Mathematical Problems in Engineering

Special Issue on
Recent Theory and Applications on Inverse Problems 2014

Call-for-Papers

The aim of this special issue is to present recent developments both in theoretical and practical areas for the solution of inverse problems which appear in physical and engineering applications. The scope of the issue not only covers a broad range of new studies but also includes attractive review articles on recent investigations.

Finding causes from the knowledge of their effects which actually constitutes the idea of solving inverse problems is necessary for the identifications of important practical applications such as mine detection, medical imaging, nondestructive testing, and geophysical explorations. Therefore, related new results are always of interest in industry and scientific communities. In this issue, we provide an opportunity to the investigators to meet all their readers in a short time with an advantage of open access journal.

The main focus of this issue will be on theoretical and numerical approaches which were introduced especially in recent decades related to the stable and rigorous solutions of inverse and ill-posed problems. Moreover, the special issue welcomes experimental contributions supported with theoretical and/or simulation results. According to fast progress of related areas, potential topics include, but are not limited to:

- Inversions in fundamental and applied sciences
- Regularization theory
- Computational methods for inverse problems
- Imaging techniques
- Data analysis
- Data assimilation
- Biomedical applications
- Nondestructive testing
- Inverse problems in seismology
- Inverse problems in underwater acoustics
- Remote sensing
- Parameter estimation problem
- Inverse design
- Integrated theoretical and experimental studies

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