Message from the General Chair

I am delighted to chair and host the 20th IEEE/ACM International Symposium on Cluster, Cloud, and Internet Computing (CCGrid 2020) sponsored by the IEEE Computer Society, IEEE Technical Committee on Scalable Computing (TCSC), and the Association for Computing Machinery (ACM) in Melbourne, Australia.

Tremendous advances in network-driven computing, communication, storage, and systems/middleware technologies are leading to new paradigms and platforms, ranging from computing clusters to widely distributed Clouds and emerging Internet computing paradigms such as Fog/Edge Computing for the Internet of Things (IoT)/Big Data applications. CCGrid is a series of very successful conference with the overarching goal of bringing together international researchers, developers, and users and to provide an international forum to present leading research activities and results on a broad range of topics related to these platforms and paradigms and their applications. The conference features keynotes, technical presentations, posters, workshops, tutorials, as well as the SCALE challenge featuring live demonstrations and the ICFEC 2020 conference.

CCGrid is an important conference for the international community as it provides a forum for all cluster, cloud, and Internet computing researchers, developers, and users, and those who are just curious to see the project results and become aware of the progress made in these areas. The inaugural CCGrid conference was held in Brisbane, Australia in 2001. Since then, the conference has successfully been hosted around the world and has emerged as a truly global event. From 2002 to 2019, CCGrid annual events were held in Germany, Japan, the USA, UK, Singapore, Brazil, France, China, Australia, USA, Canada, Colombia, Spain, USA, and Cyprus. Returning to its originating country, we are honoured to host the 20th anniversary of the CCGrid conference in Melbourne, Australia.

CCGrid has been featuring original and outstanding research work in Cluster, Cloud, and Internet Computing. In fact, many emerging research trends and associated publications are featured "first" in CCGrid and their follow-up papers have appeared in other conferences later. This demonstrates the emergence of CCGrid as a "first" class venue for presenting original and ground-breaking works. For instance, CCGrid has been featuring various Internet computing paradigms actively during the last few years. At the same time, submissions for the Grid computing area have drastically declined. Hence, from 2020, we explicitly recognized this growing trend in CCGrid by including "Internet computing" in the conference title to embrace all emerging/new Internet-driven computing paradigms.

This 20th anniversary, CCGrid 2020 conference offers an outstanding technical program featuring keynote talks, tutorials, workshops, mini-symposiums, posters sessions, industry track, research exhibits and demos, and IEEE SCALE competition. CCGrid has been extremely fortunate to serve as a venue for presentation of prestigious "IEEE Medal/Award for Excellence in Scalable Computing" award offered annually by the IEEE Technical Committee on Scalable Computing. We are fortunate to host three keynote speakers drawn from Australia, USA, and Europe. Our Australian-originated keynote speaker, Professor John Grundy, is a Laureate Fellowship recipient from Australian Research Council.

The continued success and leadership of CCGrid requires dedicated and high-quality efforts from several international leaders and volunteers. As the Chair of CCGrid conference series and General Chair of this year's event, I would like to express my sincere gratitude to the members of the Steering Committee and the Program Committee co-chaired by Professor Carlos A Varela and Laurent Lefevre. The Program Committee Co-Chairs and his Vice chairs

have coordinated peer-reviews of all submitted "full" papers and selected top-quality research papers for presentation at the conference. The CCGrid 2020 conference received 234 submissions (full papers) from 810 co-authors from 45 countries around the world: United States, China, Australia, France, India, Brazil, Spain, Canada, Germany, Japan, South Korea, Italy, United Kingdom, New Zealand, Israel, Poland, Sweden, Greece, Hungary, Norway, Portugal, Singapore, Hong Kong, Iran, Netherlands, Pakistan, Slovenia, Belgium, Finland, Indonesia, Austria, Saudi Arabia, Senegal, Taiwan, Denmark, Estonia, Switzerland, Thailand, Algeria, Ireland, North Korea, Mexico, Slovakia, Tunisia, and Vietnam. After peer-review of all submitted "full" papers, the Program Committee accepted 66 papers, resulting in an acceptance rate of 28%.

I thank George Pallis for coordinating the organisation of satellite workshops/mini-symposiums on hot topics such as Secure Mobile Cloud Computing, Network-Aware Big Data Computing (NEAC), and High-Performance Machine Learning. We appreciate the efforts of the chairs of various workshops and their PC members for attracting and selecting top-quality papers for presentation at the conference. I appreciate dedicated efforts of Doctoral Symposium Chairs (Anne-Cecile Orgerie and Ivan Rodero), Industry Chair (Rajeev Muralidhar), and Research/Product Demonstrations Chairs (Rodrigo Calheiros and Deepak Puthal).

I thank Hari Subramoni and Joanna Kolodziej for organising and managing the poster session, Mohammad Goudarzi for the excellent management of the conference website, and publicity coordinators, Jithin Jose, Stefan Schulte, Bahman Javadi, Mohsen Amini, Ching-Hsien Hsu, Carlos Westphall, and Minxian Xu, for helping us reach a broader community. I thank SCALE Challenge chairs, Yogesh Simmhan and Daniel S. Katz, and all other chairs for their efforts in enhancing the conference program with interesting demos. I thank Adel Toosi and Lisa O'Conner for their support in ensuring the publication of the conference proceedings in record time. I thank Laurence Yangfor managing TCSC sponsorship and the best paper awards.

I would like to offer my special appreciation to leading volunteers of the local organizing committee, led by Shashikant Ilager and Mohammad Goudarzi, for their dedicated services. I would like to thank Marie Trinh for managing registrations and Tricia Yamaguchi for her friendly services in finalising various contracts and budgets as an IEEE representative. Thanks are also due to our sponsors, namely, IEEE, ACM, and TCSC and organization supporters Melbourne's CLOUDS Lab.

One of the key benefits of a conference is the networking opportunities provided especially for early-career community members: PhD students get to give a talk and be nominated to post-doctoral and faculty positions, junior tenure-track faculty get to meet senior faculty who can later write recommendation letters for tenure/promotion, PIs discuss future grants and collaboration, etc. Furthermore, sessions enable paper authors of similar directions to exchange ideas in ways that virtual meetings truly lack. Coffee breaks, meals, social events, elevator speeches, birds-of-a-feather sessions are where most interaction happens.

The safety and well-being of all conference participants is our priority. After evaluating the current COVID-19 situation, the conference leadership decided to postpone the physical meeting of CCGrid 2020 to 2021 (May). That is, all accepted papers and programs of CCGrid 2020 will presented jointly with CCGrid 2021 program. However, this decision does not impact the publication of CCGrid 2020 accepted papers as we are publishing the Proceedings as per the original date. Thus, ensuring that innovative research contributions of CCGrid 2020 authors are disseminated in timely manner in 2020 itself!

We (PC Chairs, Tricia Yamaguchi of IEEE Computer Society Event Sourcing & Contracting Specialist, and I on exploring various options) decided that given the uncertainties associated with the Covid-19 pandemic, it would be in the best interest of authors to postpone the conference but still hold it physically. In this way, social interaction is not undermined, particularly given the worldwide audience we have and the difficulty of even finding a time zone that would work for everyone or even the majority. While we initially postponed it to November 2020, it became clearer that it is not obvious whether we can still do it in that timeframe. So, we decided that we would merge presentations with 2021 which will be again hosted in Melbourne. Of course, we are taking risks: (1) will we be able to have the 2021 conference physically?, (2) is the work presented one year later going to be stale?, and (3) will there be people unwilling/unable to travel in 2021?

It was not an easy decision, but putting all the pros and cons, we decided it would be best to co-locate CCGrid 2020 and CCGrid 2021, and have one big celebration of the first two decades of the conference in Australia, its birthplace. The proceedings is published in May 2020 as per the original plan, and therefore, the accepted articles can still be timely read and referenced.

Ultimately, the success of the conference will be judged by how well the delegates have participated, learnt, interacted, and established contacts with other researchers in different fields. The Committees and the sponsors have provided the funding, the venue, and the environment to allow these objectives to be achieved. It is now up to all of us to ensure that the conference is an outstanding success. Finally, I wish everyone a successful, stimulating, and rewarding meeting and look forward to seeing you all CCGrid 2020 registered participants in Melbourne in May 2021 along with new delegates of CCGrid 2021. Please plan to join, enjoy your visit to multicultural Melbourne and beautiful Australia!

Thank you for your cooperation, understanding, and support.

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