EXCELLERAT CoE supports COVID-19-related research

A group of researchers from EXCELLERAT’s consortium partner SSC-Services GmbH, an IT service provider in Böblingen, Germany and the High-Performance Computing Center Stuttgart (HLRS) is supporting the German Federal Institute for Population Research (Bundesinstitut für Bevölkerungsforschung, BiB). SSC has developed an intelligent data transfer platform, which enables the BiB to upload data, start simulations and download results. The platform supports the work of BiB researchers in predicting the demand for intensive care units during the COVID-19 pandemic.

The research group’s aim is to simulate the spread of SARS-CoV-2 infections and need for intensive care units caused by the pandemic, in order to realistically forecast future demands. EXCELLERAT, the European Centre of Excellence for Engineering Applications, made this collaboration possible by bringing SSC and HLRS together to develop and implement the platform.

The creation of the intelligent data transfer platform drew on the strengths of both partners: HLRS’s new supercomputer “Hawk” delivers the compute resources that are necessary for the simulations, and SSC is developing a data exchange and data transfer platform within the EXCELLERAT project to ease the use of High-Performance Computing (HPC) resources and make the data transfer more efficient. This platform has been made available to the BiB.
“Nowadays, organisations face various issues while dealing with HPC calculations, HPC in general or even the access to HPC resources,” said Janik Schüssler, project manager at SSC Services. “In many cases, calculations are too complex and users do not have the required know-how with HPC technologies. This is the challenge that SSC has taken on. The BiB’s researchers had to access HLRS’s Hawk in a very complex way. With the help of our new platform, they can easily access Hawk from anywhere and run their simulations remotely.”

“This platform is part of EXCELLERAT’s overall strategy and tools development, which not only addresses the simulation part of engineering workflows, but provides users the necessary means to optimise their work”, said Bastian Koller, Project Coordinator of EXCELLERAT and HLRS’s Managing Director. “Extending the applicability of this platform to further use cases outside of the engineering domain is a huge benefit and increases the impact of the work performed in EXCELLERAT.”

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Note to the Editor:

Images:

HLRS’s supercomputer Hawk: With the help of the new data transfer platform, the BiB’s researchers can remotely access Hawk and run complex simulations on this supercomputer.

About EXCELLERAT

EXCELLERAT – the European Centre of Excellence for Engineering Applications – is an EU-funded research project, which serves as a single point of access for expertise on how data management, data analytics, visualisation, simulation-driven design and Co-design with High-Performance Computing (HPC) can benefit engineering, especially in the aeronautics, automotive, energy and manufacturing sectors. EXCELLERAT aims to enable the European engineering industry to advance towards Exascale technologies and to create a single entry point to services and knowledge for all stakeholders of HPC for engineering. With 13 project partners in seven Europe contributing to its success, the project runs from December 2018 until November 2021. EXCELLERAT has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No. 823691.

EXCELLERAT on Social Media

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About SSC-Services
SSC-Services GmbH, located in Böblingen (Stuttgart) is an owner-managed IT service provider.
Since 1998, SSC offers technological premium products and services for the successful organisation of
cooperation between OEMs and suppliers, mainly in the automotive industry.
The solid foundation of a joint and prosperous collaboration of development partners is formed by the
exchange of information and data. SSC supports and implements solutions to ensure a secure, reliable and
agile flow of information between companies. Furthermore, our portfolio of partner integration contains the
management of digital identities and their access as well as customised business partner connections. The
technical know-how is completed by the company-owned service desk and characterised by the years of
experience in project management and the service sector. Our customers can always rely on a friendly and
competent contact.

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