

# DETAILED PROGRAMME

1-Mar-21		
Time	Topic	Presenters
0900 - 1200	<b>oneAPI Hands-on Workshop targeting FPGAs</b> - Introduction to Intel FPGA Technologies, usage of FPGAs with Intel® oneAPI Toolkits - Understand how your code is compiled into an FPGA design incorporating a Custom Compute Pipeline - Development Flow for Using FPGAs with the Intel® oneAPI Toolkits - Examine an FPGA optimization report and analyse many performance bottlenecks - List several techniques to optimize your command group scope	<b>Susannah Martin</b> <b>Ritesh Beigudri</b> <b>Israr Sheikh</b>
1200 - 1300	<b>LUNCH BREAK</b>	
1300 - 1430	<b>High Performance Computing on Intel GPUs using oneAPI</b> - Work on a Live (hands-on) HPC application - Use relevant oneAPI tools to identify GPU offload regions - Port the identified regions of code to oneAPI	<b>Dr Amarpal S Kapoor</b>
1430 - 1445	<b>BREAK</b>	
1445 - 1615	<b>Distributed AI on Intel CPU using oneAPI</b> - Concepts of distributed training with oneAPI powered AI frameworks - Hands-on for Transfer learning for BERT	<b>Vinod Devarampati</b> <b>Aditya Srivaya</b>

Day 1 (02 Mar 21)		
Welcome & Conference Highlights Location: Auditorium		
0930 - 1000	Welcome & Conference Highlights by SCA21 Steering Committee	
1000 - 1300	<b>HPC-AI in Health and Biomedical Sciences</b> Track Chair: Dr. Song Qingchun (HPC-AI Advisory Council) Location: Track A	<b>APAC HPC-AI Competition Awards Ceremony</b> Track Chair: Mr. Song Qingchun (HPC-AI Advisory Council) Location: Track B
1000 - 1005	<b>HPC-AI in Health and Biomedical Sciences Opening Address</b> by Dr Kenneth Ban, National Supercomputing Centre Singapore	<b>1000 - 1005 Opening Address</b> by Mr Song Qingchun, HPC-AI Advisory Council, APAC
1005 - 1025	<b>1005 - 1025 Supercomputing for Healthcare</b> by Prof Ngiam Kee Yuan, National University Health System (NUHS) Singapore	<b>1005 - 1015 Fostering the Next Generation of Supercomputing</b> by Mr Glad Shainer, HPC-AI Advisory Council
1025 - 1045	<b>1025 - 1045 Building a Data Science and Artificial Intelligence Ecosystem at SingHealth Duke-NUS Academic Medical Centre</b> by Prof Marcus Ong, SingHealth Duke-NUS Academic Medical Centre	<b>1010 - 1015 Opening Address</b> by Dr Lim Keng Hul, Institute of High Performance Computing, A*STAR
1045 - 1100	<b>1045 - 1100 Presentation</b> by Dr Nicolas Berlin, Centre for Big Data and Integrative Genomics (o-BIG), A*STAR	<b>1010 - 1035 COVID-19 Big Social Data Analytics: Enabling Communication Science Equipes through Emotion Analytic Social Technologies</b> by Dr Yang Yiping, Institute of High Performance Computing, A*STAR and Prof Lwin May Oo, NTU (COHEN)
1100 - 1105	<b>1100 - 1105 Supercomputing Frontiers Asia (SCFA) The COVID edition Opening Address</b> by Dr Kenneth Ban, National Supercomputing Centre Singapore	<b>1035 - 1100 AI Models for Detecting Pneumonia using Chest X-rays</b> by Dr Cai Yingxin, Institute of High Performance Computing, A*STAR and Dr Huang Weimin, Institute for Infocomm Research, A*STAR
1105 - 1120	<b>1105 - 1120 Modelling and Simulation of SARS-CoV-2 Spike Glycoprotein</b> by Dr Firdaus Samadhin, Bioinformatics Institute, A*STAR	<b>1100 - 1120 Pandemic-Inspired Computational Model for Pandemic Proofing Society</b> by Dr Kang Chang Wei, Institute of High Performance Computing, A*STAR
1120 - 1135	<b>1120 - 1135 Quantum Safe Network</b> Track Co-Chair: Prof Lawrence Wong & A*Prof Alexander Ling	<b>1120 - 1140 Spatial-temporal Potential Exposure Risk Analytics and Urban Sustainability Impacts related to COVID-19 Mitigation: A Perspective from Car Mobility Behaviour</b> by Dr Fu Xijun, Institute of High Performance Computing, A*STAR
1135 - 1150	<b>1135 - 1150 Phylogenetics of covid-19</b> by Dr D T Singh, CloudSeq Pte Ltd	<b>1140 - 1200 Modelling of Safe and Efficient Germicidal UV-C LED Solutions</b> by Dr Liu Xuehua, Institute of High Performance Computing (HPC), A*STAR
1150 - 1205	<b>1150 - 1205 Potential Repurposed Drugs Against SARS-CoV-2</b> by Dr Ann Althaus, Nanyang Technological University, Singapore	<b>1140 - 1200 How GPU Change the HPC, AI and them Together</b> by Dr Li Xipeng, NVIDIA
1205 - 1205	<b>1205 - 1205 Closing</b>	
1230 - 1240	<b>1230 - 1240 Student Cluster Competition Experience</b> from NTU by Mr Wang Zui-Wen, National Tsing Hua University	
1240 - 1250	<b>1240 - 1250 Ramp it up: From Server Room to International Challenges</b> by Mr Zhang Yiqi, Centre for Computational Science and Engineering of Southern University of Science and Technology	
1250 - 1255	<b>1250 - 1255 2021 Competition Announcement</b> by Mr Glad Shainer, HPC-AI Advisory Council	
1255 - 1300	<b>1255 - 1300 Closing</b>	
1300 - 1330	<b>Industry Plenary</b> <b>Aurora: Leading HPC into the Future</b> by Dr Robert (Bob) Wisniewski, Intel	
1330 - 1400	<b>Industry Plenary</b> <b>Simulating the SARS-CoV-2 virus with AI and HPC</b> by Dr Norman Arango, University of California San Diego	
1400 - 1410	<b>1400 - 1410 Welcome Address</b> by Mr Peter Ho, NSCC Steering Committee	
1410 - 1420	<b>1410 - 1420 Opening Speech</b> by Guest of Honour, Dr Vivian Balakrishnan, Minister for Foreign Affairs and Minister-in-charge of the Smart Nation Initiative, Singapore	
1420 - 1450	<b>1420 - 1450 Opening Keynote</b> by HE YAMAZAKI Jun, Ambassador of Japan to Singapore & Ms KAJIWARA Yumiko, Executive Member of Council for Science, Technology and Innovation - Japan	
1450 - 1500	<b>1450 - 1500 SCA21 Awards &amp; Recognition Ceremony</b>	
1500 - 1530		
1530 - 1600	<b>1530 - 1600 HPC Centre Leaders' Forum - Navigating HPC in the New Norm</b> Moderator: Mr Mark Stickells, Pawsey Supercomputing Centre	
1600 - 1630		
1630 - 1700	<b>1630 - 1700 Knowledge Based Systems for Intelligent Discovery</b> by Dr James Sexton, IBM Research	
1700 - 1730	<b>1700 - 1730 Industry Plenary</b> <b>Unlock your Innovation with Microsoft Azure HPC</b> by Ms Nishi Chappell, Microsoft	

Day 2 (03 Mar 21)		
Plenary Session		
0930 - 1000	<b>0930 - 1000 Opening Plenary</b> <b>Fugaku: The First to General Purpose Exascale and its Contributions to Society 5.0</b> by Prof Satoshi Matsuzaka, RIKEN Centre for Computational Science (R-CCS)	
1000 - 1030	<b>1000 - 1030 Plenary</b> <b>The Impact of Australian HPC in the Coming Decade</b> by Prof Sean Smith, Australian National Computational Infrastructure (NCI)	
1030 - 1100	<b>1030 - 1100 Plenary</b> <b>The Pacific Research Platform-a high-bandwidth distributed supercomputer</b> by Dr Larry Smarr, University of California San Diego	
1100 - 1130	<b>1100 - 1130 Industry Plenary</b> <b>Faster/Smarter/Greener, Supercomputing in the time of Covid-19</b> by Mr Jean-Pierre Panziera, Alos	
1130 - 1200	<b>1130 - 1200 Industry Plenary</b> <b>The Role of High Performance Computation in Materials Modelling at the Atomic Level</b> by Prof Debra Bernhard, The University of Queensland	
1200 - 1230	<b>1200 - 1230 Industry Plenary</b> <b>High Performance Computing with 2nd Gen AMD EPYC™ Processor and AMD Instinct™ GPUs</b> by Mr Raghun Nambiar, AMD Datacenter Ecosystems and Solutions	
1230 - 1300	<b>1230 - 1300 Industry Plenary</b> <b>The New Generation of High-Performance Computing - Cloud Native Supercomputing</b> by Mr Glad Shainer, HPC-AI Advisory Council	
1300 - 1330	<b>1300 - 1330 Industry Plenary</b> <b>Viral Droplet/Aerosol Dispersion Simulation on the Supercomputer "Fugaku" and Fight Back against COVID-19</b> by Prof Masato Tsubokura, RIKEN Center for Computational Science	
1330 - 1400	<b>1330 - 1400 Industry Plenary</b> <b>Digital Transformation in the Exascale Era</b> by Mr Bill Mannel, Hewlett Packard Enterprise	
1400 - 1730	<b>1400 - 1730 Asia Pacific Research Platform (APRP) Chair: Mr Yves Poppe (NSCC)</b>	<b>1400 - 1730 Industry Track</b> <b>Quantum Computing Track Track Chair: Prof Jose Ignacio Latorre (CQT)</b>
1400 - 1430	<b>1400 - 1430 Welcome and Intro to APRP</b> by Mr Yves Poppe, National Supercomputing Centre and Dr Jeonghoon Moon, KREONET Center, KISTI	<b>1400 - 1405 Welcome</b> by Prof Jose Ignacio Latorre, Centre for Quantum Technologies (CQT)
1430 - 1500	<b>1430 - 1500 SC20 Experiments and Demonstrations Showcasing Innovations in Large Scale Data Intensive Science Transport and Contributions To the Global Research Platform</b> by Prof Joe Mambretti, International Center for Advanced Internet Research, Northwestern University	<b>1405 - 1420 Quantum Simulations on Classical Supercomputers</b> by Dr Artur Garcia-Saez, Barcelona Supercomputing Center
1500 - 1530	<b>1500 - 1530 ICT to support the Transformation of Science in the Roaring Twenties</b> by Prof Dr K. Cees de Laat, University of Amsterdam	<b>1420 - 1435 How will our cryptographic toolkit be impacted by quantum computers?</b> by Dr Najwa Aaraj, Cryptography Research Center, Technology Innovation Institute, UAE
1530 - 1600	<b>1530 - 1600 Connecting Continents and Classrooms. How networks have to become Faster, Closer, Smarter</b> by Mr Rodney G. Wilson, Ciena Corporation	<b>1435 - 1450 Physical platforms for quantum computation</b> by Dr Gianluigi Catalani, Juelich Research Center (Germany) and Technology Innovation Institute (UAE)
1600 - 1630	<b>1600 - 1630 Bridging the gap</b> by Mr Kevin Sale, King Abdullah University of Science and Technology (KAUST)	<b>1450 - 1505 Australia's First Quantum-Supercomputing Hub</b> by Mr Ugo Varetto, Pawsey Supercomputing Centre and Dr Maciej Cyjowski, Pawsey Supercomputing Centre
1630 - 1650	<b>1630 - 1650 Data Mover Challenge Announcement for 2021-2022 Cycle</b> by Mr Avin Chiam, National Supercomputing Centre and Mr Andrew Howard, National Computational Infrastructure Canberra Australia	<b>1505 - 1525 Panel Discussion</b> Moderator: Prof José Ignacio Latorre
1650 - 1700	<b>1650 - 1700 Closing</b>	
1650 - 1660	<b>1650 - 1660 Koollodge - Energy Saving Thermal Management Solution for HPC Data Centre</b> by Mr Ian Goh, ERS Industries Pte Ltd	
1660 - 1670	<b>1660 - 1670 Artificial Intelligence Applications in Pharmaceuticals and Drug Discovery</b> by Mr Roman Boller, Dell Technologies Data Centre Workloads and Solutions Group	
1670 - 1700	<b>1670 - 1700 What We Learnt From Working With Customers on COVID-19</b> by Dr Goh Eng Lim, Hewlett Packard Enterprise	
1700 - 1720	<b>1700 - 1720 Revolutionising Supercomputing</b> by Mr Gil Bloch, NVIDIA (Networking BU)	
1730 - 1800	<b>1730 - 1800 Industry Plenary</b> <b>Getting more from Cloud with Efficient Data Storage</b> by Dr James Coomer, DDN	
1800 - 1830	<b>1800 - 1830 Industry Plenary</b> <b>A Cutting Edge HPC as a Service to Speed up the Evolution of Industries</b> by Mr Terry Tai, GARACTUS	

Day 3 (04 Mar 21)		
Plenary Session		
0930 - 1000	<b>0930 - 1000 Industry Plenary</b> <b>HPC in Covid Times: An Operational Scheduling Perspective</b> by Dr Bill Nitzberg, AIAA	
1000 - 1030	<b>1000 - 1030 Industry Plenary</b> <b>Unlocking Scientific Discovery with a Confluence of Simulation, Modelling, and Machine Learning</b> by Mr Andrew Underwood, Dell Technologies	
1030 - 1300	<b>1030 - 1300 HP Cast</b> Register here for HP Cast	<b>1030 - 1300 IBM Spectrum Scale User Group</b> Register here for IBM Spectrum Scale
1030 - 1300	<b>1030 - 1300 HPC in Education: What is HPC and where do I start?</b> Track Chair: Dr Freda Lim	
1100 - 1105	<b>1100 - 1105 Welcome Address</b> by Dr Freda Lim, Institute of High Performance Computing, A*STAR	
1105 - 1120	<b>1105 - 1120 With Great Supercomputing Power Comes Great Responsibilities</b> by Ms Julie Faure-Lacroix, Calcul Québec - Université Laval	
1120 - 1135	<b>1120 - 1135 Creating Chemistry in Computer Clusters</b> by Dr Adrian Matthew Mak, Institute of High Performance Computing, A*STAR	
1135 - 1150	<b>1135 - 1150 HPC Powered Solutions for Sustainable Future</b> by Dr Kang Chang Wei, Institute of High Performance Computing, A*STAR	
1145 - 1200	<b>1145 - 1200 How HPC can be used in the design of your skin care and shampoo formulation?</b> by Dr Freda Lim, Institute of High Performance Computing, A*STAR	
1200 - 1220	<b>1200 - 1220 The Many Faces of HPC</b> by Ms Ann Backhaus, Pawsey Supercomputing Centre, Perth, Western Australia	
1220 - 1235	<b>1220 - 1235 Panel Discussion</b>	
1235 - 1305	<b>1235 - 1305 Panel Discussion</b>	
1400 - 1430	<b>1400 - 1430 Next Generation Supercomputing at Pawsey Supercomputing Centre</b> by Mr Mark Gray, Pawsey Supercomputing Centre	<b>1410 - 1430 Quantum Key Distribution Adoption: Practical Considerations</b> by Dr Jonathan Pan, Home Team Science & Technology Agency
1430 - 1445	<b>1430 - 1445 Panel discussion</b> Moderator: Prof Alexander Ling	
1445 - 1455	<b>1445 - 1455 Panel discussion</b> Moderator: Prof Alexander Ling	
1455 - 1500	<b>1455 - 1500 Climate Research with HPC Forum</b> Track Chair: Prof Dale Barker	
1500 - 1505	<b>1500 - 1505 Introduction to Azure HPC Software</b> by Mr Parveen Kumar, DDN	
1505 - 1525	<b>1505 - 1525 Supercomputing and Climate Science: A Century-Old Partnership</b> by Prof Dale Barker, National Environment Agency (NEA)	
1525 - 1545	<b>1525 - 1545 Computing for Weather and Climate Prediction</b> by Dr Preeten Kumar, National Centre for Medium Range Weather Forecasting, India	
1545 - 1605	<b>1545 - 1605 Next-Generation Modelling for Next-Generation Supercomputing</b> by Dr Douglas Boyd, UK Met Office	
1605 - 1625	<b>1605 - 1625 Framework for future HPC cooperation in the digital decade Open Discussion</b> Moderator: Prof J. W Saputra, ASEAN HPC Task Force - Indonesia	
1625 - 1645	<b>1625 - 1645 HPC Status at CMA and Weather/Climate models at CMA</b> by Dr Xiao Huaxiong, National Meteorological Information Center of CMA	
1645 - 1705	<b>1645 - 1705 CORDEX-SEA Climate Downscaling and Simulations</b> by Dr Liew Junang, University of Malaysia	
1610 - 1620	<b>1610 - 1620 ASEAN HPC infrastructure and use cases overview</b> by Dr Piyawit Srichaikul, ASEAN HPC-Task Force Co-Chair/Chief Executive, ThaiSC, NSTDA Supercomputer Center (ThaiSC), Thailand	
1620 - 1630	<b>1620 - 1630 Open call to access Japanese High Performance Computing Infrastructure (HPCI) including Fugaku</b> by Dr Motoki Okuda, Research Organization for Information Science & Technology (RIST) KOBE center	
1630 - 1640	<b>1630 - 1640 Access and use cases for HPC data infrastructures Open Discussion</b> Moderator: Prof Satoshi Matsuzaka	
1640 - 1650	<b>1640 - 1650 Harnessing HPC Computing for Covid-19 Research: European Collaboration Activities</b> by Dr Rossen Apostolov, BioExcel Centre of Excellence for Computational Biomolecular Research	
1650 - 1700	<b>1650 - 1700 Real-time Surveillance of Pathogen Evolution and Global Transmission aided by HPC</b> by Dr Sabarwan Mauser-Shah, Bioinformatics Institute (BI), A*STAR Singapore	
1700 - 1710	<b>1700 - 1710 The way forward? HPC EU-ASEAN School</b> by Dr Fabrizio Gagliardi, Barcelona Supercomputing Centre, E-REACH HPC Expert	
1710 - 1720	<b>1710 - 1720 International Cooperation in Covid-19 HPC data research Open Discussion</b> Moderator: Pierick Filion-Ashida	
1720 - 1730	<b>1720 - 1730 Wrap-up and Closing by symposium co-chair Pierick Filion-Ashida</b>	
1730 - 1800	<b>1730 - 1800 Industry Plenary Session &amp; Closing</b> <b>Industry Plenary</b> <b>Innovating without Infrastructure constraints in a world disrupted</b> by Dr Barry Bolding, Global Director, Business Development HPC, Amazon Web Services (AWS)	
1800 - 1830	<b>1800 - 1830 Closing Remarks</b> Prof Lawrence Wong, National Supercomputing Centre	