

PRACE 20th Call for Proposals increases number of systems offering GPUs to researchers

The 20th Call for Proposals for PRACE Project Access received 59 eligible proposals, of which 45 were awarded a total of 2.11 billion core hours. This brings the total number of Project Access projects awarded to 779 since 2010. Taking into account the five multi-year projects from the 16th and 18th Calls that were renewed and will enter their third and second years respectively, and the 13.8 million core hours reserved for Centres of Excellence, the total amount of computing time awarded by PRACE to date totals nearly 25 billion core hours.

The 45 awarded proposals are led by principal investigators from 15 different countries. Several of these proposals also involve collaborators from the USA, Japan, India, Brazil and South Korea. In addition to resources, four awarded proposals will receive additional support from High-Level Support Teams (HLSTs).

Among the newly awarded proposals, six scientific domains are represented: 4 proposals are linked to the fields of Biochemistry, Bioinformatics and Life Sciences; 9 to Chemical Sciences and Materials; 7 to Earth System Sciences; 13 to Engineering; 8 to Fundamental Constituents of Matter; and 4 to Universe Sciences.

The 20th Call for Proposals included an entirely new system and the second offered by PRACE after **Piz Daint@ETHZurich/CSCS, Switzerland** to offer GPUs. 11 proposals were allocated a total of 487 million core hours on **Marconi100@CINECA, Italy**. Overall, the 20th Call for Proposals offered researchers more GPU-based systems than any previous PRACE Project Access Call, with a near even split between these and CPU-only systems (985.85 and 1135.83 million core hours, respectively).

The 20th Call for Proposals was the second successive call to include an “Industry Access Track” which earmarked 10% of the total resources for proposals with principal investigators from industry. Two proposals were awarded through this track. **High-fidelity Simulations of a Three-Dimensional Double Diffuser** was awarded 50 million core hours on **Joliot-Curie Rome@GENCI@CEA, France**. This project will be led by Prof. Charles Hirsch from [NUMECA](#) (Brussels, Belgium) and is linked to the EU-H2020 project [HiFi-TURB](#) which aims to develop new turbulence models for separated flows, based on high-fidelity DNS data and their subsequent analysis by Artificial intelligence and big data methodologies. **FULLEST – First FULL engine computation with Large Eddy SimulaTION** was awarded 15,8 million core hours on **Joliot Curie SKL@GENCI@CEA, France**. This project will be led by Dr. Thomas Quirante from the Numerical Computation department at [AKIRA](#) (Bayonne, France) and aims to develop a methodology and carry out a Large-Eddy simulation of a 360° gas turbine representative of current engines to generating an accessible on-demand data-base that could be used to validate lower order methods.

Overall, the 20th PRACE Call for Proposals awarded resources to principal investigators whose work is funded by the following: ERC Advanced Grant (3), ERC Starting Grant (2), ERC Consolidator Grant (2), and Marie Skłodowska Curie Fellowship (4). In addition, resources were also awarded to Principal Investigators involved in H2020 (10) and EUROfusion (1) projects and one COST action.

All information and the abstracts of the projects awarded under the 20th PRACE Call for Proposals can be found [here](#).

The **20th Call** for Proposals for PRACE Project Access (Tier-0) was open from 20 September 2019 until 29 October 2019. Selected proposals will receive allocations to PRACE resources from 1 April 2020 to 31 March 2021. The **21st Call** for Proposals for PRACE Project Access (Tier-0) is open from 03 March 2020 to 5 May 2020, 10:00 CEST, see [here](#).



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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