



Overview

JSC OpenACC Course 2018

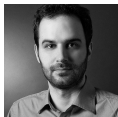
29/30 October 2018 | Andreas Herten | Forschungszentrum Jülich

Jülich Supercomputing Centre

- Forschungszentrum Jülich
- Part of Institute for Advanced Simulation (IAS)
- Operates supercomputers and connected infrastructure
- Researches in next-gen supercomputers
- Supports applications leveraging machines
- Supercomputers
 - **JUWELS**
 - **JURECA**
 - DEEP
 - **JURON**/JULIA
 - Former: JUROPA, JUGENE, JUDGE

OpenACC Course

- Since 2014
- There are other *many-core* courses
 - CUDA: April 2019
 - → See JSC [training program](#)
- Interactive course – many hands-ons 🙌
- Tutors of this course



Jiri Kraus

NVIDIA Application Lab
at Jülich, NVIDIA



Thorsten Hater

POWER Acceleration
and Design Centre, JSC



Andreas Herten

NVIDIA Application Lab
at Jülich, JSC

Timetable

Session	Day 1	Day 2
M1	Introduction to GPU Programming <i>Andreas</i>	Performance Optimization <i>Jiri</i>
<i>B</i>	<i>Coffee Break (10:45 - 11:00)</i>	
M2	OpenACC Programming Model <i>Andreas</i>	Interoperability of OpenACC <i>Andreas</i>
<i>B</i>	<i>Lunch Break (12:30 - 13:30)</i>	
A1	OpenACC Programming Model <i>Andreas</i>	Multi-GPU Programming <i>Jiri</i>
<i>B</i>	<i>Coffee Break (15:00 - 15:30)</i>	
A2	Tools for Debugging & Profiling <i>Thorsten</i>	Multi-GPU Programming <i>Jiri</i>

Organizational

- Please sign Attendance List!
- Morning/afternoon breaks: Coffee machine upstairs
- Lunch breaks: In canteen (*Casino*)
 - Need to buy payment cards on machine
 - Use machine with slot for entering cards, they provide Guest Cards!
 - 5 € deposit needed, returned when returning card on Tuesday
 - Participants from FZJ will surely help you!



More Technicalities

- Supercomputers for this course: **JURECA**
- Infrastructure for tasks
 - Each attendee has login: train0XX - train0YY
 - Individual passwords
 - Valid for local computer **and** JURECA
- Tasks
 - Tasks are in home directory of supercomputers → best to solely work on JURECA
 - Sorted by session
 - Solutions are always given, you decide how long you tinker before peaking into solutions (Hint: The later, the more benefit you will get from this course!)
 - There's a cheat sheet for the most important commands!



Let's Get Started!

Questions?