

Computational Validation of a Particle Filtering Approach to the Solution of the Magnetoencephalography (MEG) Inverse Problem

A. Sorrentino and M. Piana

Università di Genova, Italy

The problem of estimating the parameters of a source dipole from dynamical measurements of the magnetic field in a simulated magnetoencephalography (MEG) experiment is addressed by means of a Bayesian approach computed with a particle filtering technique. In particular, we validate this method in the presence of volume currents and accounting for the neuronal origin of the noise affecting the measurements. The effect of encoding a priori information in the prior density distribution function is also tested.