



SEMINARIO DE ANÁLISIS NUMÉRICO Y MODELACIÓN MATEMÁTICA

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Título de la Charla:

***Assessment of two approximation methods for the inverse
problem of electrostatics with a dipole source***

Fecha y Hora:

Martes 12 de Noviembre de 2013, 16:00 Horas.

Lugar:

Sala Seminario, Facultad de Ciencias

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Resumen

The main goal of this talk is to compare two computational efficient models for the localization of brain activity from measurements of the electric potential on the surface of the head. These measurements in the real life can be obtained using electroencephalography. We introduce two approximation methods for the solution of the forward problem in the case of a domain with several regions with different conductivities. These methods correspond to the subtraction approach and the direct approach. For the forward problem, we analyze the approximation methods in two cases: when the dipole source is located far and close from an interface. For the inverse problem, we analyze the results obtained by using the previous methods but we improve the direct approach by incorporating an adaptive strategy guided by an a posteriori error estimator

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