

## Preface

This book is the outcome of the International Symposium on Remote Sensing and Hydrology 2000 convened by the International Commission on Remote Sensing (ICRS) Bureau under the direction of ICRS President, Albert Rango. The Symposium was held in Santa Fe, New Mexico, USA, 2–7 April 2000. It was the second stand-alone meeting sponsored by ICRS; the first was in 1985: the International Workshop on Hydrologic Applications of Space Technologies, held in Cocoa Beach, Florida, USA, 19–23 August 1985 (see IAHS Publication no. 160\*).

Santa Fe enabled a very productive interchange of the latest results on remote sensing and hydrology. Remote sensing applications in hydrology have progressed considerably since 1985 and many more operational applications were described as well as many attempts to exploit a more varied portion of the electromagnetic spectrum. This volume comprises a selection of the papers that were presented orally or as posters at Santa Fe, and so provides an overview of research in remote sensing and hydrology at the beginning of the 21st century. The 125 papers are grouped in 10 sections as follows:

- Precipitation
- Snow and Ice
- Large Area Experiments
- Evapotranspiration
- Radar Applications
- Microwave Soil Moisture
- Geographic Information Systems
- General Hydrology
- Wetlands
- Hydrological Modelling

The conference opening keynote paper by Dr Eric Barrett on “Satellite Remote Sensing of Precipitation: Progress and Problems” is the first paper in this volume. The final keynote paper was presented by Dr Gert Schultz, “Present and Future Perspectives of Remote Sensing in Hydrology and Water Management”, and is included here in the Hydrological Modelling section. Dr Tom Carroll also presented a keynote paper but unfortunately it has not been possible to include it in this publication.

ICRS frequently arranges workshops and symposia at International Association of Hydrological Sciences (IAHS) and International Union of Geodesy and Geophysics (IUGG) assemblies. They are often co-sponsored by other IAHS Commissions because remote sensing cuts across a variety of hydrology disciplines. However, it was a general consensus at Santa Fe that significant remote sensing and hydrology research will continue at a rapid rate. Both the ICRS Bureau and many of the participants agreed that the remote sensing stand-alone meetings must be more frequent in the future, with a possible target date for the next meeting being 2005.

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\* *Hydrologic Applications of Space Technology* (ed. by A. I. Johnson), IAHS Publ. no. 160 (1985).

The Editors would like to thank the many people who have helped produce this volume. The members of the Technical Programme Committee helped with screening the abstracts and reviewing the papers. Special thanks go to Shelley Shupp who kept track of the abstracts and papers as they were received. Laura O'Hare helped assemble the programme, assured that registration went smoothly, and interacted with the staff at Hotel Loretto who provided excellent support throughout the meeting. The important financial aspects of the meeting were ably handled by Tim Nesbitt and his staff at the College of Agriculture at New Mexico State University. Last but not least, the support of Cate Gardner and Penny Kisby at Wallingford is greatly appreciated.

*The Editors:* Manfred Owe, Kaye Brubaker, Jerrie Ritchie & Albert Rango

The ICRS Bureau arranged to make awards to encourage participants at the International Symposium on Remote Sensing and Hydrology 2000. In total 75 oral papers, and 100 posters were presented at the lively sessions. A hard working and diligent awards committee attended each oral presentation and reviewed every poster. Three awards were given:

*Best student presentation* award was won by Ms Amy Kaleita (co-authored by P. Kumar) for her oral presentation on "Assimilation of Surface Temperature in a Land-Surface Model".

*Best poster presentation* was by Dr Christopher Neal (co-authored by L. Hipps, J. Prueger, W. Kustas, S. Bawazer, and D. Cooper) and entitled "Spatial Mapping of Evapotranspiration and Energy Balance Over Riparian Vegetation Using Airborne Remote Sensing".

*Best oral presentation* was by Dr Anna Oldak (co-authors T. Jackson and J. Pachepsky) for her paper "Soil Moisture Mapping with Passive Microwave Imagery Data and Geostatistical Analysis".