



UC3M-ICMAT Seminar – 2014

## Applied Probability and Statistics

### Small area estimation with application to poverty mapping

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13h00, ICMAT, Aula Gris 1

Demand for timely and reliable disaggregated survey estimates has increased greatly in recent years due to, among other things, their growing use in formulating regional policies and allocation of government funds. In domains or areas with small sample sizes (small areas), traditional estimates based on area-specific survey data (direct estimates) may not provide acceptable precision. In fact, the sample sizes for some areas might be even zero. Thus, it becomes necessary to borrow information across related areas through indirect estimation methods, based on models linking the areas through common parameters and using auxiliary information from a recent census or a current administrative register. This talk will introduce popular methods for estimation in small areas of linear and non-linear parameters, with special emphasis on the estimation of poverty indicators as particular cases of non-linear parameters.

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