CEMRACS 2012 : projets

25 juillet 2012

Project 1 : COLARGOL / COmparaison des aLgorithmes dans Ae-Rosol et aGhOra pour les fLuides compressibles

Collaborations
– Dragan Amenga (INRIA)
– Damien Genet (INRIA)
– Emeric Martin (ONERA)
– Vincent Perrier (INRIA)
– Florent Renac (ONERA)
– Mario Ricchiuto (INRIA)

Project 2 : VOG Vlasov On Gpu

Collaborations
– Philippe Helluy (IRMA)
– Michel Mehrenberger (IRMA)

Young researchers
– Jonathan Jung (IRMA)
– Matthieu Kuhn (LSIIT)
– Luca Marradi (Université de Pise)
– Pham Thi Trang Nhung (IRMA)
– Christophe Steiner (IRMA)

Project 3 : FullSWOFparal

Collaborations
– Stéphane Cordier (MAPMO)
– Olivier Delestre (LJAD & EPU - Université de Nice - Sophia Antipolis)
– Christian Laguerre (MAPMO)

Young researchers
- Hélène Coullon (Géo-Hyd)
- Minh-Hoang Le (MAPMO)
- Romain Serra (Polytech'Nice-Sophia)

Project 4 : POAM2-AHyMaHT : Parallelization and optimization of adaptive multiresolution methodologies : application to hydrodynamic and magnetohydrodynamic turbulence

Collaborations
- Kai Schneider (Aix Marseille U, France)
- Marie Farge (ENS Paris, France)
- Ralf Deiterding (Oak Ridge Nat. Lab., USA) Margarte Domingues (INPE, Brazil)
- Sonia Gomes (Campinas, Brazil)
- Frank Jacobitz (U San Diego, USA)
- Odim Mendes (INPE, Brazil)
- Katsunori Yoshimatsu (Nagoya U, Japan)
- Romain Nguyen Van Yen (FU Berlin, Germany)
- Julius Reiss (TU Berlin, Germany)
- Youichi Sawamura (Nagoya U, Japan)

Young researchers
- Thomas Engels (Aix Marseille U/TU Berlin, France/Germany)
- Malcolm Roberts (U Edmonton, Canada)

Project 5 : High performance solvers for Tokamak Physics

Collaborations
- Edouard Audit, permanent (CEA/Maison Simulation)
- Virginie Grandgirard, permanent (CEA/IRFM)
- Xavier Lacoste (INRIA/Bacchus)
- Guillaume Latu, permanent (CEA/IRFM)
- Chantal Passeron, permanent (CEA/IRFM)
- Pierre Ramet (INRIA/Bacchus)
- Patrick Tamain, permanent (CEA/IRFM)
- Olivier Thomine, postdoc (CEA/IRFM)

Young researchers
- Julien Bigot (CEA/Maison Simulation)
- Thomas Cartier-Michaud (CEA/IRFM)
- Fabien Rozar(CEA/IRFM)

Project 6 : Quantify cloud elasticity depending on the demand variation modeled as a turbulent flow

Collaborations
– Chuyen Huynh (CISCO)

Young researchers
– Jean-Matthieu Etancelin (LJK)
– Tony Février (LMO)
– Georges Sadaka (LAMFA)

Project 7 : CoMPaS : Compositional Multiphase Parallel darcy flow Simulations

Collaborations
– Roland Masson (INRIA, Univ. Nice)
– Cindy Guichard (INRIA, Univ. Nice)

Young researchers
– Eric Dalissier (ICJ)
– Wei Zhang (LMO)
– Guillaume Gourlaouen (EDF et CMAP)
– Chang Yang (Université lyon 1)

Project 8 : Simulation of the parallel dynamics in Tokamaks

Collaborations
– Hervé Guillard (INRIA)
– Boniface Nkonga (INRIA)
– Petr Vanek (University of Pilsen)

Young researchers
– Marco Bilanceri (INRIA Sophia-Antipolis)
– Tian Tian (POLYTECH NICE)
– Jeaniffer Vides (INRIA, Maison de la Simulation)

Project 9 : ViVaBrain : Vascular blood flows

Collaborations
– University of Strasbourg, IRMA, EDP-TC team (R. Tarabay, Mr. Szopos, C. Prud'homme)
– University of Grenoble Laboratoire Jean Kuntzmann, EDP team (V. Chabannes)

– Interdisciplinary Laboratory of Physics, team DYFCOM (Ismail)

Young researchers
– Céline Caldini-Queiros (INRIA/LMB)
– Tarik Madani (LAMFA)
– Jussara Marandola Kofuji (Georgia Institute of Technology)

Project 10 : HAMM : domain decomposition, coarse grid solver, application to nonlinear mechanics

Collaborations
– University of Grenoble, Laboratoire Jean Kuntzmann, EDP team (V. Chabannes)
– University Strasbourg, IRMA, EDP-TC team (C. Prud'homme)
– IMATI CNR Pavia Italy (S. Bertoluzza)

Young researchers
– Abdoulaye Samake (LJK)
– Pierre Jolivet (LJK – LJLL)
– Chady Zaza (CEA)

Project 11 : RB4FASTSIM : Massively parallel certified and non-intrusive reduced basis methods for simulating multi-physics non-linear models

Collaborations
– University Pierre et Marie Curie, Laboratoire Jacques Louis Lions (R. Chakir)
– University of Strasbourg, IRMA, EDP-TC team (C. Prud'homme)
– CNRS, Laboratoire National High Magnetic Field (C. Trophime)

Young researchers
– Elisa Schenone (UPMC - INRIA-Rocquencourt)
– Stéphane Veys (LJK)

Project 12 : On the development of high order realizable moments methods for the simulation of sprays : adaptation to GPU/hybrid architectures

Collaborations
– Adam Larat (EM2C)
– Aymeric Vié (EM2C)