The Proceedings of

International Conference on High Performance Computing in Asia-Pacific Region

(HPC Asia 2021)

January 20-22, 2021

Republic of Korea

Organized by:

Korea Institute of Science and Technology Information (KISTI)
Korean Society for Computational Science and Engineering (KSCSE)
in cooperation with ACM SIGHPC

The Association for Computing Machinery
1601 Broadway, 10th Floor
New York, New York 10019, USA

ACM ISBN: 978-1-4503-8842-9

Welcome Message from HPC Asia 2021 General Co-Chairs

Welcome to HPC Asia 2021, International Conference on High Performance Computing in Asia-Pacific Region!

HPC Asia conference series serve as a valuable venue to bring together researchers in Asia-Pacific region and beyond in the field of high performance computing, including application and algorithms, programming models and system software, data, storage and visualization, and architectures and networks.

It is our pleasure and honor to host the HPC Asia conference back in Korea in 2021. The conference was originally planned to be held as in-person event in Jeju Island on January 20-22, 2021. However, due to the continuing concerns of the COVID-19 pandemic, we have decided to host the conference as a virtual event. This will be the first virtual HPC Asia conference.

We are now entering the Exascale Era as the world first exascale supercomputer (Frontier) is expected to be delivered in 2021 at the Oak Ridge National Laboratory. With our interest in the Exascale computing, we have invited keynote speakers who will provide the current status and insights of the on-going Exascale projects in the US and Europe, including the Exascale Computing Project (ECP) and the European Processor Initiative (EPI). In addition, we have third keynote on high-performance cloud computing for deep learning.

It has been a challenge to come up with the efficient operation of a virtual conference that will lead to strong participation and engagement from attendees under unprecedented circumstances. Even though we received relatively small number of paper submission due to COVID-19, the program committee put together a solid program by selecting high-quality papers.

Even though the conference will be virtual, the conference is still a three-day event as originally planned. The main HPC Asia conference will be held for the first two days of the conference on Wednesday (Day 1) and on Thursday (Day 2) that includes three keynote talks, three technical paper sessions and one poster session. Friday (Day 3) is a workshop day consisting of three workshops: MMCP, IXPUG and Quantum Information.

This high-quality technical program is the result of the hard work of the HPC Asia 2021 Program Co-Chairs, Jaehyuk Huh and Rio Yokota and the program committee. We would like to take this

opportunity to thank Jaehyuk and Rio for their huge efforts in putting together a strong program under unprecedented circumstances. We also thank all of the organizing committee members for their support and warm advice: Prof. Jaehwan Lee (Program vice-chair and Proceedings chair), Prof. Jik-soo Kim (Poster chair), Prof. John Kim (Workshop chair), Dr. Sik Lee (Exhibition chair), and Prof. Changhoon Lee (Financial chair). Their fresh ideas and their prior experiences in organizing an international online conference have played a key role in the successful organization of this conference.

Special thanks to Prof. Takeshi Iwashita, General Chair of the HPC Asia 2020, for the kind guidance that he provided with us during the early planning phase of our event. We are grateful to Prof. Taisuke Boku, Chair of HPC Asia Steering Committee and General Co-Chair of IEEE Cluster 2020 which also ran virtually, for sharing his experience in the operation of the Cluster 2020 in the time when we were discussing the operation of our technical program.

We hope that this virtual conference will be as memorable and beneficial to all of you as the physical, in-person conference. With the good news of the promising vaccines and treatments, we look forward to seeing you in person in Kobe at HPC Asia 2022.

Soonwook Hwang
Heon Young Yeom
Co-Chairs of the Organizing Committee of HPC Asia 2021

Message from the Program Co-Chairs

It is our great honor to welcome all of you to the HPC Asia 2021 which was originally planned to be held at Jeju, South Korea from January 20th (Wednesday) to 22nd (Friday), 2021. Due to COVID-19, this year's event will be held virtually. We are pleased to announce an outstanding program covering interesting HPC research topics: deep learning, GPU computing, matrix computation, advanced computer systems, modern processors, and novel networks. There were 22 full technical paper submissions from France, Germany, Israel, Japan, Kenya, Philippines, Saudi Arabia, South Korea, Sweden, Taiwan, , and United States. Each paper was reviewed by at least three program committee members. In this year, the paper review has been processed under the single-blind policy. These reviews were carefully discussed at one-day online track-chair committee meeting on October 13, 2020. After active discussions, 13 excellent papers were accepted. The acceptance rate is 59%. Among the 13 accepted papers, 3 best paper finalists were selected at the track-chair committee meeting. The best paper will be selected by the best paper award committee after the best paper finalist session on Wednesday. The program committee consists of two program co-chairs, a vice program chair, eight track co-chairs, and other 65 members. There are four technical tracks in HPC Asia 2020: applications and algorithms track, programming models and system software track, data, storage and visualization track, and architectures and networks track. Each track has two track co-chairs. The program committee members are from various countries including China, France, Japan, South Korea, and United States. The program committee did a good job of constructing a nice technical program. We would like to thank all program committee members for their dedicated efforts. We hope you find the HPC Asia 2021 to be a rewarding event.

Jaehyuk Huh
Rio Yokota
Program Co-Chairs of HPC Asia 2021

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