



## 45<sup>th</sup> VI-HPS Tuning Workshop

LRZ, Garching near Munich, Germany,  
10 - 13 June 2024

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<http://www.vi-hps.org/training/tws/tw45.html>

# 45th VI-HPS Tuning Workshop (LRZ)

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- VI-HPS tools instructors
  - **Josef Weidendorfer, Amir Raoofy & Michele Martone** (Leibniz-Rechenzentrum)
  - **David Böhme** (Lawrence Livermore National Laboratory)
  - **Rudy Shand** (Linaro)
  - **Cédric Valensi, Emmanuel Oseret & Hugo Bolloré** (Université de Versailles St-Quentin)
  - **Ilya Zhukov, Jan André Reuter & Brian Wylie** (Jülich Supercomputing Centre)
  - **Alexander Geiß** (Technische Universität Darmstadt)
  - **Germán Llort & Lau Mercadal** (Barcelona Supercomputing Center)
  - **Sameer Shende** (University of Oregon)
- Local organisation
  - **Volker Weinberg, LRZ**

## Agenda (Monday)

Time	Topic	Presenter
09:00	Welcome;	Weinberg
	Introduction to VI-HPS & parallel performance engineering	Valensi
	Lab setup; Building and running a code on CoolMUC2	Zhukov
10:30	<i>Break</i>	
11:00	Callgrind/kCachegrind cache utilisation analysis	Weidendorfer
	Callgrind Hands-on exercises	
12:30	<i>Lunch</i>	
14:00	Caliper performance analysis toolbox in a library	Böhme
	Coccinelle semantic patching of C programs	Martone
15:30	<i>Break</i>	
	Hands-on coaching to apply Callgrind & Caliper to analyze your own code(s)	
17:30	<i>Adjourn</i>	

## Agenda (Tuesday)

Time	Topic	Presenter
09:00	Linaro MAP profiling and performance reports	Shand
	Linaro hands-on exercises	
10:30	<i>Break</i>	
11:00	MAQAO performance analysis framework	Valensi
	MAQAO hands-on exercises	Oseret & Bolloré
12:30	<i>Lunch</i>	
14:00	Hands-on coaching to apply Linaro Tools & MAQAO to analyse your own codes	
15:30	<i>Break</i>	
16:00	Hands-on coaching to apply Linaro Tools & MAQAO to analyse your own codes	
17:30	<i>Guided tour of LRZ compute cubes</i>	
18:30	<i>Adjourn</i>	

## Agenda (Wednesday)

Time	Topic	Presenter
09:00	Score-P instrumentation & measurement	Zhukov, Reuter & Wylie
	CUBE profile explorer	
10:30	<i>Break</i>	
11:00	Scalasca automated trace analysis	Zhukov, Reuter & Wylie
	mpiP lightweight MPI profiling	Raofy
12:30	<i>Lunch</i>	
14:00	Extra-P automated performance modeling	Geiß
	Hands-on coaching to apply Score-P/Scalasca/mpiP/Extra-P to analyze your own code(s)	
15:30	<i>Break</i>	
16:00	Hands-on coaching to apply Score-P/Scalasca/mpiP/Extra-P to analyze your own code(s)	
17:30	<i>Adjourn</i>	
18:30	<i>Social event</i>	



## Agenda (Thursday)

Time	Topic	Presenter
09:00	BSC performance tools	Llort & Mercadal
	BSC tools hands-on exercises	
10:30	<i>Break</i>	
11:00	TAU performance system	Shende
	Review of the workshop	Valensi
12:30	<i>Lunch</i>	
14:00	Hands-on coaching to apply BSC tools & TAU to analyze your own code(s)	
15:30	<i>Break</i>	
16:00	Hands-on coaching to apply BSC tools & TAU to analyze your own code(s)	
17:30	<i>Adjourn</i>	