

INTRODUCTION TO THE PROGRAMMING AND USAGE OF THE SUPERCOMPUTING RESOURCES IN JÜLICH

ONLINE COURSE PROVIDED BY

JÜLICH
SUPERCOMPUTING
CENTRE

30.05.2023 | ILYA ZHUKOV, JOLANTA ZJUPA



DISCLAIMER

This course offers the opportunity to attend lectures selectively, based on individual needs and knowledge levels. Participants are not required to attend all sessions as some may cover advanced or basic material. While flexibility is offered, it is important to assess personal needs and choose sessions accordingly, as attending lectures out of order may result in knowledge gaps.

SCHEDULE TUESDAY – MAY 30TH

13:00 - 13:10	Welcome	I.Zhukov, J.Zjupa (JSC)
13:10 - 13:30	Introduction to JSC	Bernd Mohr (JSC)
13:30 - 14:10	HPC in a Nutshell	Ilya Zhukov (JSC)
14:10 - 14:30	Break	
14:30 - 15:20	User Portal and Job Monitoring	Jolanta Zjupa (JSC)
15:20 - 16:05	JupyterLab — Supercomputing in your Browser	Jens Henrik Göbbert (JSC)
16:05 - 16:25	Break	
16:25 - 17:00	JUST: Jülich Storage Cluster	Stephan Graf (JSC)
17:00 - 17:30	JSC Systems — JUWELS, JURECA & JUSUF	Sebastian Achilles (JSC)

SCHEDULE WEDNESDAY – MAY 31ST

09:00 - 12:00	Hands-on I – Access, UNIX Shell Basics, Environment	
12:00 - 13:00	Lunch	
13:00 - 13:30	Uniform Resource Access, Data Access and Cloud Resources	Björn Hagemeier (JSC)
13:30 - 14:00	HPC Software - Modules, Libraries & Software	Ruth Schöbel (JSC)
14:00 - 14:50	Work load management with Slurm	Chrysovalantis Paschoulas (JSC)
14:50 - 15:10	Break	
15:10 - 16:25	JUWELS - Tuning and Tweaks	Heinrich Bockhorst (Intel)
16:25 - 16:45	Break	
16:45 - 17:30	Deep Learning on Supercomputers	Alexandre Strube (JSC)

SCHEDULE THURSDAY – JUNE 1ST

09:00 - 11:00	Hands-on II – Software Modules, Custom Software, Accounting and Running Jobs	
11:00 - 12:00	Hands-on II – Remote Visualisation	Herwig Zilken (JSC)
12:00 - 13:00	Lunch	
13:00 - 14:00	HPC Software – Debuggers and Performance Analysis Tools	Michael Knobloch (JSC)
14:00 - 14:20	Break	
14:20 - 15:10	Using GPU accelerators on JURECA and JUWELS	Andreas Herten (JSC)
15:10 - 15:40	Proper Pinning Prevents Pretty Poor Performance	Thorsten Hater (JSC)
15:40 - 16:00	Break	
16:00 - 16:45	ParTec Cluster Management	Patrick Küven (ParTec)
16:45 - 17:25	Evolution of the Sequana System Architecture	Thomas Warschko (Atos)

SCHEDULE FRIDAY - MAY 2ND

09:00 - 10:00	Hands-on III – CPU Affinity, Using GPUs	
10:00 - 11:00	Hands-on III – Performance Analysis	Michael Knobloch (JSC)
11:00 - 12:00	Hands-on III – Finish what you didn't manage & Bring your own code	

ORGANISATIONAL INFORMATION

- For communication join our Slack chat
http://go.fzj.de/slack_intro_0523
- **During** a talk you can ask questions either in the Zoom chat or the Slack chat general channel.
- **After** a talk you can also ask questions verbally by turning on your microphone.
- For Hands-on questions please use only the Slack chat Hands-on channel.
- Only screensharing will be recorded and published if allowed.
- Certificates will be based on attendance of the Hands-on component.
- Slides and videos of selected talks are available after the course at
<https://www.fz-juelich.de/en/ias/jsc/education/training-courses/training-materials>
- More workshops and conferences on JSC website:
<https://www.fz-juelich.de/en/ias/jsc/education/training-courses>
- Twitter: @fzj_jsc, @fzj_jscuser