

Preface

Special Issue: Uncertainty Quantification and Its Applications

Uncertainty quantification (UQ) has been an important research topic in computational sciences and scientific computing for many years. This special issue is based on the UQ workshop held in Jilin University in 2019, which was organized jointly by the Tianyuan Mathematical Center in Northeast China and the UQ activity group of CSIAM.

Established in 2018, the UQ activity group of CSIAM aims at enhancing activity and collaboration on all aspects of the effects of uncertainty on mathematical descriptions of real phenomena. It serves to support interactions among mathematicians, statisticians, engineers and scientists working in the interface of computation, analysis, and probability. The founding chair of the UQ activity group is Prof. Tao Tang from Southern University of Sciences and Technology.

There are 6 papers in this special issue, all of which were selected after a careful and studious peer-review process. Those papers cover various important topics in UQ, for instance, sparse polynomial approximations, Bayesian inverse problems, numerical SPDEs, optimization under uncertainty, to name a few.

We would like to express our sincere thanks to all the authors and the referees for their contributions to this special issue. Special thanks go to the Editors-in-Chief, Prof. Fuquan Fang and Prof. Tao Tang, for providing the opportunity to organize this special issue.

We sincerely hope our readers will like and enjoy all the articles in the special issue.

Special Issue Editor:
Tao Zhou
AMSS, Chinese Academy of Sciences