

FF4EUROHPC 2ND CALL FOR PROPOSALS FOR HIGH QUALITY EXPERIMENTS INVOLVING INNOVATIVE SMES USING ADVANCED HPC SERVICES

PRESENTATION LANGUAGE: ENGLISH







EuroCC@Greece / FF4EuroHPC Joint Event

FF4EuroHPC 2nd call for proposals for high quality experiments involving innovative SMEs using advanced HPC services

Programme

15 July, 2021

11:30 - 13:30 EEST

Title and Content	Duration	Speakers				
Welcome & Introduction - agenda presentation - <u>EuroCC@Greece</u> National Competence <u>Center</u> - presentation of activities	20′	Ilias Hatzakis, GRNET				
FF4EuroHPC Open Call 2 presentation	20'	Tomi Ilijas, Arctur, FF4Europe				
Q&A	15'					
The EuroHPC infrastructure and services access	15′	Evangelos Foloros, EUROHPC JU				
Success story presentation: Shape Optimization under Uncertainty through HPC Cloud	20′	Alessandro Alaia, OPTIMAD Engineering				
<u>PediDose</u> : A pediatric simulated dosimetry platform for clinical use. A successful FF4EuroHPC submission	15′	Panagiotis Papadimitroulas, Bioemtech				
Q&A	15′					
Wrap-up and Closing	5′	Ilias Hatzakis, GRNET				

EuroCC@Greece



The National Competence Center is the single point of contact and coordination on a national level for HPC. Its missions are to analyse, implement and coordinate all necessary activities and offer services to end users to cover their needs: from access to resources and technological consultancy to the provision of training courses for academia, public administrations and industry.

EuroCC@Greece is one of the 33 HPC Competence Centres, built in the framework of the European High Performance Computing Joint Undertaking (EuroHPC JU).

Consortium

The Greek National Competence Center "EuroCC@Greece", is run by a consortium of 5 institutions, namely

- GRNET National Infrastructures for Research and Technology (coordinator),
- National Center for Scientific Research "Demokritos",
- Foundation for Research and Technology Hellas (FORTH),
- Institute of Communication and Computer Systems of NTUA
- Aristotle University of Thessaloniki.







The project has received funding from the European High-Performance computing Joint Undertaking (JU) under grant agreement No 951732 and the Greek Secretariat for Research and Technology.









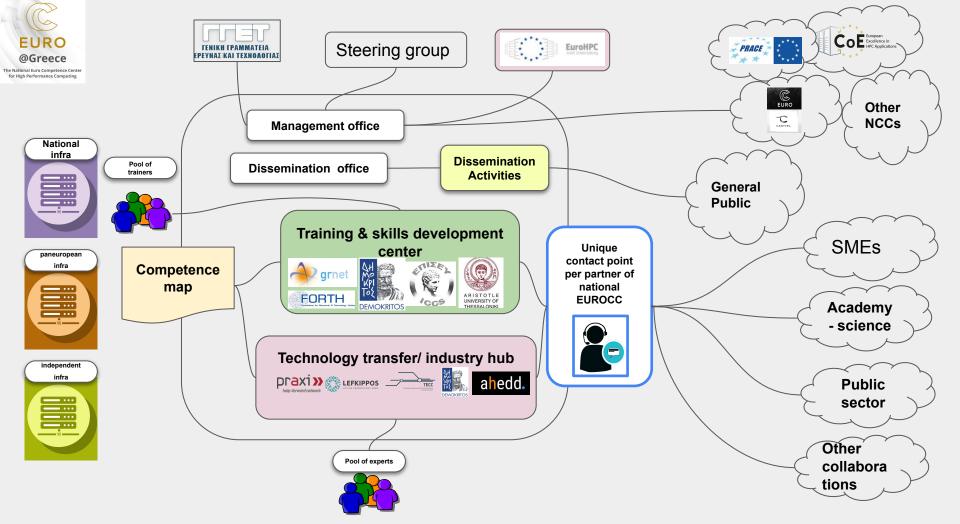














Home About Industry Training Competences News Contact

Training

Training is the most important entry point for accessing HPC resources. In this "training" area of EuroCC@Greece you can discover available sources for training in Greece and Europe. You can visit the "HPC/BD/AI training in Greece repository" in which, through keywords or through filtering by domain, course type, institution, or your level of readiness you can find out all kinds of relevant trainings in Greece on AI, BD and HPC. At the moment we have identified 421 relevant training programs, mainly bachelor degree or masters degree, and a few summer schools, webinars and HPC specialized courses.

Moreover, in this area you can find a **collection of video lectures** on HPC related topics, coming from all sorts of training providers, Universities, HPC centers, vendors etc, identified and approved as very useful for potential HPC users.

Additionally, there are sections where you are informed about **upcoming training events** all over Europe, or you can discover all kinds of **training resources**, online material, presentations, white papers and publications, produced and delivered by PRACE training centers, HPC centers and domain expert Centers of Excellence.

Last but certainly not least, you have access to the official HPC training delivered by GRNET, and its role as an **official PRACE training center**. The hands-on trainings 2-3 day webinars cover both basic skills in parallel programming technologies and domain specific specialized knowledge with topics such as "Introduction to Parallel Programming", "GPU programming using CUDA", "Effective use of HPC systems", "Introduction to biomolecular modeling in HPC", "Machine learning in HPC", "accelerator programming", "Meteorological and climate modeling" and the list is about to be enlarged in the following years.

Finally there is a section that leads to all the **scientific publications** coming from researchers and scientists in Greece that have used the ARIS supercomputer infrastructure during the last years.

If you want to help us improve the level of training on HPC related topics, please take a few minutes to fill in the **online questionnaire** in order to identify training needs, it will be a significant help for us in designing our next actions.



















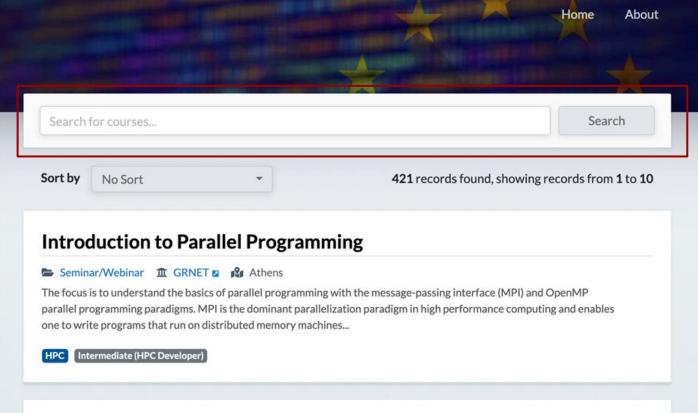


All Courses

All Courses

421

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Efficient Use of HPC Systems

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Seminar/Webinar III GRNET Athens

The purpose of this course is to present to existing and potential users of PRACE HPC systems an introduction on how to efficiently use these systems, their typical tools, software environment, compilers, libraries, MPI/OpenMP, batch system,



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421 records found, showing records from 1 to 10

About

Introduction to Parallel Programming

Seminar/Webinar III GRNET Athens

The focus is to understand the basics of parallel programming with the message-passing interface (MPI) and OpenMP parallel programming paradigms. MPI is the dominant parallelization paradigm in high performance computing and enables one to write programs that run on distributed memory machines...

HPC Intermediate (HPC Developer)

No Sort

Sort by

Efficient Use of HPC Systems

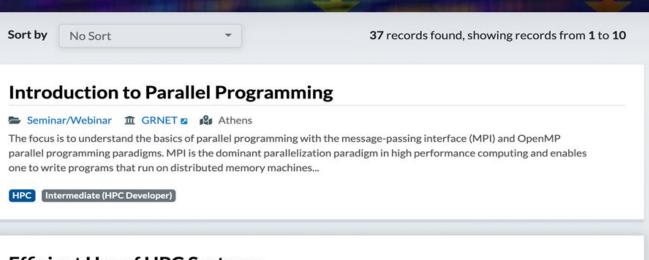
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Seminar/Webinar III GRNET Athens

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All Courses

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About



Seminar/Webinar 🏛 GRNET 🗷 🖓 Athens

The purpose of this course is to present to existing and potential users of PRACE HPC systems an introduction on how to efficiently use these systems, their typical tools, software environment, compilers, libraries, MPI/OpenMP, batch system, etc. The trainees will learn what the HPC systems offer...

HPC Beginner (HPC user)



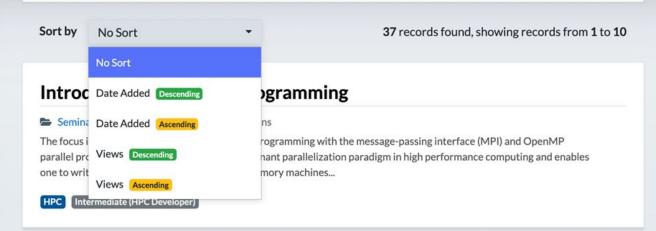
Courses on High-performance Computing

All Courses 421

Fields Al DA 53 **HPC** 37 **HPDA HPCAI** 15 Course Types Course - MSc level 190 Course - BSc level 144 MSc 67 BSc Seminar/Webinar 6 Search for courses... Search

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Efficient Use of HPC Systems



The purpose of this course is to present to existing and potential users of PRACE HPC systems an introduction on how to efficiently use these systems, their typical tools, software environment, compilers, libraries, MPI/OpenMP, batch system, and the purpose of this course is to present to existing and potential users of PRACE HPC systems an introduction on how to efficiently use these systems, their typical tools, software environment, compilers, libraries, MPI/OpenMP, batch systems, the purpose of this course is to present to existing and potential users of PRACE HPC systems an introduction on how to efficiently use these systems, their typical tools, software environment, compilers, libraries, MPI/OpenMP, batch systems, the purpose of the pur

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The National Euro Competence Center for High Performance Computing



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Video Lectures

In this section you can find valid video lectures on HPC, coming from entities related to the EuroCC Competence Centers

BIOMOLECULAR	H
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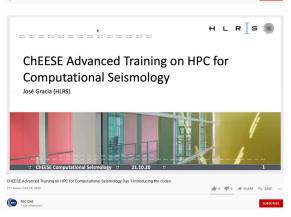


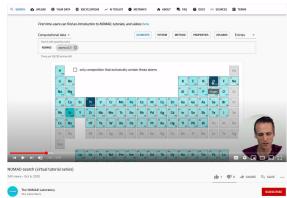
















Upcoming training events in Europe

Discover upcoming training events all over Europe, delivered by PRACE training centers, HPC centers, relative Centers of Excellence etc.

"FF4Europe 2nd call for proposals for high quality experiments involving innovative SMEs using advanced HPC services" online event

FF4EuroHPC European initiative and EuroCC@Greece invite you to participate in the online event titled: "FF4Europe 2nd call for proposals for high quality experiments involving innovative SMEs using advanced HPC services", on July 15th, at 10:30 CET | 11:30 EEET.

ONLINE PRACE Training Centre course (PTC)

GRNET offers a PRACE Training Centre course: "Introduction to Molecular Modeling and Molecular Dynamics in HPC"

HPC for the Greek Health and Life Sciences Sector

EuroCC@Greece's partners, ICS-FORTH and PRAXI Network are inviting you to attend the "HPC for the Greek Health & Life Sciences Sector" online event, on June 17, at 16:00 PM (GMT+3).

Intermedaite Workshop on OpenACC/CUDA by ENCCS - June 28th

This workshop targets researchers and developers who already know the basics of OpenACC and/or CUDA but would like to expand their knowledge.

ENCCS/Intel OpenMP Hackathon at June 8th

To apply for participation in the hackathon you will need a well-defined project with clearly stated goals, and we recommend you to join a team with at least 2 people

Online introductory lectures on quantum computing by CERN

A series of weekly lectures on the basics of quantum computing by CERN is now available

Training resources

GRNET training resources

Find the GRNET training resources on HPC. GRNET is a PRACE training center.

PRACE Training Portal

Browse, search, explore all upcoming training events and every kind of HPC-related training resources on the PRACE training portal. This includes trainings and resourced created by PRACE training centers and other HPC centers, members of PRACE.

HLRS training material

HLRS Teaching and training material (slides, audio and pointing information) and the PDF files (e.g. for personal notes) from the German HPC center HLRS in Stuttgart

ENCCS training resources

Very useful training resources from the Swedish ENCCS on MPI & OpenMP, GPU programming, Al and Deep Learning, performance engineering etc.

PRACE White Papers

On this page you will find PRACE White Papers related to numerous aspects of High Performance Computing



System Information

Access - Support -

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Publications

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Types						
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Years					
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Affiliations	[nex
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283 results

2021

[283] Evaluating the Efficiency of the Martini Force Field to Study Protein Dimerization in Aqueous and Membrane
Environments (Christos Lamprakis, Ioannis Andreadelis, John Manchester, Camillo Velez-Vega, José S. Duca, Zoe Cournia), In
J. Chem. Theory Comput., volume 17, 2021. [details] [pdf] [doi]
[282] Effects of Structural Dynamics on Charge Carrier Transfer in B-DNA: A Combined MD and RT-TDDFT Study

282] Effects of Structural Dynamics on Charge Carrier Transfer in B-DNA: A Combined MD and RT-TDDFT Study (Marilena Mantela, Andreas Morphis, Konstantinos Lambropoulos, Constantinos Simserides, Rosa Di Felice), In The Journal of Physical Chemistry B, volume 125, 2021. [details] [pdf] [doi]

[281] Parallel Computation of Discrete Orthogonal Moment on Block Represented Images Using OpenMP (I.M. Spillotis, C. Sitaridis, M.P. Bekakos), In International Journal of Parallel Programming, volume 49, 2021. [details] [pdf] [doi]

[280] Investigating sea-state effects on flash flood hydrograph and inundation forecasting (George Papaioannou, George Varlas, Anastasios Papadopoulos, Antanasios Loukas, Petros Katsafados, Elias Dimitriou), In Hydrological Processes, volume 35, 2021. [details] [pdf] [doi]

[279] The first multi-model ensemble of regional climate simulations at kilometer-scale resolution, part I: evaluation of precipitation (Ban N. et al), In Climate Dynamics, 2021. [details] [pdf] [doi]

[278] Evolving graph convolutional networks for neural architecture search (Kyriakides George, Margaritis Konstantinos), In Neural Computing and Applications, 2021. [details] [pdf] [doi]
[277] Large Eddy Simulation of low Reynolds number turbulent hydrogen jets - Modelling considerations and

comparison with detailed experiments (I.C. Tolias, A.A. Kanaev, N. Koutsourakis, V.Y. Glotov, A.G. Venetsanos), In
International Journal of Hydrogen Energy, volume 46, 2021. [details] [pdf] [doi]

[276] Assessment of a regional physical-biogeochemical stochastic ocean model. Part 1: ensemble generation (Vervatis

V.D., De Mey-Frémaux P., Ayoub N., Karagiorgos J., Ghantous M., Kailas M., Testut C.-E., Sofianos S.), In Ocean Modell., volume 160, 2021. [details] [pdf] [doi]

[275] Assessment of a regional physical-biogeochemical stochastic ocean model. Part 2: empirical consistency. (Vervatis)

V.D., De Mey-Frémaux P., Ayoub N., Karagiorgos J., Clavatta S., Brewin R., Sofianos S.), In Ocean Modell, volume 160, 2021.

[details] [pdf] [doi]

[274] Impact of Oxygen on the Properties of Cu3N and Cu3-xN1-xOx (Matthew Zervos, Andreas Othonos, Theodore

Pavloudis, Stefanos Glaremis, Joseph Kioseoglou, Kalliopi Mavridou, Maria Katsikini, Fani Pinakidou, Eleni C Paloura), *In J. Phys. Chem. C*, 2021. [details] [pdf] [doi]

[273] Ab Initio Study of the Electron-Phonon Coupling in Ultrathin Al Layers (S Giaremis, Ph Komninou, Th Karakostas, J Kioseoglou), In J Low Temp Phys, 2021. [details] [pdf] [doi]

[272] Combining generative adversarial networks and agricultural transfer learning for weeds identification (Borja Espejo-Garcia, Nikos Mylonas, Loukas Athanasakos, Eleanna Vall and Spyros Fountas), In Biosystems Engineering, volume 204, 2021. [details] [pdf] [doi]

[271] Biffurcations and instability mechanisms in rotor systems generated by non-linear bearings of complex design and elastic pedestals (Anastasopoulos Lysandros, Chasalevris Athanasios), In SIRM 2021 - 14th International Conference in Dynamics of Rotating Machinery, 2021. [details] [odf]

[270] The Saharan convective boundary layer structure over large scale surface heterogeneity: A large eddy simulation study (Georgios Papangelis, Maria Tombrou, John Kalogiros), In Atmospheric Research, volume 248, 2021. [details] [pdf] [doi]

[269] NanoMaterialsCAD: Flexible Software for the Design of Nanostructures (G Nikoulis, P Grammatikopoulos, S Steinhauer, J Kioseoglou), In Advanced Theory and Simulations, 2021. [details] [pdf] [doi]

[268] Micellization through complexation of oppositely charged diblock copolymers: Effects of composition, polymer architecture, salt of different valency, and thermoresponsive block (Christos Gioldasis, Leonidas N. Gergidis, Costas Viahos), in Journal of Polymer Science, volume, 2021. [details] [odf] [doi]

2020

[267] The opposing effects of reforestation and afforestation on the diurnal temperature cycle at the surface and in the lowest atmospheric model level in the European summer (Brell, M., Rechid, D., Davin, E.L., De Noblet-Ducoudré, N.,



for High Performance Computing



Τεχνική Περιγραφή ν Πρόσβαση ν Υποστήριξη ν Εκπαίδευση ν Διεθνείς Συνεργασίες ν

Εκπαίδευση

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[ONLINE] Introduction to Molecular Modeling and Molecular Dynamics in HPC @GRNET, 22-23 June 2021 ΙΝ ΕΚΠΑΙΔΕΥΣΉ. ΝΕΑ ΕΚΔΗΛΩΣΕΙΣ

2021

17 PRACE Training Centre Course :GPU programming using CUDA @GRNET ΙΝ ΕΚΠΑΙΔΕΎΣΗ, ΝΕΑ ΕΚΔΗΛΩΣΕΙΣ

2021

GPU programming using CUDA @GRNET - Date : 1-2 Apr. 2021

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[ONLINE] Efficient Use of HPC Systems ΙΝ ΕΚΠΑΙΔΕΥΣΗ. ΝΕΑ ΕΚΔΗΛΩΣΕΙΣ

2020

14-15 December 2020 Description The purpose of this course is to guide existing and potential users on how to efficiently...

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ONLINE - PRACE Training Centre: Introduction to Parallel Programming ΙΝ ΕΚΠΑΙΔΕΥΣΗ, ΝΕΑ ΕΚΔΗΛΩΣΕΙΣ

2020

11 - 13 November 2020 Purpose of the course The focus is to understand the basics of parallel programming with...

Introduction to Biomolecular modeling and Molecular dynamics in HPC ΙΝ ΕΚΠΑΙΔΕΥΣΉ, ΝΕΑ ΕΚΔΗΛΩΣΕΙΣ 2020 (Classical and Quantum) Purpose of the course The purpose of this course is to present to existing and potential users...

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RESCHEDULED, ONLINE - PRACE Training Centre: Machine Learning in HPC, 11-12 June 2020. ΙΝ ΕΚΠΑΙΔΕΥΣΗ, ΝΕΑ ΕΚΔΗΛΩΣΕΙΣ

2020

Machine Learning in HPC RESCHEDULED, ONLINE 11-12 June 2020 Description After the course the participants should be able to understand...



The National Euro Competence Center for High Performance Computing





Questions Responses

Section 1 of 6

HPC Training Needs in Greece by EuroCC@Greece

Dear participant,

The EuroCC@Greece is one of 33 national nodes of the EuroCC project, which started during September 2020, built in the framework of the European High Performance Computing Joint Undertaking (EuroHPC JU). The aim of EuroCC is to advance competitiveness in research, improve effectiveness of government services and promote innovation in industry.

In order to implement this objective, we will design and deliver training activities in order to address the different user needs, enabling them to scale up their HPC workloads and enhance their HPC competencies.

The results from this survey will help us identify and understand the distinct needs of the Greek users as well as those that want to become HPC users and create training portfolios for the coming years, enhancing this way High Performance Computing in Greece.

Your participation is important. Let's co-create together the future HPC training events in Greece!

If you want to keep up to date with the EuroCC@Greece activities, upcoming training events, workshops, you can:

- visit our web page: https://eurocc-greece.gr/
- Sign up for our EuroCC newsletter https://eurocc-greece.gr/newsletter/
- follow us on Twitter @EuroCC_Greece and LinkedIn https://www.linkedin.com/company/eurocc-greece/











EuroCC@Greece

HPC Needs & Skills Survey







Invitation to EuroCC@Greece High Performance Computing
Needs & Skills Survey

May 2021

Dear Reader,

As you are already aware, EuroCC@Greece has launched the "HPC needs & skills in Greece" survey.

If you hold a key role in big data in your organization or company, and still wish to partake in the survey, you are able to do so **up until May 28th**.

Your participation is crucial in our effort to map the ecosystem of HPC/ Big Data / Al existing and potential users and providers in Greece, identify and understand the distinct needs, but also the existing skills. The outcome of the survey will enable us to gradually build up the necessary support accordingly and help the existing and potential HPC user communities benefit from this knowledge in order to utilize it, whilst executing everyday related tasks within their organization.

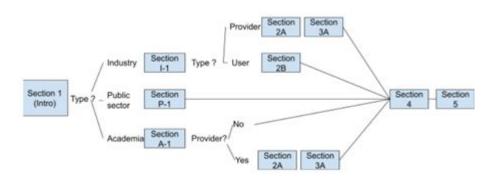
Don't miss it, fill out the form until May 28th!

Completing the survey will only take 10 minutes.

Take part in the Survey

General information Personal Data & Contact Information Name* Email* Telephone no. Organization Information Name of Organization* @ Link* @ Location (Country)* @ Location (City)* @ How many people are employed in your organization? (If applicable) include also administrative staff.* ☐ 1 (singe person) □ 2-10 □ 10-50









- Consultation on access to HPC infrastructure
- · Consultation on access to funding
- · Consultation on HPC, AI and HPDA technologies
- Facilitation of industrial collaborations/ tech transfer

Help us understand your needs with requests at contact@eurocc-greece.gr



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EuroCC@Greece thematic events



"FF4Europe 2nd call for proposals for high quality experiments involving innovative SMEs using advanced HPC services" online event

on Jul 6

FF4EuroHPC European initiative and EuroCC@Greece invite you to participate in the online event titled: "FF4Europe 2nd call for proposals for high quality experiments involving innovative SMEs using advanced HPC services", on July 15th, at 10:30 CET | 11:30 EEST.

Boad more



HPC for the Greek Health and Life Sciences Sector

on Jun 8

EuroCC@Greece's partners, ICS-FORTH and PRAXI Network are inviting you to attend the "HPC for the Greek Health & Life Sciences Sector" online event, on June 17, at 16:00 PM (GMT+3).

Read more -



















SMEs, submit proposals to the second FF4EuroHPC Open Call!

Why should SMEs apply to the FF4EuroHPC Open Call and take part in experiments?

- ${\ensuremath{\overline{\mathbf{\mathcal{C}}}}}$ to develop unique, innovative products or services
- ✓ to optimise products or the production process
- ✓ to speed-up the time-to-market, save real money and gain new customers
- ☑ to lift their business to Industry 4.0 and gain new know-how
- ✓ to gain new insights by collaborating with experts from HPC/HPDA/AI domain

Which SMEs can apply to the FF4EuroHPC Open Call?

This call for proposals targets highest quality experiments involving innovative, agile SMEs and putting forward work plans built around innovation targets arising from the use of advanced HPC services. Proposals are sought that address business challenges from European SMEs from varied application domains, with strong preference being given to engineering and manufacturing, or sectors able to demonstrate fast economic growth or particular economic impact for Europe.

Key details

- ◆ Submission Deadline: 29th September 2021, at 17:00 Brussels local time
- Expected duration of experiments: Maximum 15 months with expected commencement 1st March 2022
- Funding for the Open Call: The indicative total funding budget is EUR 5 M.
- Maximum funding request per proposal: EUR 200,000 (covering all participants)



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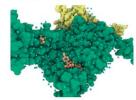
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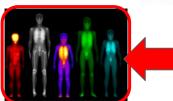
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Advanced HPC based drug discovery with converged Deep Physics and AI Read more •



A pediatric simulated dosimetry platform for clinical use

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Welcome to EuroCC@Greece HPC, Big Data and AI providers page

Register Here

EuroCC@Greece Hub for HPC

This page displays information on High-Performance Computing, Big

Data and Artificial Intelligence providers and experts

tzation Name ▼

e Organization type ∨ Country ∨

Location (city) Domain ∨ Al (Applications) ∨

Technologies (Al) ∨ Al (Technical skills) ∨ HPC (bardware) ∨

HPC (software) ∨ HPC (support and services) ∨ Technologies (HPC) ∨

Computational Process Engineering group, School of Chemical Engineering, National Technical University of Athens



Organization name: Computational Process Engineering group, School of Chemical Engineering, National Technical University of Athens Organization type: Academic sector (University, Research institution)

Country: Greece

HPC (hardware): Compute Processing (CPU architectures)

Phone Number: 2107723299

2

View EuroCC@Greece members

Find information on HPC, Big Data and Al providers



Register as a member of the EuroCC@Greece HPC

Add your own information in the list of the providers





"HPC Needs & skills" survey

Help us identify HPC related needs and skills and create a reliable Competence Map in Greece

SURVEY

Contact us at

contact@eurocc-greece.gr

Thank you!!

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