



SPACE CoE NEWSLETTER

ASHPC24 – Austrian-Slovenian HPC Meeting 2024



ASHPC24 is the annual Austrian HPC Meetings, bringing together scientists and technicians with a background and interest in supercomputing. ASHPC24 (10-13 June) was an excellent opportunity to present and learn about the latest research results and exchange ideas between the users and providers of HPC resources. Thanks to Lubomir Riha who gave a talk about SPACE CoE achievements so far, presenting also two SPACE posters.

[Find out more](#)

Maximizing Performance in High-Performance Computing: Tools, Techniques, and Hands-On Sessions

Organizers: CINECA
Date: July 23-25, 2024
Time: 9.30 – 16.30 CEST
Language: English
Event format: | CINECA (Casalecchio di Reno, Bologna, Italy) and online



This training is part of the SPACE CoE activity and CINECA is the training organizer. The training room can accommodate 40 participants (first come, first served), but it is equipped for streaming, therefore online participation is also possible. The participation in the training is free of charge.

[Find out more](#)

[Register](#)

Upcoming online training opportunities



The OpenGadget code for Cosmological Simulations

18.06.2024 (15.00 - 15.45 CEST) - Online

The training is addressed to HPC experts from all domains interested in evolving their codes to "exa-scale". The audience will benefit from the training, discovering how a different community is solving computational problems and implementing algorithms. Conversely, the benefits for the speakers will come from the audience observations, discussions, suggestions, and even error spotting.

15.00 - 15:30 Code presentation and technical discussion; algorithms, performance, metrics and the road towards exascale.
15.30 - 15:45 Q&A, technical discussion, short hands-on demo

The participation in the training is free of charge.

The webinar is organised by the SPACE CoE and NCC Czechia.

[Register](#)

The ChaNGa code and the Charm++ framework

02.07.2024 (15.00-15.45 CEST) - Online

The training is addressed to researchers interested in HPC and the challenges that astrophysics codes present when scaling towards exa-scale. We will discuss both the benefits and difficulties of the ChaNGa code and the Charm++ framework. We will also discuss recent and future improvements of the code.

15.00 - 15:30 Code presentation and technical discussion; algorithms, performance, metrics and the road towards exascale.
15.30 - 15:45 Q&A, technical discussion.

The participation in the training is free of charge.

The webinar is organised by the SPACE CoE and NCC Czechia.

[Register](#)

OpenGadget3 User Meeting

July 29th – August 1st, 2024 |

University of Ljubljana, Faculty of Mathematics and Physics

OpenGadget is a versatile N-Body/Lagrangian cosmological code that employs smoothed particle hydro-dynamics (SPH) to simulate the evolution of matter under gravitational forces in a cosmological context. It is particularly adept at handling large-scale structure simulations and zoom-in simulations of individual galaxies or galaxy clusters, providing insights into the cosmological impact of various astrophysical processes such as star formation and black hole dynamics.

This meeting is the opportunity for the code users to discuss code advances and development, to look for possible solutions to common problems and bottlenecks, to suggest algorithms to be implemented, to analyse code performance and metrics, on the road towards exascale.



MACHINE LEARNING FOR ASTROPHYSICS
2ND EDITION CATANIA, 8-12 JULY, 2024

In the Big Astronomical Data era, the conference aims to address the challenges emerging from the application of ML/DL methods to open problems in astrophysics, bringing together researchers actively involved in these fields.

Novel AI techniques will be presented, and collaborative discussions on their use with observational and simulated data will be fostered.

Mark your calendar and join us for an enriching experience at ML4ASTRO2.

For any inquiries or additional information, please do not hesitate to contact our organizing committee at ml4astro2@inaf.it

Visit for updates

PLUTO Symposium 2024 - Torino (Italy) 23-25 September

The PLUTO symposium 2024 aims at bringing together developers, scientists and users with the purpose of sharing recent numerical algorithms, new code features as well as challenging astrophysical applications. A special focus will be given to the GPU porting of the code and its forthcoming release. A hands-on session will also take place in order to help the new users to get used to the code structure.

While we strongly encourage in-person participation, we will also ensure remote participation through the Webex application.

Registration is mandatory and can be done using the [Google form](#).

Find out more



Towards exascale-ready astrophysics - Virtual Meeting 25-27 September

Exascale computing represents a transformative tool enabling researchers to better model and analyse complex systems, thereby enhancing scientific discovery. With a strong emphasis on numerical simulations in astrophysics, this workshop aims to present the latest developments in exascale technology and its applications within the field of astrophysics research. By bringing together scientists, code developers, and high-performance computing (HPC) experts, this workshop aims to discuss current challenges and future opportunities in utilising exascale computing for astrophysics and cosmology.

The workshop will feature a mix of invited, contributed, and poster presentations, as well as interactive tutorials focusing on astrophysics simulation codes, high-performance computing, machine learning, and data analytics. Attendees will have opportunities for knowledge sharing, discussing innovative ideas, and fostering collaborations through technical talks, hands-on training sessions, and networking events. We strongly encourage female and early career researchers to participate, as their unique perspectives and contributions are invaluable to our discussions.

The call for abstracts is open.

The participation is free of charge.

Register

If you want to contact us please write at info@space-coe.eu



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