

PRACE 23rd Call for Proposals Continues to Support Diversity, Equity, and Inclusion

The 23rd Call for Proposals for PRACE Project Access received 61 eligible proposals, of which 43 were awarded, a total of 1.997 billion core hours. This brings the total number of Project Access projects awarded to 916 since 2010. Taking into account the six multi-year proposals from calls 19 and 21, and the 10.73 million core hours reserved for Centres of Excellence, the total amount of computing time awarded by PRACE to date has reached approximately 32.2 billion core hours.

The proposals awarded under the 23rd Call are led by principal investigators from 14 different countries. International collaboration is significantly supported through the awarded proposals as these involve team members collaboration from a number of countries that include Kazakhstan, Japan, USA, Canada and Brazil.

Among the awarded proposals, eight scientific domains are represented: 14 proposals are linked to the fields of Chemical Sciences, 10 to Fundamental Constituents of Matter, 10 to Engineering, 3 to Earth System Sciences, 2 to Biochemistry, Bioinformatics and Life Sciences, 2 to Universe Sciences, 1 to Mathematics and Computer Sciences and 1 to Physiology and Medicine.

This call was the occasion to reaffirm PRACE's commitment to diversity, equity, and inclusion (DEI). On the initiative of the PRACE Scientific and Steering Committee Chair, actions were taken to identify and mitigate potential unconscious biases inside the Access Committee review panel. Such actions include the appointment of reference panel members to spot arguments that divert from equal opportunity principles. With 11 proposals led by a female scientist out of 61 and 7 out of 43 awarded, the process displays a neutral treatment against the gender of the proposal's principal investigator. With this continued effort, PRACE strives to further support DEI.

Details of a selection of awarded proposals are highlighted below:

Muon magnetic moment: new physics or not? was awarded 222 million core hours on **HAWK at GCS/HLRS (Germany)**. The project will be led by Dr Laurent Lellouch from the CNRS and Aix-Marseille University, France. The research team intends to perform new and critical simulations to reduce both systematic and statistical uncertainties between the calculation and measurement on the magnetic moment of an elementary particle called muon.

Thermal Conductivity of Metal-Organic Frameworks (TC_MOFs) was awarded 39 million core hours with high level support on **Piz Daint at ETH Zurich/CSCS (Switzerland)**. This is a two-year project and will be led by Dr Raffaella Cabriolu from the Swiss Federal Institute of Technology Lausanne, Switzerland. This project will contribute to a fundamental understanding of how changes in pore topology and functional groups will affect thermal conductivity (TC) of Metal-Organic Frameworks (MOFs).

GASTON was awarded 30 million core hours on **MareNostrum at BSC (Spain)**. The project will be led by Dr Laurent Selle from the Toulouse Institute of Fluid Mechanics, France. The project intends to investigate the microscopic and macroscopic structure of the submerged flame front within porous networks, so as to assess the validity of current and newly-proposed volume-averaged modelling strategies.



Understanding how kinase domain mutations of PI3K α alter lipid kinase activity using HDX-MS and CryoEM experiments and Molecular Dynamics simulations was awarded 35 million core hours on **Marconi100 at CINECA (Italy)**. The project will be led by Dr Zoe Cournia from the Biomedical Research Foundation of the Academy of Athens, Greece. This project aims to understand the molecular mechanisms by which oncogenic mutations in the kinase domain of PIK3CA are activated on membranes, which will reveal novel molecular insights that may be exploited for the development of novel cancer therapeutic strategies.

Radiative general relativistic MHD simulation of a transitional accretion disk was awarded 20 million core hours on **JUWELS Cluster at GCS/JSC (Germany)**. The project will be led by Dr Oliver Porth from the University of Amsterdam, Netherlands. The research team claims that its simulation will enable the most direct connection between accretion disk theory and observations to date and can lead to a major breakthrough in the understanding of the accretion phenomenon of black hole.

New radiotherapy approaches based on distinct dose delivered methods was awarded 16 million core hours on **Joliot-Curie SKL at GENCI/CEA (France)**. This project will be led by Dr Yolanda Prezado from the Institute Curie, France. The project proposes to explore new techniques for cancer treatment based on novel dose delivery methods and different particle types (heavy ions) and energies (high energy electrons).

All information and the abstracts of the projects awarded under the 23rd PRACE Call for Proposals is available on the [PRACE website](https://prace-ri.eu).

The **23rd Call** for Proposals for PRACE Project Access (Tier-0) was open from 23 March 2021 until 27 April 2021. Selected proposals will receive allocations to PRACE resources from 1 October 2021 to 30 September 2022. The **24th Call** for Proposals for PRACE Project Access (Tier-0) is open from 9 September 2021 to 2 November 2021, 10:00 CET, see here: <https://prace-ri.eu/call/prace-24th-call-for-proposals-for-project-access/>.

About PRACE

The Partnership for Advanced Computing in Europe (PRACE) is an international non-profit association with its seat in Brussels. The PRACE Research Infrastructure provides a persistent world-class high performance computing service for scientists and researchers from academia and industry in Europe. The computer systems and their operations accessible through PRACE are provided by 5 PRACE members (BSC representing Spain, CINECA representing Italy, ETH Zurich/CSCS representing Switzerland, GCS representing Germany and GENCI representing France). The Implementation Phase of PRACE receives funding from the EU's Horizon 2020 Research and Innovation Programme (2014-2020) under grant agreement 823767. For more information, see www.prace-ri.eu

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