



DEPARTAMENTO DE
ANÁLISIS MATEMÁTICO Y
MATEMÁTICA APLICADA



SEMINARIO DE ANÁLISIS MATEMÁTICO Y MATEMÁTICA APLICADA

Jaques Henry
INRIA Bordeaux

A method for solving the Cauchy problema in cardiac electrophysiology. Generalization to solving unstable forecast problems

The technique of ECGI aims at reconstructing an image of the electric potential on the cardiac surface from the measurement of the potential map on the torso. From the mathematical point of view this is a Cauchy problem known to be unstable. The factorization method developed in cooperation with Angel Ramos provides an equivalent formulation of this problem as a product of two first order problems one being trivial and the other unstable. We propose a method for the numerical solution of this unstable problem.

We propose a generalization of this approach to solve forecasting problems which may have an unstable component.

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