

Inversion of the Causality

Satoshi HONDA

Department of Applied Physics & Physico-Informatics,
Faculty of Science and Technology,
Keio University

Abstract

Inverse problems are the problems of finding and characterizing unknown parameters and structures by indirect measurements. Those cover wide range of engineering applications, such as computed tomography, non-destructive inspection, non-invasive measurements, shape design, and so on. Since inverse problems in engineering sciences often become severely ill-posed, measurements are essential part of the feasible and validate analysis.

In this workshop, two topics from the fields of process tomography and bio-signal processing are introduced:

- (1) flow field reconstruction with electro-magnetic induction
- (2) estimation of the conduction velocity distribution of human sensory nerve fibers