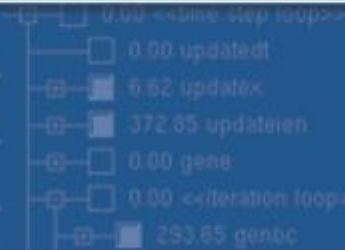


VI-HPS

SOFTWARE



FAST SOLUTIONS

- ☒ PAPL.L1.DCM
- ☒ PAPL.L1.JCM
- ☐ PAPL.L2.DCM
- ☒ PAPL.L2.JCM
- ☒ PAPL.L3.DCM
- ☐ PAPL.L3.JCM

PRODUCTIVITY

Second Workshop on Extreme Scale Programming Tools VI-HPS & SPPEXA

Michael Gerndt

November 18th, 2013

SC13, Denver

Today's supercomputers offer unprecedented levels of hardware performance, but using them in a **productive** manner remains a major challenge.

- Writing correct and efficient code requires to be
 - A domain scientist
 - A (super)computer expert
- Access to parallelism offered via low-level interfaces
 - Hard to learn and use
 - Performance behavior hard to understand and predict



- Development of portable programming tools that assist programmers in diagnosing programming errors and optimizing the performance of their applications
- Integration of these tools
- Organization of training events designed to teach the application of these tools
- Organization of academic workshops to facilitate the exchange of ideas on tool development and to promote young scientists

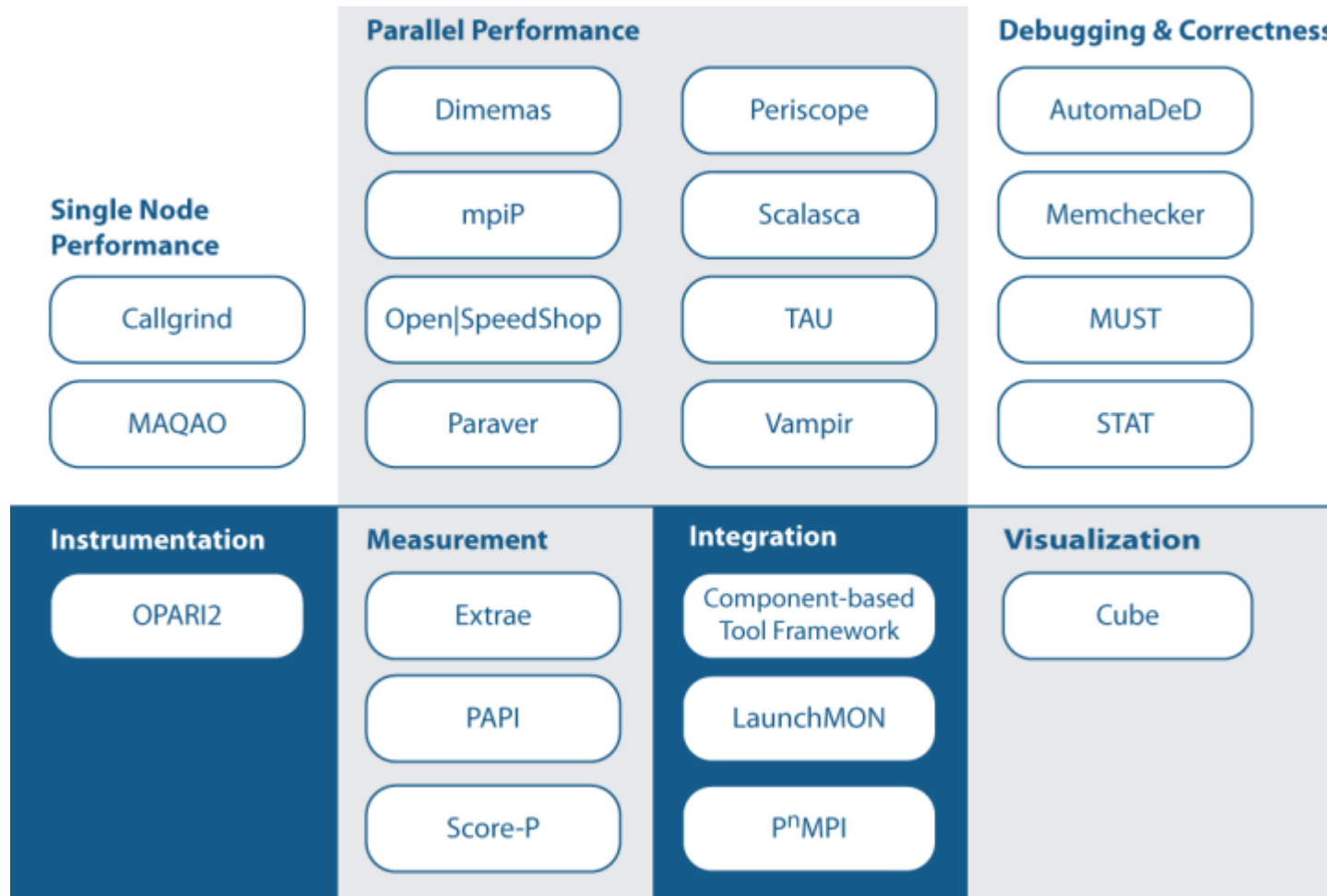


UNIVERSITY OF OREGON



Technische Universität München





Project	Agency	Time
SILC	BMBF	2009 - 2011
PRIMA	DOE	2009 - 2013
TEXT	EU	2010 - 2012
H4H	ITEA	2010 - 2013
HOPSA	EU	2011 - 2013
ECS	G8	2011 - 2014
LMAC	BMBF	2011 - 2014
Score-E	BMBF	2014 - 2016
<i>PRIMA-X</i>	<i>DOE</i>	<i>2014 -2106</i>

- Tuning workshops
 - Typically 3-5 days
 - Bring your own codes
 - Held usually twice per year
- Short courses
 - Trimmed down tuning workshops
- Conference tutorials and
 - Cluster, EuroMPI, Euro-Par, ICCS, SC
- Other invited training events
 - DEISA, PRACE
- Online training materials & LiveDVD

- PROPER workshop series
 - Topic: productivity & performance
 - Focus on tools and their application
 - Forum for young scientists
 - In conjunction with Euro-Par since 2008
 - This year in Aachen
- SC workshops
 - Extreme-scale performance tools (2012)
 - Extreme-scale programming tools (2013)
 - In cooperation with SPPEXA
 - Open call for abstracts



Session 1 09:00-10:00	Keynote: Tools for Earth System Modelling <i>Thomas Ludwig, German Climate Computing Centre</i>
Session 2 10:30-12:40	Tools for Energy and Performance Tuning 5 Talks + Talk on Pathway (each 15 minutes)
Session 3 14:00-15:00	Keynote: Addressing Performance and Programmability Challenges in Current and Future Supercomputers <i>Luiz De Rose, Cray Inc.</i>
Session 4 15:30-17:30	Tools for Performance Analysis 6 Talks (each 15 minutes)