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Preface

This special issue highlights significant work that was presented at the Fourth Symposium on Fire and Forest Meteorology. The symposia series provides biennial forums for atmospheric and fire scientists to introduce and discuss the latest and most relevant studies of fire and its relation to weather and climate. While the symposia were born out of a historic need for accurate fire weather predictions to help suppress wildfires that threatened timber products, the context has broadened dramatically over the years. Now, in addition to wildfire suppression, the world of fire includes assessments and predictions of time, location, behavior, and severity for prescribed fire and smoke management; land–atmosphere processes that control fire rehabilitation; coupled fire–atmosphere physics; and the relation of fire to the global carbon budget and greenhouse warming. Grass, shrublands, and the wildland–urban interface now share the stage with timbered forests. Related meteorology includes weather and climate at all spatial and temporal scales, past, current, and future.

Continuing in the new, broadened definitions of fire, forests, and related meteorology, the Fourth Symposium on Fire and Forest Meteorology included oral sessions on fire behavior, numerical modeling, climate analysis, decision-making tools, predictive services, climate prediction, and fire danger indices. It was organized by the American Meteorological Society and held at the Atlantis Hotel in Reno, Nevada during 13–15 November 2001. The program was developed by Timothy J. Brown and Sue A. Ferguson, co-chairpersons, and by committee members Barbara Bonefeld, Jim Brenner, Mark Finney, Francis M. Fujioka, Scott L. Goodrick, Beth L. Hall, Bryan Lee, Tom McClellan, Rick Ochoa, Brian E. Potter, Carol Rice, and Paul Stokols.

The U.S. Department of Interior and U.S. Department of Agriculture *Joint Fire Science Program* graciously sponsored student participation at the Symposium and publication costs associated with works that addressed any of their four principal purposes: (a) fuels inventory and mapping; (b) evaluation of fuels treatments; (c) scheduling fuels treatments; and (d) monitoring and evaluation for fuels treatments. Additional co-sponsors included the International Association of Wildland Fire, the University of Nevada Desert Research Institute, and the Association of Fire Ecologists. Support for this volume was provided by the *Joint Fire Science Program*.

There were over 100 participants from several countries. Fifty-one papers and 12 posters were presented. Many of these were submitted to the proceedings volume that was published November 2001 by the American Meteorological Society, 45 Beacon Street, Boston, Massachusetts 02108–3693, USA. While all symposium participants were invited to submit their work to this special issue of the *International Journal of Wildland Fire*, only 11 manuscripts contained sufficient detail of background, methods, and results to meet Journal standards. These manuscripts represent some of the Symposium's finest works covering a broad spectrum of interests that include fire behavior, fire severity, fire indices, statistical analyses and prediction. We hope they will be found beneficial as a scientific contribution, and perhaps some will find immediate utility in the world of applications. They represent atmospheric science research at the beginning of 21st Century fire, and a hint as to just how much more there is to do.

We would like to express much gratitude to the authors, reviewers and editors involved in this special issue. A special thank-you to *Joint Fire Science Program*, whose contributions helped deepen the scope of the Symposium and related publications and fostered interest and broadened the understanding of fire among a new generation of scientists as they consider careers in wildland research.

Sue A Ferguson and Timothy J Brown
Guest Editors

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Editor in Chief