

Speaker: Silvia Liverani (Queen Mary University of London)

Date: 04/02/2025 at 13:15 in 1 WN 3.11

Title: Bayesian modelling for spatially misaligned health areal data

Abstract:

The objective of disease mapping is to model data aggregated at the areal level. In some contexts, however, (e.g. residential histories, general practitioner catchment areas) when data is arising from a variety of sources, not necessarily at the same spatial scale, it is possible to specify spatial random effects, or covariate effects, at the areal level, by using a multiple membership principle. In this talk I will investigate the theoretical underpinnings of these application of the multiple membership principle to the CAR prior, in particular with regard to parameterisation, properness and identifiability, and I will present the results of an application of the multiple membership model to diabetes prevalence data in South London, together with strategic implications for public health considerations.