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!**

Mat-GDT: Using AI and HPC to Rethink How We Design Complex Materials

From clean energy to quantum computing, tomorrow’s technologies depend on new materials with specific, often unconventional atomic properties. But the most promising of these materials can also be the hardest to work with. Many exhibit site disorder—a phenomenon where atoms within a crystal structure switch places or leave gaps. These irregularities can lead to highly valuable traits like improved conductivity, enhanced durability, or reduced thermal loss.

To address this challenge, researchers at A*STAR's Institute of Materials Research and Engineering (A*STAR IMRE), together with partners from Nanyang Technological University (NTU), the National University of Singapore (NUS), and A*STAR's Institute of High Performance Computing (A*STAR IHPC), developed the Materials Generative Design and Testing Framework (Mat-GDT).

Read more

Vladyslav Khalin

International Olympiad in Artificial Intelligence (IOAI): Nurturing the Next Generation of AI Innovators with HPC

NUS High School students represented Singapore at the International Olympiad in Artificial Intelligence (IOAI), showcasing their talent on a global stage. To prepare, NSCC Singapore provided access to CPU and GPU resources, including A100 GPUs.

Building on this support, NSCC Singapore will continue partnering with NUS High School to deepen students' exposure to supercomputing for AI and scientific research.

Image credit: International Olympiad in AI

Building HPC Capability with ASPIRE 2A Workshops

NSCC Singapore conducts monthly hands-on workshops to familiarise users with the ASPIRE 2A supercomputer, covering system operations, compilers, job submissions, and accelerators.

Designed for both new users and those transitioning from ASPIRE 1, the sessions combine guided walkthroughs with practical exercises, enabling participants to confidently apply what they learn.

Read more

Read more

Healthcare Innovation Pitch Challenge 2025
Grand Prize Winner

Healthcare AI Symposium and Innovation Pitch Challenge 2025

NSCC Singapore took part in the Healthcare AI (HAI) Symposium 2025, which gathered over 200 stakeholders from healthcare, research, policy, and industry to explore AI's impact on healthcare.

As HPC partner, NSCC Singapore's Chief Executive Dr Terence Hung's took on the role of a judge in the inaugural Healthcare Innovation Pitch Challenge, where winning startups received GPU hours on the national supercomputing infrastructure.

Read more

Shaping Tomorrow's Compute: NSCC Singapore Hosts R-CCS & CSCS Workshop

NSCC Singapore hosted a technical workshop with partners from R-CCS (Japan) and CSCS (Switzerland) to exchange insights on next-generation computing.

Discussions spanned AI-enabled workflows, model serving, data readiness, and post-exascale platform design, including FugakuNEXT, ALPS, and NSCC Singapore's own roadmap. Participants also shared initiatives on researcher training, quantum-readiness, and sustainable data centres, underscoring the importance of collaboration in strengthening HPC ecosystems.

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)

Deadline extended!

Friday 19 Sep **Call for Papers**
- Paper Abstract Submission

Deadline extended!

Friday 19 Sep **Call for Papers**
- Full Paper Submission

Monday 8 Sep **Birds of a Feather**
- Proposal Submission

Monday 27 Oct **Call for Posters**
- 1st Round

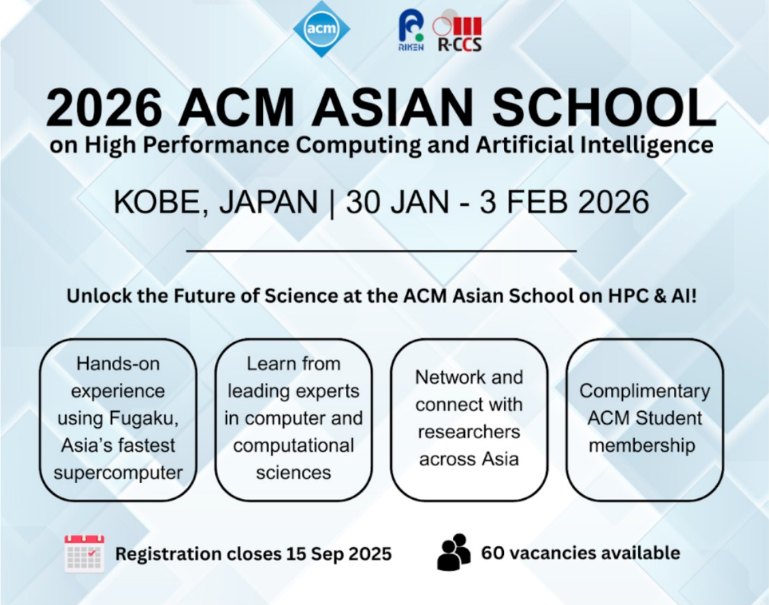
Shape the Future of Supercomputing at SCA/HPCAsia 2026: Submit your Papers & BoF Proposals

The flagship HPC event of the Asia-Pacific returns from 26 to 29 January 2026, as the regional and international supercomputing community gathers in vibrant Osaka, Japan, for SCA/HPCAsia 2026. This is where the brightest minds, boldest ideas, and breakthrough innovations converge to push the boundaries of what's possible in high performance computing, artificial intelligence (AI), and quantum computing.

We're inviting original research and visionary work that will advance HPC optimization and performance.

- **Papers – Deadline: 5 September 2025**
- **Birds of a Feather (BoFs) – Deadline: 8 September 2025**

Read more



2026 ACM ASIAN SCHOOL

on High Performance Computing and Artificial Intelligence

KOBE, JAPAN | 30 JAN - 3 FEB 2026

Unlock the Future of Science at the ACM Asian School on HPC & AI!

- Hands-on experience using Fugaku, Asia's fastest supercomputer
- Learn from leading experts in computer and computational sciences
- Network and connect with researchers across Asia
- Complimentary ACM Student membership

Registration closes 15 Sep 2025

60 vacancies available

Applications Open for the 2026 ACM Asian School on HPC & AI

The school offers a unique opportunity for the next generation of researchers to gain deep insights into cutting-edge computational technologies, engage in hands-on learning, and network with peers and experts across Asia and beyond.

The school is designed specifically for recent postdoctoral fellows, PhD candidates, and exceptional MSc students who aspire to elevate their research and technical expertise. Over the course of one intensive week, participants will explore the forefront of HPC, AI, and Computational Science, discovering how cutting-edge hardware and software is revolutionising how we scale scientific research to tackle global challenges.

- **Applications – Deadline: 15 September 2025**
- **Results Notification: 15 October 2025**

Read more

THE LAST BYTE

Shared reads and cool finds from the HPC world

Budget 2025: $3b National Productivity Fund boost for efforts to drive tech and innovation

In his 2025 Budget speech, Prime Minister Lawrence Wong announced a $3 billion boost to the National Productivity Fund to attract high-value tech investments, enhance business productivity, and upskill workers. The initiative will strengthen Singapore's competitiveness in frontier areas like AI and quantum computing. Emphasising that innovation and technology are key drivers of growth, PM Wong noted that Singapore must continue creating value and differentiating itself amid intensifying global competition.

Read more

Image credit: Sunningdale Tech

RIKEN launches international initiative with Fujitsu and NVIDIA for "FugakuNEXT" development

RIKEN, Fujitsu, and NVIDIA have launched an international initiative to develop FugakuNEXT, Japan's next flagship supercomputer and successor to Fugaku, targeting operation around 2030. For the first time in Japan's flagship systems, GPUs will be adopted as accelerators, with NVIDIA leading GPU infrastructure design and Fujitsu overseeing CPUs and system integration. Envisioned as a unified AI-HPC platform, FugakuNEXT will tightly integrate simulation and AI, aiming for up to a 100-fold performance boost over Fugaku.

Read more

Image credit: RIKEN

World’s fastest supercomputer helps US scientists improve tsunami alerts

El Capitan, the world’s fastest exascale supercomputer, has powered the development of the first real-time tsunami forecasting system by researchers at Lawrence Livermore National Laboratory with partners from UT Austin and UC San Diego. Using more than 43,500 AMD APUs to precompute vast physics-based simulations of seafloor earthquakes, the team created a digital twin of ocean wave propagation that enables rapid, high-fidelity predictions in seconds on modest GPU clusters.

Read more

Image credit: Lawrence Livermore National Laboratory

Want to feature your research in NSCC Singapore’s NewsBytes?

We’re looking for guest contributors for our monthly newsletter, shared with over 7,500 subscribers.

If you’re keen to share your work, email us at e-news@nscc.sg – we’d love to hear from you!

We’d Love Your Feedback!

Got a minute? Help us improve our newsletter by sharing your thoughts.

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

Submit here

**Powering Innovation
Supercomputing in Asia**

National Supercomputing Centre (NSCC) Singapore
1 Fusionopolis Way, Connexis South, #17-01 Singapore
138632