

Biological imaging systems

Abstract

5 A biological imaging system for determining a spatial distribution of one or more physical properties within a biological structure is provided comprising a data input arranged to receive a plurality of measurements relating to one or more physical fields and a processing device arranged to determine a spatial distribution of one or more physical properties within the biological structure using said plurality of
10 measurements. The processing device forms a discretized full order model of the biological structure, determines a reduced order model of the biological structure and determines optimised values for the reduced order model coefficients to describe a baseline spatial distribution. The processing device also forms a hybrid model comprising the reduced order model coefficients and a set of full order model
15 coefficients which describe a deviation from the baseline spatial distribution, determines optimised values for the reduced and full order model coefficients of the hybrid model and determines the spatial distribution of one or more physical properties within the biological structure using optimised values of the coefficients.

20 [Figure 3]