The 1st China Digital Earth Conference
18-20 November 2019, Beijing, China

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Preface

The 1st China Digital Earth Conference

November 18 – 20, 2019

The 1st China Digital Earth Conference (CDEC) was successfully convened in Beijing, China, from November 18 – 20, 2019. The conference was hosted by the International Society for Digital Earth and the Chinese Academy of Sciences.

Since the Chinese Academy of Sciences co-sponsored nineteen ministries and commissions and the related national and international organizations to hold the first International Digital Earth Conference in 1999 in Beijing, digital earth theory and technology have attracted widespread attention and made great progress in the world. It is also playing an increasingly important role on promoting sustainable development. The digital earth is a major strategy for China to develop the digital economy. It is also a highly integrated cross-disciplinary field of space science, information science, and earth science. It is an advanced tool for studying the earth quantitatively, understanding the earth deeply, and exploiting the earth scientifically. With the advent of the era of big data, the rapid advancement of artificial intelligence is promoting the further development of the digital earth. Achieving the United Nations Sustainable Development Goals, implementing the "Belt and Road" initiative, and promoting the strategy of Digital China and Beautiful China all require strong support of digital earth and big data technologies.

In order to lead the development of digital earth, promote the advancement of digital earth science and technology in China, and pioneer the role of big data science and technology in major scientific discoveries and the implementation of national strategies, the Chines National Committee of International Society of Digital Earth decided to convene the China Digital Earth Conferences every two years, and the "First China Digital Earth Conference (CDEC)" was in Beijing in November 2019. The theme of the conference was “Big Earth Data promoting sustainable development”.

The 1st CEDC attracted over 800 participants from universities, institutions,
governmental departments and enterprise. 300 oral presentations and 144 posters were selected by the Technical Program Committee for 52 sessions at the conference. In order that the papers from this conference could be published on a well-recognized platform, the organizers decided to produce referred papers in IOP EES and invited all presenters to contribute to this proceeding. Each submitted paper was refereed by two anonymous reviewers, following the guidelines of the IOP’s Peer Review Policy. The final collection of 55 papers covers focusing topics of “big earth data serving for sustainable development goals (SDGs)” and “cutting-edge technologies and platforms of digital earth science”.

We would like to take this opportunity of the publication of the 1st CEDC Proceedings to express our gratitude to all the participants, especially those who contributed with presentations and manuscripts, for making the 1st CEDC such a successful conference. Our thanks also go to our colleagues for their support and encouragement, particularly to the reviewers who worked very hard in reviewing the papers and provided thoughtful comments on the manuscripts.

Finally, we sincerely hope that the China Digital Earth conferences will prove to be a significant step forward in digital earth science and technology as applied to addressing the persistent challenges related to global sustainable development.

Thank you for your interest and please enjoy the Proceedings.

Chair: GUO, Huadong
Editors: LI Xiaoming, WANG Changlin and HUANG WenJiang
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International Society for Digital Earth
Key Laboratory of Digital Earth Science, Chinese Academy of Sciences
List of Hosts

International Society for Digital Earth
Chinese Academy of Sciences

List of Co-organizers

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The Academy of Digital China (Fujian)
Aerospace Information Research Institute, Chinese Academy of Sciences
Key Laboratory of Digital Earth Science, Chinese Academy of Sciences
State Key Laboratory of Remote Sensing Science
Hainan Key Laboratory of Earth Observation
International Centre on Space Technologies for Natural and Cultural Heritage under the Auspices of UNESCO
Digital Belt and Road Program (DBAR)
CAS-TWAS Centre of Excellence on Space Technology for Disaster Mitigation (SDIM)
Integrated Research on Disaster Risk (IRDR)
Acknowledgement

We would like to express our sincere thanks to the reviewers below, who selected the best quality papers and provided constructive suggestions for improving the submitted papers.

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