

7. **Multi-information and conditional independence**

Proposer: Sofia Massa

Brief description: The aim of the project is to investigate the relation between multi-information and conditional independence. In order to do so, the project will start with the study of the basic notions of information theory necessary to introduce the multi-information and after this, its relation with conditional independence will be analysed.

References:

Lauritzen, S. L. (1996). *Graphical Models*. Oxford University Press, Oxford. (Chapter 3)

Studeny, M. (2005). *Probabilistic Conditional Independence Structures*, Springer. (Chapter 2)

Whittaker, J. (1990). *Graphical Models in Applied Multivariate Statistics*. Wiley, Chicester. (Chapter 4)

Prerequisite courses/knowledge: MS1a *Graphical Models and Inference*

Level of computing required? Not required.