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# *Remote Sensing for Agriculture, Ecosystems, and Hydrology XIV*

**Christopher M. U. Neale**
**Antonino Maltese**
*Editors*

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# Introduction

This proceedings volume contains papers presented during the Remote Sensing for Agriculture, Ecosystems, and Hydrology XIV conference. The conference was part of the 19th International Symposium on Remote Sensing sponsored by SPIE. The symposium was held 24-27 September 2012 at the Edinburgh International Conference Centre, Edinburgh, United Kingdom. This conference is structured to provide the rapid dissemination of scientific and technical information in remote sensing applied to agriculture, ecosystems, and hydrology. The conference attracted scientists and professionals from throughout Europe, Africa, Asia, and the Americas. More than 30 oral and 30 poster presentations were given, covering a broad range of topics in the field of remote sensing in environmental science.

The program was organized according to major themes, with 10 sessions distributed over three days on Agriculture: Leaf Area Index, Crop monitoring (2), Vegetation; Ecosystems: Water Bodies; Hydrology: Hydrology, Snow, Energy Balance, Thermal Remote Sensing, Water Content. The poster presentations also had good representation from the three major themes. The presentations described both fundamental and applications-based research activities from modelling, to laboratory and field experiments, as well as operational applications.

We extend our thanks to the session chairs, Francesco Vuolo, of the Institute of Surveying, Remote Sensing and Land Information, University of Natural Resources and Life Sciences (Austria); and John H. Prueger, from the Agricultural Research Service, United States Department of Agriculture.

The oral program also included four invited presentations: John H. Prueger gave a presentation on the subject "Sources of uncertainty for eddy covariance measurements over heterogeneous surfaces in a semi-arid region: impact to remote sensing"; Giuseppe Ciraolo of Università degli Studi di Palermo (Italy) gave a presentation on the subject "Mapping evapotranspiration on vineyards: a comparison between Penman-Monteith and energy balance approaches for operational purposes"; Massimo Menenti of Technische Universiteit Delft (Netherlands) gave a presentation on "Hyperspectral imaging: Do information content, land cover classification, sensitivity analysis and inverse modelling of spectral reflectance lead to the same set of optimal spectral bands?"; Shahid Habib of NASA Goddard Space Flight Center (USA) gave a presentation on "Overview of USAID-World Bank-NASA collaboration to address water management issues in the MENA region".

We also thank the presenters for their efforts and to the participants for their insightful questions and discussions. Special thanks are also due to the host city for

the excellent venue and to the SPIE staff for their support prior to, during, and after the symposium. We look forward to an even more successful and exciting conference in 2013 in Dresden, Germany.

**Christopher M. U. Neale**
**Antonino Maltese**