



# 4th Workshop on Extreme-Scale Programming Tools (ESPT 2015)



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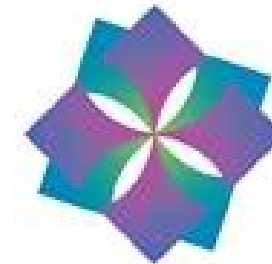


- Programming tools
  - Performance monitoring and analysis
  - Debuggers and correctness checking
  - Energy efficiency analysis
  - Performance tuning, scalability improvement, performance engineering
  - Automatic solutions: from source transformation to online tuning
  - Performance prediction and scalability analysis
- Tool technologies
  - How to solve the extreme-scale challenges for the tools
  - Tool infrastructures, tool architectures, reusable components
- Application developer experiences with programming tools

- ESPT 2012
  - 17 November 2014, New Orleans, LA
- ESPT 2013
  - 18 November 2013, Denver, CO
- ESPT 2014
  - 16 November 2012, Salt Lake City, UT



**SC12**  
Salt Lake City, Utah



**SC14**  
New Orleans, LA | hpc matters.

- ESPT 2015 is part of the SC workshop proceedings

In cooperation with:

**sighpc**

The ESPT workshop series is organized by the Virtual Institute – High Productivity Supercomputing

- Productive use of leading-edge supercomputers
  - Improve the quality and accelerate the development process of complex simulation programs in science and engineering
  - Target the most advanced parallel computer systems
  - Stable and state-of-the-art programming tools
  - Training and support
- 
- 12 partners from Europe and USA
  - Initiated with funding by the Helmholtz Association, Germany

The logo consists of the letters 'VI-HPS' in a bold, blue, sans-serif font. The 'V' is a simple chevron shape. The 'I' is a vertical bar. The 'H' is formed by two vertical bars connected at the top. The 'P' and 'S' are also in a bold, sans-serif style. The entire logo is rendered in a solid blue color.



The ESPT workshop series is supported by the German Priority Programme 1648: Software for Exascale Computing (SPPEXA)

- Priority Programme by the German Research Foundation (DFG)
- Fundamental research on various aspects of HPC software targeting the Exascale era
- Evolutionary and revolutionary approaches
- Currently funding 13 projects, phase 2 starts in Q1 2016!
- Many thanks for supporting the ESPT workshop series!



09:00 – 09:20	Intro
09:20 – 10:00	Keynote presentation
10:10 – 10:30	Work-in-progress presentation
10:30 – 11:00	Coffee break
11:00 – 11:30	Full-paper presentation
11:30 – 12:00	Work-in-progress presentation
12:00 – 12:30	Work-in-progress presentation:
12:30 – 13:40	Lunch break
13:40 – 14:30	Keynote presentation
14:30 – 15:00	Work-in-progress presentation
15:00 – 15:30	Coffee break
15:30 – 16:00	Full-paper presentation
16:00 – 16:30	Work-in-progress presentation
16:30 – 17:00	Work-in-progress presentation
17:00 – 17:30	General discussion

09:20 – 10:00 Keynote presentation:

"Providing a Robust Tools Landscape for CORAL Machines"

by Michael J. Brim (ORNL), Dong H. Ahn (LLNL),  
Scott Parker (ANL), and Gregory Watson (IBM)

13:40 – 14:30 Keynote presentation:

"Performance Optimization and Productivity"

by Judit Gimenez and Jesus Labarta (BSC)



10:10 – 10:30	“Large-scale debugging with graphs” by Nikoli Dryden
11:00 – 11:30	“Preventing the explosion of exascale profile data with smart thread-level aggregation” by Daniel Lorenz, Sergei Shudler, and Felix Wolf
11:30 – 12:00	“Progress report on the Integrative Model for Parallelism” by Victor Eijkhout
12:00 – 12:30	“A Principled Approach to HPC Monitoring” by Aaron Gonzales
14:30 – 15:00	“The OpenACC 2.5 Profiling Interface: A Tool Study” by Robert Dietrich, Bert Wesarg, and Guido Juckeland
15:30 – 16:00	“HPC I/O Trace Extrapolation” by Xiaoqing Luo, Frank Mueller, Philip Carns, John Jenkins, Robert Latham, Robert Ross, and Shane Snyder
16:00 – 16:30	“Exploring the Impact of Overlay Network Topology on Tool and Application Performance” by Whit Schonbein and Dorian Arnold
16:30 – 17:00	“Initial Validation of DRAM and GPU RAPL Power Measurements” by Spencer Desrochers, Chad Paradis, and Vincent Weaver

# VI-HPS



## Enjoy the workshop!

