Preface

On behalf of the International Co-ordination group for Laser Atmospheric Studies (ICLAS) I would like to welcome the readers of the volume containing the scientific Abstracts of the 29th International Laser Radar Conference held in Hefei (China) on 24-28 June 2019.

For 51 years now, the International Laser Radar Conference (ILRC) traditionally remains the world recognized venue where scientists and engineers from all over the world working in the field of the optical remote sensing applied to the atmospheres of the Earth and other planets and to the oceans, meet together to report on new results and developments and obtain a comprehensive and state-of-the-art knowledge at a vast range of topics (technology, devices, applications, education) associated with the laser radar (lidar) technique. The ILRC remains an enjoyable and stimulating meeting at which the international lidar community can get together to discuss and even argue over controversial topics and future directions. A primary focus of the Conference is to encourage young scientists to attend and present their work, ensuring the vitality of the field of laser remote sensing.

Finally, I would like to acknowledge the suppport of all sponsors of the 29th ILRC who facilitated the realisation of this Conference.

Prof. Dr. Alex Papayannis
ICLAS President

The 29th International Laser Radar Conference (ILRC29) was successfully held on June 24-28, 2019 in Hefei, China. The conference has more than 550 registrants from 35 countries/regions. Submitted papers were peer reviewed by the Paper Review Committee and 280 papers were accepted of which 86 papers including 16 invited talks were selected for oral presentations and 194 papers for poster presentations. The papers were organized in 8 sessions:

I. Space Lidars; II .Aerosol; III. Boundary Layer, Pollution, Greenhouse and Trace Gases; IV. Strato-, Mesosphere and Upper Atmosphere; V. Lidar Networks; VI. Wind, Water Vapor and Temperature Measurements, VII New Lidar Technologies and Applications; VIII. Lidar Data AnalysisaAnd Models

We appreciate the work of all the participants and the reviewers in making the conference a great success.

Review Committee: George Tzeremes, Dave Donovan, Weibiao Chen, Anne Grete Straume, Eduardo Landulfo, Kevin Strawbridge, Michael Newchurch, Yingjian Wang, Stavros Solomos, Mark Vaughan, Gelsomina Pappalardo, Jianping Huang, Sophie-Godin Beekmann, Thomas McGee, Makato Abo, Faquan Li, Dimitris Balis, Silke Gross, Igor Veselovskii, Dong Liu, Fabien Gibert, Martin Wirth, Christoph Senff, Fred Moshary, Andreas Behrendt, Oliver Reitebuch, Shoken Ishii, Songhua Wu, Jorg Neumann, Boyan Tatarov, Andreas Fix, Wei Gong, Dengxin Hua, Liang Mei, Adolfo Comeron, Alex Papayannis.

In this proceedings, 172 papers are presented which cover a broad range of topics including:

the initial assessment of the performance of the ESA's space-borne Doppler lidar AEOLUS, the proposed next-generation of the laser remote sensors for NASA's future earth and space science, the airborne lidar measurement for atmospheric composition and meteorological parameters, the latest research on lidar networks such as EARLINET and LALINET, and new lidar technologies and applications. The proceedings show the great progresses made by lidar scientists in every area.

We would like to thanks the 18 enterprise's sponsors (http://www.ilrc29.cn/) and all volunteers who supported this excited event

Let's meet again in the next ILRC in USA.

Co-Chairmen of the 29th ILRC
Prof. Yingjian Wang
Prof. Dong Liu