

## Guest Editorial



This volume contains eight technical papers contributed by some of the members of SPG North America Chapter. The papers cover wide-ranging topics including modeling (seismic and electromagnetic), inversion, seismic reservoir characterization and monitoring, and rock physics. The paper by Liu and Sen describes some new developments in finite difference modeling of seismic wavefield and outlines some strategies to reduce numerical artifacts in the synthetic seismograms. Mukhopadhyay et al show results from electromagnetic modeling for a suite of realistic geologic models computed by a parallel finite difference based algorithm. Routh outlines practical strategies to quantify uncertainty in earth model estimates from Geophysical data. Mallick et al develop a set of recommendations for carbon sequestration monitoring using synthetic seismic data and seismic inversion. Mukerji et al address the problem of estimation of a low frequency trend used as prior information in earth model estimation. Srinivasan and Sen use multiple datasets to map reservoir facies in a carbonate reservoir using a method based on seismic inversion and novel geostatistical techniques. Sil and Srinivasan use 2D seismic data together with well log information to map fractures using a new method that uses residual normal moveout in seismic data and well log derived fracture attributes. Kumar et al review different methods of estimating hydrate concentration from disparate datasets with examples from different geographic regions.

It has indeed been a pleasure to work with all of these authors. They must all be commended for making contributions of such a high caliber. I thank all the contributors for responding to my comments in a timely fashion. Dr. Dhananjay Kumar (President, SPG North America) and Dr. Abhijit Gangopadhyay (Vice-president, SPG North America) coordinated this effort and assisted in the review process.

We are all looking forward to SPG in Hyderabad.

Sincerely,

**Mrinal K. Sen**

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Advisor, SPG North America and Guest Editor