Overview
JSC OpenACC Course 2018

29/30 October 2018 | Andreas Herten | Forschungszentrum Jülich

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Forschungszentrum | JÜLICH SUPERCOMPUTING CENTRE

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

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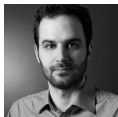
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OpenACC Course

- Since 2014
- There are other *many-core* courses
  - CUDA: April 2019
  - → See JSC training program
- Interactive course – many hands-ons 👐

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- 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

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Timetable

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

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Organizationals

- 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!

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More Technicalities

- Supercomputers for this course: **JURECA**
- Infrastructure for tasks
  - Each attendee has login: `train0XX` - `train0YY`
  - Individual passwords
  - Valid for local computer **and** JURECA

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- 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!

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Let's Get Started!

Questions?

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