

Betreff: 2022 Virtual Guest Student Programme on Scientific Computing
Datum: Freitag, 25. Februar 2022 08:44:59

Information for the users of the supercomputers
at Forschungszentrum Juelich
24-February-2022

2022 Virtual Guest Student Programme on Scientific Computing

Where: Virtual Event (JSC)
When: 1 August to 7 October 2022

In order to give students the opportunity to familiarize themselves with various aspects of scientific computing as early as possible, the Juelich Supercomputing Centre (JSC) is once again organizing a programme for guest students in the 2022 summer vacation. The programme is supported by CECAM - Centre Europeen de Calcul Atomique et Moléculaire.

It targets students of science and engineering, computer science and mathematics who have already completed their first degree but have not yet finished their master's course.

The students will work together with local scientists on topics of current interest in research and development. Depending on their previous experience and interests, they will be involved in various fields of work, for example:

Computational Science, Applied Mathematics

- * Modelling and simulation in physics, chemistry and biophysics
- * Techniques of parallel MD simulation
- * Modelling, simulation and data analysis in neuroscience
- * Parallel computational procedures in quantum chemistry and structural mechanics
- * Performance evaluation of parallel algorithms in linear algebra
- * Mathematical modelling, statistics and data mining

Computer Architectures, GPU Computing

- * GPU-computing
- * High-speed data networks & data management
- * Data science (machine learning, analytics)
- * Programming models and performance portability

High-Performance Computing, Visualization

- * Performance analysis and optimization of parallel programs
- * Programming of hierarchical parallel computer systems
- * Distributed applications, interactive control and visualization

* Virtual reality techniques for visualizing scientific data

The programme will run for ten weeks from 1 August to 7 October 2022. During this period JSC grants access to its supercomputers. The participants should be familiar with the computational branch of their subject. In addition, practical experience including at least a good knowledge of programming with C, C++, Python or Fortran on Linux systems should be present.

More information: <https://www.fz-juelich.de/ias/jsc/gsp>

Application deadline: 30 April 2022

Contact: Ivo Kabadshow
Juelich Supercomputing Centre
Forschungszentrum Juelich
52425 Juelich (Germany)
Tel.: +49-2461-61-8714
[E-Mail:jsc-gsp@fz-juelich.de](mailto:jsc-gsp@fz-juelich.de)

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Forschungszentrum Juelich GmbH
52425 Juelich
Sitz der Gesellschaft: Juelich
Eingetragen im Handelsregister des Amtsgerichts Dueren Nr. HR B 3498
Vorsitzender des Aufsichtsrats: MinDir Volker Rieke
Geschaeftsfuehrung: Prof. Dr.-Ing. Wolfgang Marquardt (Vorsitzender),
Karsten Beneke (stellv. Vorsitzender), Prof. Dr. Astrid Lambrecht,
Prof. Dr. Frauke Melchior

