**The Macroeconomics of Age-Varying Epidemics. Giagheddu Papetti (2020)**

The model combines a SIR and Macroeconomic model, incorporate age-specific socio-economic interactions to study the role of demographic factors for the COVID-19 epidemic evolution. The model features two types of agents, young and old, and a contact matrix between and within the groups, and different mortality risk. Goal of the paper is to analyze two policies: consumption tax (economic shutdown), and social distancing (reducing parameter values of the contact matrix).

SIR part: A SIR model compose of two groups of individual: young and old. The transmission function depends on the within and between groups contact.

Economic part: A simple three-sector economy, featuring two types of households (young and old) with no access to savings in the demand block, a profit maximizing competitive firm in the supply block, and a simple government, who collects consumption tax and distribute lump-sum transfer to households.