

# Clustering of ego-networks: An application to elderly singles in Italy

Roberta Pappadà<sup>1</sup>

*Based on a joint work with Elvira Pelle, Department of Communication and Economics, University of Modena and Reggio Emilia, Italy*

The analysis of ego-networks has recently attracted increasing interest and finds application in many areas of social sciences. In particular, the identification of ego-networks typologies can be crucial for studying of several aspects of everyday life. Motivated by recent studies in this framework, we propose a distance-based clustering procedure to identify homogeneous groups of ego-networks based on their characteristics, such as size and composition. To this aim, we exploit a dissimilarity measure that accounts for mixed-type variables, in order to extract structurally similar networks. To illustrate our approach, we use data from the latest edition of the “Family and Social Subjects” (FSS) Survey conducted by the Italian National Statistical Institute in 2016. Mining relational information in FSS in a network perspective allows us to derive the ego-network for Italian elderly singles involved in the survey. Results on the analysis of female and male respondents show how the proposed procedure can be used to analyze an ensemble of personal networks. The comparison with existing approaches and some open issues for further research will be discussed.

<sup>1</sup> Department of Economics, Business, Mathematics and Statistics “B. de Finetti”, University of Trieste, Italy