

MODELLING OF CURRENT SOURCE(S) IN ELECTROCARDIOGRAPHY (ECG) AND MAGNETOCARDIOGRAPHY (MCG)

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Abstract

Electrically or magnetically measured electrophysiologic activity of some organs can be described by equivalent current sources that replace in a model the collective contribution of many electrically active cells. These modelled current sources are introduced in order to simplify the calculation of electric potentials and magnetic fields that are needed in the process of finding the diagnostically relevant information. The equivalent current sources will be presented in form of current multipole expansion and in form of elementary current distribution with special emphasis on their use in ECG and MCG.

Keywords: ECG, MCG, modelling, current source(s), inverse problem