

NEWSBYTES

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CORPORATE NEWS

Singapore's national supercomputer to be used in student education and upskilling of professionals to support future jobs

NSCC, Republic Polytechnic, Singapore Polytechnic, Institute of Technical Education, Singapore Institute of Technology, AI Singapore and the Institution of Engineers, Singapore, signed MOUs to explore new training methods, courses and curricula which will leverage the power of a supercomputer.



Call for Research Projects on ASPIRE 2A

NSCC is pleased to announce the launch of the 1st Call for Research Projects on ASPIRE 2A. Interested applicants from stakeholder organisations (i.e. A*STAR, NTU, NUS, SUTD) can now apply for resources on ASPIRE 2A and the Köppen system via this call.

Application Period:

3 Apr 2023, 1000 hrs – 2 May 2023, 2359 hrs

Resource Allocation Period:

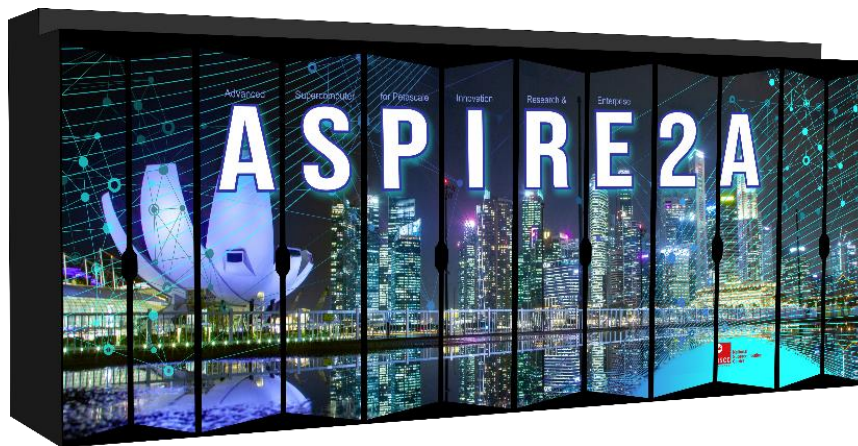
1 Jul 2023 – 30 Jun 2024

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Educational institutions, like polytechnics and ITE, and professional associations will have access to supercomputing resources to advance teaching and education, especially in areas like AI and machine learning. The high-performance computing (HPC) resources provided by the supercomputer will also be used to upskill professionals in the related advanced research and IT fields.

The collaborations are part of a series of Memorandums of Understanding (MOUs) that were signed at the annual international SupercomputingAsia 2023 (SCA23) conference under the umbrella of “AI & HPC-enabled Education and Talent Development for Singapore”. The National Supercomputing Centre (NSCC) Singapore, Institute of Technical Education (ITE), Republic Polytechnic (RP), AI Singapore (AISG), Singapore Polytechnic (SP), Singapore Institute of Technology (SIT) and the Institution of Engineers, Singapore Incubator & Accelerator (IES-INCA) are partnering to jointly develop talent in HPC by developing new curricula, training courses, workshops and student competitions in areas such as HPC, AI, data science and analytics, and advanced simulation and modelling. The training and nurturing of talent will better equip a future workforce to support these areas and their relevant industry sectors.

In support of the new partnerships, NSCC Singapore also announced that the nation’s next generation national supercomputer, the Advanced Supercomputer for Petascale Innovation Research and Enterprise 2A, or ASPIRE 2A, will soon be made available to the Singapore research community.



A green, warm water-cooled system - one of the first known deployments in a tropical environment - the ASPIRE 2A will provide an aggregate of up to 10 PFLOPS of raw compute power and is almost seven times more powerful than the current ASPIRE 1 supercomputer. The first generation ASPIRE 1 supercomputer, which was commissioned in 2016, has been running at nearly full capacity in support of local advanced research that requires high-end computing resources. The ASPIRE 2A will strengthen and support local research at universities, research institutes, government agencies and companies in areas like climate change, biomedical science and smart nation activities as well as across a wide array of scientific fields.

For more information about the partnership, please visit <https://www.nscg.sg/press-room/>.

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SupercomputingAsia 2023 (SCA23) Conference and Exhibition concludes on a high note

Themed “Sustainable Supercomputing for a Greener Future”, the four-day event featured 160 speakers and panelists sharing their knowledge and expertise with more than 1,100 registered participants from 35 countries and 315 organisations.



Co-organised by supercomputing centres from Australia, Japan, Singapore and Thailand, the SCA23 conference concluded after four days of insightful conference sessions and exhibitions on the latest HPC technology innovations and developments. For the first time ever, the International Conference on High Performance Computing in the Asia-Pacific Region (HPC Asia) was co-located with SCA23. The unique collaboration between HPC Asia and SCA23 synergises the collaborative and collective strengths from two of Asia’s established conferences by bringing together key HPC researchers, academics, technology specialists and industry leaders from across the region and beyond. The Conference on Next Generation Arithmetic (CoNGA) was also held in conjunction with SCA23 once again and provided a platform for participants to exchange ideas on emerging technologies for computer arithmetic and to stay up-to-date on the latest breakthroughs in next-generation data formats and their corresponding hardware, tools, applications, and services.

Key Highlights from SCA23

Closer collaboration between Singapore and Thailand



A Memorandum of Understanding (MoU) was signed between NSCC and NSTDA Supercomputer center (ThaiSC) to explore further collaborations between the two HPC centres in the ASEAN region. The collaboration will explore promoting and nurturing HPC partnership in areas like HPC resource and capability development, joint training and staff upskilling.

3rd HPC Centre Leaders Forum



The third instalment of the HPC Centre Leaders Forum brought together like-minded leaders from HPC Centres in Japan, Australia, Finland, Thailand, United States, and Poland came together for the 3rd HPC Centre Leaders Forum to discuss common areas of interest, challenges faced as well as ways to leverage strengths and resources and grow HPC talent.

3rd EU-ASEAN-Japan Symposium



Key opinion leaders and principals from EU, ASEAN and Japan provided updates on the most recent HPC-related initiatives and partnerships in the various regions and countries and discussed ways to broaden the level of HPC cooperation between the EU, Japan and the ASEAN region in areas like HPC resource sharing, data infrastructure, talent development and HPC skill capacity building. The Symposium also launched the 2023 HPC School, which will be held in Jakarta, Indonesia.

Partnership between San Diego Supercomputing Centre and SingAREN



San Diego Supercomputing Centre (SDSC) and SingAREN signed an MoU to jointly work towards deploying a data cache at SingAREN to better serve the research community in the Asia region. This collaboration will support researchers in the Asia region with faster and more efficient access to data, thereby accelerating scientific discovery and technological innovation in the region.

SCA23 Inaugural Award Winners' Lecture Series



Prof David Abramson, recipient of the SCA HPC Visionary Award 2022, shared his insights on "Translational Computer Science and its application to Supercomputing" at the SCA23 Inaugural Award Winners' Lecture Series, which showcases talks from past recipients of the SCA Awards.

Launch of the 2023 APAC HPC-AI Competition (HPCAIAAC)



Organised by the HPC-AI Advisory Council and with support from the National Supercomputing Centre (NSCC) Singapore and National Computational Infrastructure (NCI) Australia, the 6th annual competition was officially launched at SCA23. The competition encourages university and technical institute teams in the APAC region to showcase their HPC and AI expertise in a friendly yet spirited competition that builds critical skills, professional relationships, competitive spirits and lifelong comradeships.

A big **THANK YOU** to all our partners, speakers, track chairs, sponsors, exhibitors, participants, and co-organisers for making SupercomputingAsia 2023 a success!

For the first time ever, SupercomputingAsia will be heading to Australia! Mark your calendars and join us at SCA24 in Sydney, Australia, from 19 - 22 February 2024 at the International Convention Centre Sydney.

For more information on SupercomputingAsia, please visit <https://www.sc-asia.org/>

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Recognising the pioneer-leaders of regional HPC

The SupercomputingAsia 2023 (SCA23) Awards was recently announced at the SCA23 held in Singapore. The SCA23 Awards honours key HPC leaders from the regional and international communities.



Ms Chan Lai Fung, Permanent Secretary (National Research & Development), National Research Foundation (right) and Mr Quek Gim Pew, Chairman, NSCC Steering Committee (left) presenting the award to the SCA23 Awards recipients at the SCA23 Conference in Singapore.

The SCA Awards are an opportunity for the HPC community to recognise and celebrate those who have contributed significantly in one way or another to High-Performance Computing, or those who have been instrumental in the development of the HPC ecosystem, particularly for the Asian or Indo-Pacific region.

This year's SCA23 Award recipients have been recognised for their contributions towards the development of HPC in their respective countries and towards driving international HPC cooperation and collaboration through their activities.

“The recipients of this year's SCA Awards have demonstrated visionary leadership and exceptional innovation and contributions to HPC and related technologies. The four SCA23 award winners have greatly impacted the HPC communities with their impactful achievements and have advanced HPC both domestically and across the region,” said Associate Professor Tan Tin Wee, Chair of the SCA23 Awards.

The SupercomputingAsia 2023 (SCA23) Award winners are:

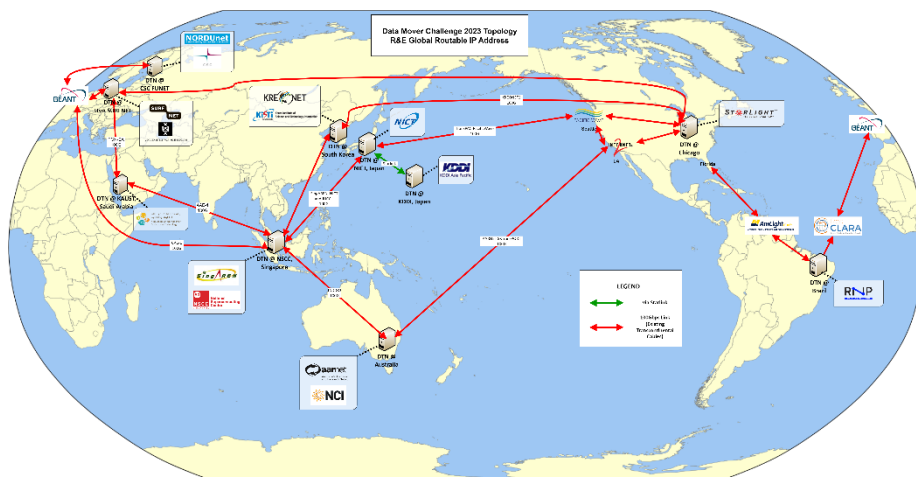
Award Name	Name	Designation	Citation
SCA HPC Distinguished Service Award (Singapore)	Mr Peter Ho	Inaugural Chairman, Steering Committee, NSCC Singapore	For visionary leadership in establishing high-performance computing (HPC) as a strategic national research infrastructure and setting in place policies and long-term strategies to exploit HPC to enhance Singapore's scientific research, technological innovations and economic competitiveness.
SCA HPC Distinguished Service Award (Japan)	Professor Shinji Shimojo	Director and Professor, Cybermedia Center, Osaka University	For helping establish the research and development of Japan's HPC networks and promoting its links with international research networks.
SCA HPC Pioneer & Achievement Award (Japan)	Professor Kengo Nakajima	Professor and Leader of Supercomputing Research Division, Information Technology Center, University of Tokyo, Japan & Deputy Director, RIKEN-CCS, Japan	For pioneering work in the development of HPC research in Japan in the areas of large-scale parallel computing, the development of flagship systems and in promoting HPC education.
SCA HPC Network Achievement Award (Posthumous)	Emeritus Professor Lawrence Wong Wai Choong	Former President, Singapore Advanced Research and Education Network (SingAREN) & Former Chair, SupercomputingAsia (SCA) Conference Organising Committee	For pioneering the establishment of the Singapore Advanced Research and Education Network, linking local and international research collaborations via the network, and mentoring the international SCA conference series.

For more information about the SupercomputingAsia Awards and past winners, please visit <https://www.sc-asia.org/sca-awards/>.

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Launch of the Data Mover Challenge 2023

The international Data Mover Challenge 2023 has officially been launched and registration for the challenge will open on 2 April 2023.



Moving data is an essential foundation of national and global science. The international Data Mover Challenge (DMC) is a competition organised by the National Supercomputing Centre (NSCC) Singapore that aims to bring

together experts from industry and academia in a bid to test their software and solutions for transferring huge amounts of research data. Run once every two years, the DMC competition encourages international teams to come up with the most advanced and innovative solutions for data transfer across servers located in Singapore, Australia, Canada, Europe, USA, South Korea, Japan and Saudi Arabia that are connected by 100Gbps international research and education networks.

DMC23 was officially launched at the SupercomputingAsia 2023 (SCA23) conference and will run from 1 August to 31 October 2023. Registration for the challenge will open on 2 April 2023 and is open to all organisations, companies, research institutions, academia, researchers, post-graduate students and undergraduate students.

Competitors will be assessed and selected by an international panel of judges comprising domain experts and professionals in the field of networking and data transfer. Members of the judging panel for DMC23 include:

Name	Designation & Organisation	Panel
Andrew Howard	Associate Director – Cloud Services, National Computational Infrastructure (NCI), Australia	Chief Judge
Marcos Felipe Schwarz	R&D Manager, RNP, Brazil	Judge
Francis Lee Bu Sung	Associate Professor, School of Computer Science and Engineering, Nanyang Technological University (NTU), Singapore	Judge
Tim Chown	Network Development Manager, Jisc, United Kingdom	Judge

For more information about the Data Mover Challenge 2023 (DMC23), the participants and the supporting partners, please visit <https://www.nscg.sg/data-mover-challenge-2023/>

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Shared articles and news from the HPC world.

Japan's 1st Quantum Computer Begins Operations

Japan's first quantum computer began operating Monday at the Riken research institute in Wako, Saitama Prefecture

The United States is among the nations that have taken lead in creating experimental quantum computers, but Japan aims to stay ahead of the competition by concentrating on the practical use of such computers. Japan's first domestically produced model was developed by Riken and other entities, including Osaka University, Fujitsu Ltd. and NTT Corp., while the government has contributed a total of about ¥2.5 billion from fiscal 2018. Read more at The Japan News [here](#).



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Credit: The Yomiuri Shimbun

LUMI Data Centre Receives ‘Green Data Centre of the Year’ Award

The LUMI data center has been recognized in the 2023 Data Centre World Awards for the Green Data Centre of the Year.

The Data Centre World Awards celebrates the people, innovations, and operations within the data center industry that have gone above and beyond to achieve outstanding excellence in the sector. It shows that the LUMI data center is a trailblazer in sustainable HPC operations on a global scale. Read more at HPC Wire [here](#).



Credit: HPC Wire

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Supercomputer Can Predict ICU Patient Dangers to Give Healthcare Workers a Warning

A patient in the intensive care unit (ICU) can deteriorate quickly. Doctors may have little to no warning before machines ping, panic sets in, and a patient faces irreparable damage or death from a brain bleed.

Many times these crises have been impossible to predict. Data researchers have now combined efforts with the Pawsey Supercomputing Research Centre in Australia to create a supercomputer which can run an algorithm that predicts—in real-time—impending dangers to patients. This revolutionary system has the potential to give doctors and staff as much as a 20-minute warning to avert disaster. Read more at My Modern Met [here](#).



Credit: Pawsey Supercomputing Research Centre

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Powering Innovation
Supercomputing in Asia

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