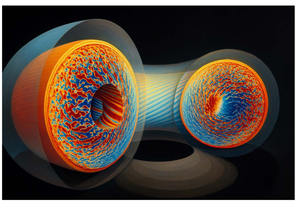
A MONTHLY E-NEWSLETTER BY NSCC SINGAPORE

NEWSBYTES

CORPORATE NEWS

A snapshot of NSCC Singapore's key updates and ongoing collaborations



Featured Read of the Month!

Powering the Future: Singapore's Path into Fusion Energy

Singapore is pushing the frontiers of clean energy with fusion research led by Nanyang Technological University (NTU) through the Singapore Fusion Power Programme, powered by NSCC Singapore's ASPIRE 2A supercomputer. By simulating plasma turbulence at unprecedented scales, training AI models on massive datasets, and virtually testing reactor designs, researchers are tackling one of fusion's toughest challenges.

With NSCC Singapore's technical expertise improving efficiency by 25% and saving over 2 million core hours, this effort accelerates Singapore's path toward fusion energy while building national expertise in advanced modelling.

Read more

2025 HPC Users Symposium—Small Nations, Big Compute: Where Innovation Meets Purpose

The 2025 HPC Users Symposium convened over 200 researchers and practitioners to explore advances in high-performance computing, AI, and quantum technologies. Through panel discussions, technical presentations, and poster exhibitions, participants shared insights, showcased innovations, and identified collaboration opportunities. The Symposium exemplifies NSCC Singapore's commitment to knowledge sharing, empowering researchers to leverage HPC resources effectively and accelerate scientific discovery.

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Advancing Climate Science: Launch of CAWRAS and Partnership in CAWRET

September marked the launch of the Climate and Weather Research Alliance Singapore (CAWRAS), bringing together leading institutions to advance tropical climate and weather research. NSCC Singapore continues its partnership in the Climate and Weather Research and Evaluation Testbed (CAWRET), providing HPC resources, observational datasets, and modelling tools.

These initiatives enable large-scale simulations, improve prediction of extreme events, and support long-term climate research, strengthening Singapore's position at the forefront of tropical climate science.

Image credit: Centre for Climate Research Singapore

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Building HPC Capabilities: ASPIRE 2A & 2A+ Workshops in September

NSCC Singapore's September workshops introduced researchers to the ASPIRE 2A and GPU-rich 2A+ systems. The ASPIRE 2A workshop guided participants through system fundamentals, file management, and job submissions, while ASPIRE 2A+ focused on GPU-enabled computing. These hands-on sessions equip the research community to fully leverage national supercomputing resources, demonstrating NSCC Singapore's commitment to capability-building and empowering researchers to accelerate their work.

Read more

Empowering Research Through NSCC Singapore's 6th Call for Projects

Keep a lookout for NSCC Singapore's 6th Call for Projects which opens opportunities for researchers to access the nation's leading supercomputing resources for large-scale simulations, complex data processing, and GPU-accelerated computing. Aligning with strategic resource allocation policies, the call prioritises projects with national relevance and computational complexity.

Key dates for the 6th Call for Projects:
Submission window: 1 – 29 October 2025
Evaluation period: 1 – 19 December 2025
Project commencement: From 2 January 2026 onwards

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THE LAST BYTE

Shared reads and cool finds from the HPC world

NUS ramps up HPC capability to propel research

To support a growing demand for advanced GPU (Graphics Processing Unit) resources, NUS has expanded its capability by implementing a state-of-the-art supercomputer, Hopper, that can perform a staggering 25 quadrillion calculations per second — or 25 PetaFLOPS — giving NUS researchers access to HPC power.

Read more

Image credit: National University of Singapore (NUS)

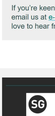
Ceremony Marks Launch of the Exascale Supercomputer JUPITER

The JUPITER exascale-class supercomputer was unveiled to the public at Forschungszentrum Jülich in Germany. The system, designed by the Jülich Supercomputing Centre (JSC) and in collaboration with the EuroHPC Joint Undertaking (EuroHPC JU) and procured by EuroHPC, is the first in Europe to exceed 1 quintillion calculations per second (1 ExaFLOPs). This marks a major technological milestone.

Read more

Image credit: NVIDIA

KAIST Research Team Uses Quantum Computing for Design of Porous Materials



This study is positioned as the first instance of using quantum computing to resolve a bottleneck in the design of complex multicomponent porous materials. The achievement is expected to be applied as a customized material design technology in fields such as carbon capture and separation, selective catalytic reactions, and ion-conducting electrolytes. The researchers plan to expand this method into a platform that can be coupled with classical simulations or machine learning-based property prediction tools.

Read more

Image credit: Quantum Computing Report

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