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# Security, Privacy, and Anonymity in Computation, Communication, and Storage

13th International Conference, SpaCCS 2020  
Nanjing, China, December 18–20, 2020  
Proceedings


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# Preface

The 13th International Conference on Security, Privacy and Anonymity in Computation, Communication and Storage (SpaCCS 2020) was held in Nanjing, China on December 18–20, 2020, hosted by Nanjing University of Aeronautics and Astronautics and co-organized by Key Lab of Information System Requirement, Jiangsu Computer Society, and the Collaborative Innovation Center of Novel Software Technology and Industrialization.

The previous SpaCCS conferences were held in Atlanta, USA (2019), Melbourne, Australia (2018), Guangzhou, China (2017), Zhangjiajie, China (2016), Helsinki, Finland (2015), Beijing, China (2014), Melbourne, Australia (2013), Liverpool, UK (2012), and Changsha, China (2011). The conference aims to bring together world-class researchers and practitioners to share their research achievements, emerging ideas, and trends in these highly challenging research fields.

This year, the conference received 88 submissions from many different countries. All submissions were reviewed by at least three experts with relevant subject matter expertise. Based on the recommendations of the reviewers and subsequent discussions of the program committee members, 30 papers were selected for oral presentation at the conference and inclusion in this Springer LNCS volume (i.e., an acceptance rate of 34.1%). In addition to the technical presentations, the program included a number of keynote speeches by world-renowned researchers. We would like to thank the keynote speakers for their time and willingness to share their expertise with the conference attendees.

SpaCCS 2020 was only possible because of the support and dedication of a large number of individuals and organizations worldwide. A long list of people volunteered their time and energy to put together the conference and deserve special thanks. First and foremost, we would like to offer our gratitude to the Steering Committee Chairs, Prof. Guojun Wang from Guangzhou University, China and Prof. Gregorio Martínez Pérez from University of Murcia, Spain, for guiding the entire process of the conference. We are also deeply grateful to all the Program Committee members for their time and efforts in reading, commenting, debating, and finally selecting the papers.

We would like to offer our gratitude to the General Chairs, Prof. Zhiqiu Huang, Prof. Zhipeng Cai, Prof. Xuefeng Yan, and Prof. Aniello Castiglione, for their tremendous support and advice in ensuring the success of the conference. Thanks also go to: Program Chairs, Guojun Wang, Bing Chen, Wei Li, and Roberto Di Pietro; Workshop Chair, Ryan Ko; Local Organizing Committee Chairs, Hao Han and Kun Zhu; Publicity Chairs, Xin Li, Alberto Huertas Celdrán, Shuhong Chen, Marco Guazzone, Yan Huang, and Weizhi Meng; and Conference Secretariat, Liming Fang.

It is worth noting that SpaCCS 2020 was held jointly with the 11th International Workshop on Trust, Security and Privacy for Big Data (TrustData 2020), the 10th International Symposium on Trust, Security and Privacy for Emerging Applications (TSP 2020), the 9th International Symposium on Security and Privacy on the Internet

of Things (SPIoT 2020), the 6th International Symposium on Sensor-Cloud Systems (SCS 2020), the 2nd International Workshop on Communication, Computing, Informatics and Security (CCIS 2020), the 1st Workshop on Intelligence and Security in Next Generation Networks (ISNGN 2020), and the 1st International Symposium on Emerging Information Security and Applications (EISA 2020).

Finally, we thank you for contributing to and participating in the SpaCCS 2020 conference and hope you found the conference a stimulating and exciting forum! Hopefully, you also enjoyed the beautiful city of Nanjing, China!

December 2020

Guojun Wang  
Bing Chen  
Wei Li  
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