Editorial

The IMS is one of over 100 organizations all over the world that have committed to supporting 2013 as a special year for the "Mathematics of Planet Earth," http://mpe2013.org/. This special issue of *Statistical Science* grew out of this commitment. It contains a series of invited expository articles covering an array of topics in the area written by experts in the field. We invited a broad range of experts actively working in the intersection of statistical and earth sciences to contribute. Nearly all our invitations were accepted, leading to papers concerning the following areas in the earth sciences:

1. seismology,
2. meteorology,
3. river networks,
4. wind energy,
5. wildfires,
6. epidemiology,
7. ecology.

The papers show the importance of the development of appropriate stochastic models as well as statistical methods for fitting these models to data. Forecasting is a natural focus in many of the papers, including those on seismology, wind energy and wildfires. Given the size and complexity of many data sets in the earth sciences, computational considerations play an important role in several of the papers. In just nine papers it is not possible to address the full scope of ongoing research at the interface of statistical and earth sciences. We hope this collection of papers provides the reader with a useful overview of the accomplishments to date and the challenges for the future in this area. We particularly hope that researchers looking for new topics to study will find something here to inspire them. We would like to thank the referees for their work, and all contributors for their considerable efforts to write expository articles for this special issue.

Michael Stein & Michel Dekking
Guest Editors

Jon A. Wellner
Editor