Media Release

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SupercomputingAsia 2018 (SCA18) Kicked Off with Focus on How Artificial Intelligence and High Performance Computing Converge to Transform the Way We Live

Graced by Senior Minister of State, Dr Janil Puthucheary from the Ministry of Communications & Information and Education, the three-day conference kicked off this morning amidst a global wave of interest in Artificial Intelligence (AI) and how it converges with High Performance Computing (HPC) and the technologies relating to them, to transform the way we live.

Singapore 27 March 2018 – Organised by National Supercomputing Centre (NSCC) Singapore, SCA18 is the inaugural annual conference that will encompass an umbrella of notable supercomputing and allied events in Asia. The new flagship conference has its roots in Supercomputing Frontiers (SCF) since 2015. NSCC aims to build on the success of the global Supercomputing Frontiers conference series and make the SCA series Asia's HPC nexus, by gathering the best and the brightest under the SCA umbrella to share and promote HPC in Asia. Artificial Intelligence (AI) wave, a key high-growth area, will headline the theme of the inaugural SCA18 with "*The Convergence of AI and HPC Bringing Transformation*".

The theme is underpinned by the number of distinguished speakers, all luminaries in the fields of AI and HPC, and the wide selection of workshops and panel discussions held over the three-day event.

Besides the Minister, SCA18 is also host to several prominent speakers, including:

1. Hewlett Packard Enterprise's Dr Goh Eng Lim, who is known as the Singaporean who, with NASA, put a supercomputer in space.
2. Dr Satoshi Sekiguchi from the National Institute of Advanced Industrial Science and Technology, and known for driving developments in HPC and applying IT-based solutions to solve society's problems on AI.
3. Professor Joe Mambretti and Professor Thomas DeFanti, both distinguished pioneers of advanced Internet networking from the United States.
4. Mr Gilad Shainer from the HPC & AI Advisory Council and an HPC evangelist.

Alongside co-located HPC events, attendees can expect the following conferences in session:

1. **Asia Pacific Advanced Network Meeting (APAN45)** – The largest and longest-standing community of advanced network experts that pioneers and strategises research network connectivity and platforms for research and innovative projects in Asia Pacific.

2. **Conference on Next Generation Arithmetic (CoNGA)** – An innovation invented by supercomputing veteran Professor John Gustafson who has a law named after him (Gustafson's Law), and whose latest unum incarnation called "posits" has the potential of changing the entire landscape of computing.

3. **Singapore-Japan Joint Sessions** – Talks and panel discussions centering energy efficiency and data centre cooling, aerospace and smart city concepts that aim to foster collaborations between Singapore and Japan.

4. **Supercomputing Frontiers Asia (SCFA)** – The technical sessions for SCA18, that has received over 40 papers, out of which 16 papers will be presented in the areas of Big Data, Graphics Processing Unites (GPU) and Field Programmable Gate Arrays (FPGA), Performance Tools and Linear Algebra.

5. **Towards an Asia Pacific Research Platform (APRP)** – HPC and networking experts will knock heads together and lay the groundwork for building the planned Asia Pacific Research Platform (APRP), another innovation to bridge researchers and HPC/Networking facilities over a large geographical region.

SCA18 will also cover a rich selection of workshops and sessions, including:

- Enabling Government Innovations Session; sharing GovTech's innovation programme and AI & HPC related government projects that were funded under this programme.
- Industry Tracks; 14 exciting talks on HPC technologies and roadmaps by leading HPC vendors and sponsors who will stargaze and discuss the possibilities and potential of AI and HPC.
- Precision Medicine Track; Talks and panel discussions on the precision medicine landscape in Singapore today and what lies ahead for Precision Medicine in Singapore.
- Start-up Tracks; Panel discussions in the areas of Fintech, Biotech and Automation.
- 18 exhibition booths from sponsors including representation from supercomputing centres in Wuxi and Australia, as well as a combined booth by Japan's RIKEN and Research Organisation for Information Science and Technology (RIST).

Associate Professor Tan Tin Wee, Chief Executive of NSCC said, *"The Supercomputing Frontiers conference series was started three years ago. For it to have grown into the revamped and expanded inaugural SupercomputingAsia conference of this size, with five co-located events and a registration list of 700 from over 20 countries, this is a good start. For NSCC to be in the thick of all the discussions and collaborations that will happen during SCA18, I am very excited.".*

Another key highlight at the SCA18 opening ceremony is the SCA18 Awards, which was presented by Dr Puthucheary. The Awards aim to promote excellence in HPC, networking, storage and visualisation in the areas of Asia's research, innovation, education and enterprise.

Recipients of the SCA18 Awards were:

1. **Asia HPC Leadership Award, Dr Satoshi Sekiguchi, Vice President & Director General at Japan's National Institute of Advanced Industrial Science and Technology (AIST**).

    Dr Sekiguchi has driven major developments in high performance computing from its system architecture to applications. His expertise also includes applying IT-based solutions to many of society's problems related to global climate change, environmental management and resource efficiency. Over the past three decades, he has played key leadership and founding roles in international organisations and projects such as the PRAGMA, GEO and the Global Grid Forum. His latest outstanding role has been in initiating the world's fastest supercomputer for artificial intelligence research, known popularly as the AI Bridging Cloud Infrastructure (ABCI).

2. **Asia HPC Outstanding Innovation Award, The National Supercomputing Centre in Wuxi**

    The National Supercomputing Centre in Wuxi houses the world's most powerful supercomputer, the Sunway TaihuLight, hosted by Tsinghua University. It has kept its top position in the TOP500 supercomputer list for 4 times in a row since 2016. TaihuLight is based on a Chinese home-grown processor, the Shenwei SW26010, which has a completely different architecture compared to any existing processors. Projects on this supercomputer have been nominated five times for the highly coveted Gordon Bell Prize. They have the honour of achieving the rare feat of winning the Gordon Bell Prize for two consecutive years.

3. **Singapore Distinguished Service Award, Professor Lam Khin Yong**

    Professor Lam is being recognised for his distinguished and pioneering efforts and contributions towards shaping the HPC landscape in Singapore since the 1980s. In the 1990s, he founded the Centre for Computational Mechanics and expanded it as the founding Executive Director of Singapore's Institute of Higher Performance Computing (IHPC). Today, Professor Lam continues to be an active advocate of aligning research with industry applications. His latest achievement for Singapore is clinching a multimillion dollar research collaboration in Artificial Intelligence with Chinese e-commerce giant, Alibaba.

National
Supercomputing
Centre
SINGAPORE

1 Fusionopolis Way, Connexis South, #17-01
Singapore 138632
Tel: +65 6714 9450 | Email: contact@nscc.sg
Reg. No. 2007208292

4. **Singapore Visionary Award, Dr Goh Eng Lim**

Dr Goh has been a veteran of the high performance computing industry for nearly three decades, first with SGI and now with Hewlett Packard Enterprise as Vice President and CTO for HPC and AI. He is known as the Singaporean who put a supercomputer in space with NASA in the United States, to study high performance computing hardware for long duration space travel. He has won numerous awards for his achievements and visionary ideas, including the most recent HPCwire's "Readers' Choice Top Supercomputing Award 2017" with HPE, and was twice listed in HPCwire's *"People to Watch"*. He is the first and only Singaporean to make it to the prestigious Scientific Advisory Board of the Singapore National Research Foundation (NRF).

5. **Outstanding Technical Paper Award**

This award aims to recognise an outstanding individual or team deemed to have presented the best research technical paper at SCFA in the areas of Big Data, GPU/FPGA, Performance Tools and Linear Algebra. The recipient of the award will be announced at the closing ceremony of the conference on 29 March 2018.

SCA18 will also be the launch platform of the APAC HPC-AI Competition, jointly organised by the HPC-AI Advisory Council (HPCAC) and NSCC. HPCAC is a leading global organisation for HPC and AI research, outreach, and education. The competition is open to teams from tertiary institutions in the APAC region who wish to demonstrate their programming ability in the traditional and emerging disciplines, including HPC and AI.

The is the first-ever APAC HPC-AI competition that aims to educate, empower, and bring together the next generation technology leaders. Participants will get the unique opportunity to showcase their HPC and AI expertise and the winning team will receive a cash prize and represent APAC at the Student Cluster Competition (SCC) at ISC 2019, a global HPC conference, in Germany.

SCA18 will be attended by over 700 delegates from nearly 20 different countries from all over the world.

About National Supercomputing Centre (NSCC) Singapore

The National Supercomputing Centre (NSCC) Singapore was established in 2015 and manages Singapore's first national petascale facility with high performance computing (HPC) resources to support science and engineering computing needs for academic, research and industry communities. Funded by its stakeholders, including Agency for Science Technology and Research (A*STAR), Nanyang Technological University (NTU), National University of Singapore (NUS), and Singapore University of Technology and Design (SUTD), with substantial funding from the Singapore Ministry of Trade and Industry (MTI), NSCC aims to democratise access to supercomputing. NSCC works with local and international organisations to catalyse collaborative HPC projects and programmes which support national research and development initiatives, attract industrial research collaborations and enhance Singapore's research capabilities. For more information, please visit https://nscc.sg.

About SupercomputingAsia (SCA)

Organised by NSCC, SCA18 is the inaugural annual flagship conference that will encompass an umbrella of notable supercomputing and allied events in Asia. The key objective is to promote a vibrant and shared High Performance Computing (HPC) ecosystem in Asia, where the most exciting HPC developments are taking place. Delegates will be able to gain access to visionary insights from thought leaders in academia and industry, optimum networking opportunities and the HPC community in Singapore and Asia.

Media Contact

Cindy Lim (Ms)

Manager, Corporate Communications

Tel: +65 6714 9462 / 9338 8292

Email: cindylim@nscc.sg