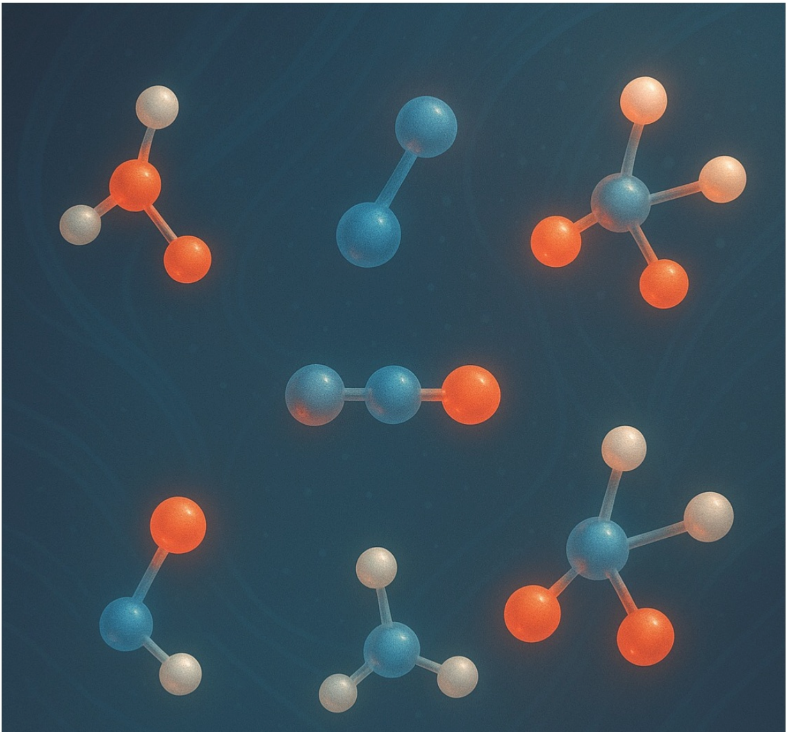
A MONTHLY E-NEWSLETTER BY NSCC SINGAPORE

NEWSBYTES

ASPIRE 2A
NETWORKING

CORPORATE NEWS

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



📌 **Featured Read of the Month!**

Catalysts of Change: Turning Carbon Dioxide Into Clean Fuel for the Future

Using the ASPIRE 2A supercomputer at NSCC Singapore, researchers at the National University of Singapore (NUS) are simulating catalytic reactions at the atomic scale to accelerate the conversion of carbon dioxide (CO_2) into methanol — a clean, sustainable fuel. By modelling how hydrogen moves across metal nanoparticles supported on two-dimensional (2D) materials such as graphene and MoS_2, the team is uncovering the key mechanisms that make CO_2-to-fuel conversion more efficient and stable.

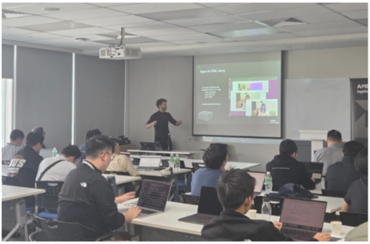
Harnessing parallelised molecular dynamics and density functional theory (DFT) on hundreds of CPU nodes, the team achieved dramatic performance gains — cutting computation times from months to days while maintaining high accuracy. This capability allows researchers to test multiple catalyst configurations rapidly, pinpoint reaction bottlenecks, and refine material designs in real time.

Read more

Data Centre Visits: A Closer Look at Singapore’s Supercomputing Capabilities

This month, NSCC Singapore hosted two data centre visits, giving both local and international visitors a first-hand look at the nation’s advanced supercomputing systems — ASPIRE 2A and ASPIRE 2A+ — and their role in supporting research and innovation. The visits included a delegation from the Hong Kong Computer Society (HKCS) and a delegation of students from Nanyang Technological University’s AI for Society programme.

Read more



AMD x NSCC Singapore Workshop: Leveraging HPC for robotics and LLMs

NSCC Singapore, in collaboration with

Strengthening Singapore’s HPC Community Through Advanced Training Workshops

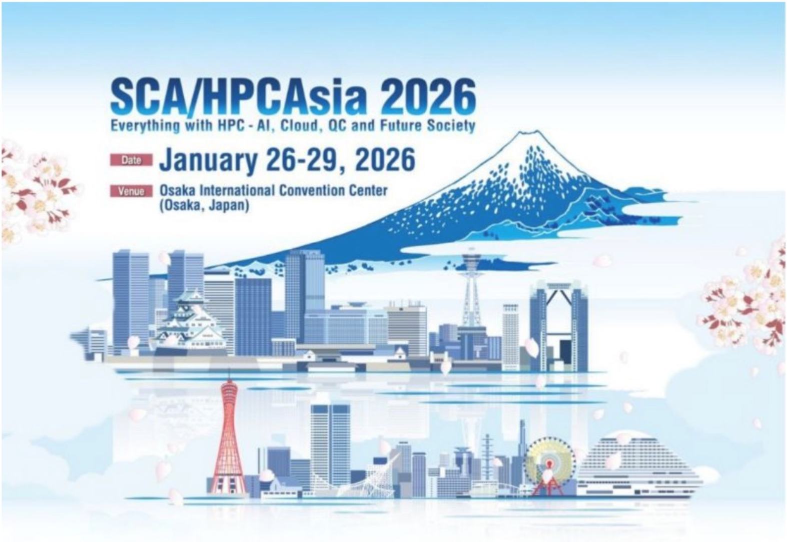
At NSCC Singapore, empowering users to

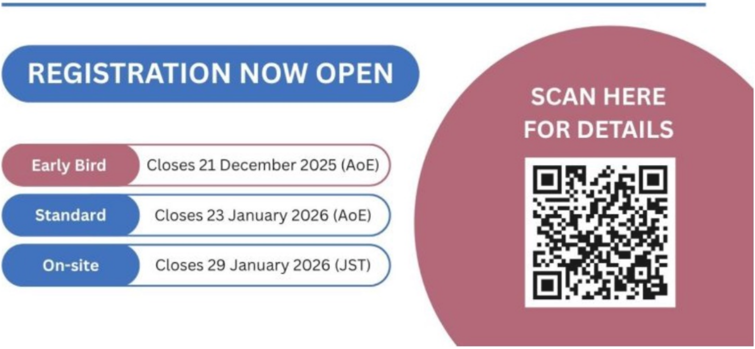
AMD, hosted a workshop that brought together close to 50 participants from local universities and research institutions to explore developments in artificial intelligence (AI) and high performance computing (HPC). The session featured speakers from AMD and Nanyang Technological University and offered insights on robotics using AMD technologies and hands-on labs for running robotics simulations. The workshop is part of the Centre of Excellence initiative, established under the Memorandum of Understanding between NSCC Singapore and AMD, which aims to strengthen Singapore's HPC and AI ecosystem through education, research, and innovation.

Read more

harness the full potential of high performance computing (HPC) remains at the heart of our mission. Alongside our introductory training sessions that help new users get started on the ASPIRE systems, our advanced workshops are designed to support more experienced users in deepening their technical proficiency and maximising computational performance. This month, two advanced workshops on strengthening users' ability to optimise performance and scale applications effectively on NSCC Singapore's ASPIRE systems were held.

Read more


SCA/HPCAsia 2026
Everything with HPC - AI, Cloud, QC and Future Society
Date
January 26-29, 2026
Venue
Osaka International Convention Center
(Osaka, Japan)



REGISTRATION NOW OPEN

Early Bird	Closes 21 December 2025 (AoE)
Standard	Closes 23 January 2026 (AoE)
On-site	Closes 29 January 2026 (JST)

SCAN HERE FOR DETAILS

SCA/HPCAsia 2026: Registrations Now Open

Registration for SupercomputingAsia (SCA) and HPCAsia 2026 is now open. Co-organised by HPC centres from Australia, Japan, Singapore, and Thailand — including NSCC Singapore — this premier international conference will be held in Osaka, Japan from 26 - 29 January 2026 under the theme “Everything with HPC – AI, Cloud, QC and the Future Society.”

The event will feature keynote sessions, research and industry presentations, Birds of a Feather discussions, and exhibitions exploring the convergence of HPC with AI, cloud, and quantum computing. Researchers, developers, and professionals are encouraged to register early to join this leading platform for collaboration and innovation in HPC.

Key Dates:

- Early Bird Registration Closes: 21 December 2025 (AoE)
- Standard Registration Closes: 23 January 2026 (AoE)

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THE LAST BYTE

Shared reads and cool finds from the HPC world

Agentic AI, quantum represent extraordinary moment in tech, says Singapore’s Digital Minister

SICW
SINGAPORE INTERNATIONAL CYBER WEEK 2025
10TH EDITION

Singapore’s Digital Minister Josephine Teo described agentic AI and quantum computing as defining technologies of this era, calling for collective global governance before “they govern us.” At Singapore International Cyber Week 2025, she announced new CSA initiatives, including public consultations on securing agentic AI, a Quantum Readiness Index, and a Quantum-Safe Handbook.

Read more

Image credit: GovInsider

Pawsey Supercomputing Centre to Host International HPC Summer School in 2026

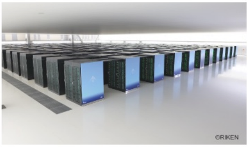
INTERNATIONAL
HPC
SUMMER
SCHOOL

Pawsey Supercomputing Research Centre announced that Perth, Western Australia, has been selected to host the International High-Performance Computing Summer School on HPC Challenges in Computational Sciences (IHPCSS). This is the first time the summer school will take place in the Southern Hemisphere since its inception in 2010. Applications for the IHPCSS will open in early 2026.

Read more

Image credit: insideHPC

Researchers Use Fugaku Supercomputer to Model Dynamic Dark Energy Scenarios



Dark energy, which drives the accelerated expansion of the Universe, is assumed to be constant since the Universe began by today’s leading model. Researchers from Japan, Spain, and the U.S. explored the possibility of time-varying dark energy by conducting one of the largest cosmological simulations to date. Their results show that while dark energy variations have modest effects alone, variations in other parameters like matter density significantly alter galaxy formation and cosmic structure, aligning closely with the latest observations.

Read more

Image credit: RIKEN

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As a valued subscriber, your input helps us tailor content to better suit your interests.

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