# PROCEEDINGS OF SPIE

# Remote Sensing of Clouds and the Atmosphere XXI

Adolfo Comerón Evgueni I. Kassianov Klaus Schäfer James W. Jack Richard H. Picard Konradin Weber Editors

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# Introduction

Remote sensing of clouds and atmosphere from ground, air, and space are central to many climate-related and air quality studies with important and far-reaching societal applications. This volume provides an opportunity for readers to review contributions on new advances in a wide variety of topics related to both passive and active remote sensing. The diversity of participants from Europe, North America, Asia, and Australia reflects the international recognition of the need to design modern instrumentation, as well as to advance retrieval techniques, models, and user friendliness. A strong interrelation with the newly created conference "Remote Sensing Technologies and Applications in Urban Environments" exists, where more specific and object-oriented remote sensing results are presented and discussed.

A healthy mixture of senior investigators and talented young researchers is one of the valuable signatures of this conference. In particular, a distinguished keynote speaker (Dr. Ewan O'Connor, Finnish Meteorological Institute, Finland, and University of Reading, UK) offered an interesting lecture on the current state of ground-based active remote sensing of clouds and aerosols, fast-paced advances in data interpretation, and future directions for addressing long-standing challenges. The Best Student Paper Award (Mr. Thomas Chambers, University of Adelaide, Australia) was recognized thanks to the special financial support from the SPIE Organizing Committee.

The meeting was held in Edinburgh, UK, an attractive city with a long and impressive tradition of scientific and cultural life. We would like to express our most sincere thanks to the SPIE Organizing Committee for creating a pleasant atmosphere and to all the participants for making this conference successful. Also, we would like to acknowledge our colleagues from the University of Edinburgh, UK, and especially Dr. James Jack for hosting this conference and for invaluable support during this international forum.

Adolfo Comerón James Jack Evgueni I. Kassianov Klaus Schäfer Richard H. Picard Konradin Weber