Monday 01.06

Welcome to the Conference

10:00 - 10:15
Opening & Welcome Ceremony

10:15 - 10:45
Towards the HPC-Inference of Causality Networks from Multiscale Economical Data
by Satoshi Matsuoka, Jan Hesthaven, Markus Püschel, Kenko Nakajima, Matthias Troyer, Horst Simon, Matteo Bocchi, Michael Bader, Romain Teyssier, Horst Simon, and Satoshi Matsuoka

10:45 - 11:15
The Future Long
by Tatjana Ruefli & Maria Grazia Giuffreda

11:15 - 12:00
Poster Session

Tuesday 02.06

Minisymposium I: Materials

09:00 - 10:00
Materials Discovery and Scientific Design by Machine Learning
by Romain Teyssier, Beat Bäuml, and Romain Teyssier

10:00 - 11:00
Materials and Interfaces
by Seth Munoz (EPFL, Switzerland)

11:00 - 12:00
Materials Science - Chemistry
by Jeroen Tromp (ETH Zurich, Switzerland)

Wednesday 03.06

Minisymposium II: Computer Science & Mathematics

09:00 - 10:00
Conference Entries in Computational Physics

10:00 - 11:00
Algorithms for Effective Finite Element Computation
by Maria Grazia Giuffreda and Tatjana Ruefli

11:00 - 12:00
Computer Science & Mathematics - Chemistry
by William E. Schulten (University of Basel, Switzerland)

12:00 - 13:00
PASC Networks Overview

Welcome

After a successful launch of the Platform for Advanced Scientific Computing (PASC) Conferences in 2015 with a theme focus on HPC and data, the conference is continuing to expand its horizons on a global scale.

PASC15 is dedicated toWelcome scientists and professionals from the academic and corporate world to discuss key issues in the area of High Performance Computing (HPC) - a branch of sciences that requires computer modeling and simulations.

The objectives of this conference are to provide a platform where emerging and accomplished leaders from diverse scientific disciplines can openly address their work, and to promote exchange of expertise in HPC and interdisciplinary collaborations. The ultimate goal is to help foster a scientific global society in the world that values challenge with innovative perspectives and ideas.

The conference offers six invited plenary sessions including a public lecture, 21 contributed talks, a poster session, information stands, one inter-PASC Networks Discussions, and the Swiss National Supercomputing Centre (CSCS) user meeting.

PASC15 is guided to its sponsors for their support, as well as to all participants that contributed to the creation of this year's program.

Organizing Committee

PASC15 Conference has been co-organized by

- Michel Leu (ESI, ETH Zurich, Switzerland)
- Peter Bauer (University of Basel, Switzerland)
- George Biro (University of Texas, USA)

Joand Hesthaven (EPFL, Switzerland)

Scientific Committee

- Michel Leu (ESI, ETH Zurich, Switzerland)
- Peter Bauer (University of Basel, Switzerland)
- George Biro (University of Texas, USA)

Joand Hesthaven (EPFL, Switzerland)

Monday 01.06

Welcome to the Conference

10:00 - 10:15
Opening & Welcome Ceremony

10:15 - 10:45
Towards the HPC-Inference of Causality Networks from Multiscale Economical Data
by Satoshi Matsuoka, Jan Hesthaven, Markus Püschel, Kenko Nakajima, Matthias Troyer, Horst Simon, Matteo Bocchi, Michael Bader, Romain Teyssier, Horst Simon, and Satoshi Matsuoka

10:45 - 11:15
The Future Long
by Tatjana Ruefli & Maria Grazia Giuffreda

11:15 - 12:00
Poster Session

Tuesday 02.06

Minisymposium I: Materials

09:00 - 10:00
Materials Discovery and Scientific Design by Machine Learning
by Romain Teyssier, Beat Bäuml, and Romain Teyssier

10:00 - 11:00
Materials and Interfaces
by Seth Munoz (EPFL, Switzerland)

11:00 - 12:00
Materials Science - Chemistry
by Jeroen Tromp (ETH Zurich, Switzerland)

Wednesday 03.06

Minisymposium II: Computer Science & Mathematics

09:00 - 10:00
Conference Entries in Computational Physics

10:00 - 11:00
Algorithms for Effective Finite Element Computation
by Maria Grazia Giuffreda and Tatjana Ruefli

11:00 - 12:00
Computer Science & Mathematics - Chemistry
by William E. Schulten (University of Basel, Switzerland)

12:00 - 13:00
PASC Networks Overview

Welcome

After a successful launch of the Platform for Advanced Scientific Computing (PASC) Conferences in 2015 with a theme focus on HPC and data, the conference is continuing to expand its horizons on a global scale.

PASC15 is dedicated toWelcome scientists and professionals from the academic and corporate world to discuss key issues in the area of High Performance Computing (HPC) - a branch of sciences that requires computer modeling and simulations.

The objectives of this conference are to provide a platform where emerging and accomplished leaders from diverse scientific disciplines can openly address their work, and to promote exchange of expertise in HPC and interdisciplinary collaborations. The ultimate goal is to help foster a scientific global society in the world that values challenge with innovative perspectives and ideas.

The conference offers six invited plenary sessions including a public lecture, 21 contributed talks, a poster session, information stands, one inter-PASC Networks Discussions, and the Swiss National Supercomputing Centre (CSCS) user meeting.

PASC15 is guided to its sponsors for their support, as well as to all participants that contributed to the creation of this year's program.

Organizing Committee

PASC15 Conference has been co-organized by

- Michel Leu (ESI, ETH Zurich, Switzerland)
- Peter Bauer (University of Basel, Switzerland)
- George Biro (University of Texas, USA)

Joand Hesthaven (EPFL, Switzerland)

Scientific Committee

- Michel Leu (ESI, ETH Zurich, Switzerland)
- Peter Bauer (University of Basel, Switzerland)
- George Biro (University of Texas, USA)

Joand Hesthaven (EPFL, Switzerland)
Monday
01.06

Tuesday
02.06

Wednesday
03.06

**MS09**
Lars Ruthotto (Emory University, USA)
Eldad Haber (University of British Columbia, Canada)
16:30 - 17:00  On the Solution of Large-Scale Inverse Problems that “Cannot be Solved”

**MS11**
17:00 - 17:30  DYNARE, a Toolbox for Solving and Estimating DSGE Models;

**MS07**
Polypeptides, Crystals, and Quantum Systems;
Jean-Philip Piquemal (Université Pierre et Marie Curie, France)

**MS06**
14:00 - 14:30  Building Computable Biological Network Models and their Application

**MS05**
14:30 - 15:00  HPC Framework for Aortic Valve Simulation with Hybrid Discretization
Alik Ismail-Zadeh (Karlsruhe Institute of Technology, Germany)
Ludovic Métivier (CNRS, France)
Claudia Draxl (Humboldt-Universität zu Berlin, Germany)
Davide Donadio (Ikerbasque, Spain)

**MS13**
11:10 - 12:00  Upgrading Smoothed Particle Hydrodynamics Calculations;
Jacqueline Chen (Sandia National Laboratories, Livermore, USA)

**MS12**
11:10 - 11:30  Scientific Computing Based on Mobile Embedded Technology;

**MS11**
17:00 - 17:30  DYNARE, a Toolbox for Solving and Estimating DSGE Models;

**MS10**
16:00 - 16:30  Generational Policy and Aging in Closed and Open Dynamic General Equilibrium
Kenneth Judd (Stanford University, USA)
Martin Berzins (University of Utah, USA)

**MS09**
Lars Ruthotto (Emory University, USA)
Eldad Haber (University of British Columbia, Canada)
16:30 - 17:00  On the Solution of Large-Scale Inverse Problems that “Cannot be Solved”

**MS11**
17:00 - 17:30  DYNARE, a Toolbox for Solving and Estimating DSGE Models;

**MS07**
Polypeptides, Crystals, and Quantum Systems;
Jean-Philip Piquemal (Université Pierre et Marie Curie, France)

**MS06**
14:00 - 14:30  Building Computable Biological Network Models and their Application

**MS05**
14:30 - 15:00  HPC Framework for Aortic Valve Simulation with Hybrid Discretization
Alik Ismail-Zadeh (Karlsruhe Institute of Technology, Germany)
Ludovic Métivier (CNRS, France)
Claudia Draxl (Humboldt-Universität zu Berlin, Germany)
Davide Donadio (Ikerbasque, Spain)

**MS13**
11:10 - 12:00  Upgrading Smoothed Particle Hydrodynamics Calculations;
Jacqueline Chen (Sandia National Laboratories, Livermore, USA)

**MS12**
11:10 - 11:30  Scientific Computing Based on Mobile Embedded Technology;

**MS11**
17:00 - 17:30  DYNARE, a Toolbox for Solving and Estimating DSGE Models;

**MS07**
Polypeptides, Crystals, and Quantum Systems;
Jean-Philip Piquemal (Université Pierre et Marie Curie, France)

**MS06**
14:00 - 14:30  Building Computable Biological Network Models and their Application

**MS05**
14:30 - 15:00  HPC Framework for Aortic Valve Simulation with Hybrid Discretization
Alik Ismail-Zadeh (Karlsruhe Institute of Technology, Germany)
Ludovic Métivier (CNRS, France)
Claudia Draxl (Humboldt-Universität zu Berlin, Germany)
Davide Donadio (Ikerbasque, Spain)

**MS13**
11:10 - 12:00  Upgrading Smoothed Particle Hydrodynamics Calculations;
Jacqueline Chen (Sandia National Laboratories, Livermore, USA)

**MS12**
11:10 - 11:30  Scientific Computing Based on Mobile Embedded Technology;

**MS11**
17:00 - 17:30  DYNARE, a Toolbox for Solving and Estimating DSGE Models;