>st</sup> and 2<sup>nd</sup>, 2014 - Ecole Polytechnique, Palaiseau, France**

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