



UNIVERSIDADE DA CORUÑA



## CONFERENCIA:

### "Spatio-temporal modelling of mortality risks using penalized splines"

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#### ABSTRACT:

Analyzing the temporal evolution of the geographical distribution of mortality (or incidence) risks is an important area of research in disease mapping. It might help to better determining the risk factors involved in the studied disease, and to address important epidemiological questions about the stability of the estimated patterns of disease.

Traditionally, risk smoothing is carried out using conditional autoregressive (CAR) models but very recently, penalized splines have also been considered in a spatial context. In this talk, penalized splines for smoothing risks in both the spatial and the temporal dimensions will be applied. The mean squared error (MSE) of the log-risk predictor will be derived allowing for constructing confidence intervals for the risks. To illustrate the procedure mortality data due to brain cancer in continental Spain over the period 1996–2005 are analyzed.

**Lugar:** Aula2.Grados. Facultade de Informática

**Data:** 30 de setembro de 2009

**Hora:** 17:00