Assignments $\mathcal{N}^{\underline{o}}$ 5 - PART I

released: 12.01.2012   **due:** 18.01.2012, 14:15h
(solutions can be handed over at the beginning of the lecture)

Task 1: Number of Actors in SAOMs   2 points

Which general assumption in the SAOM is rather implausible, when we deal with too many actors (say more than 1000)?

Task 2: Number of Panels in SAOMs   4 points

(a) Within the examples in the lecture there were only a few panel observations. What conceptual problem might arise, if we apply the same estimation on many (say 15) consecutive panel observations? What workaround would you propose?

(b) You are planing to analyze the development of friendships within a group of university freshmen which are initially mutual strangers. What is a good schedule to collect your data, keeping in mind that each survey is costly?

Task 3: Parameter Interpretation in SAOMs   4 points

Within a longitudinal network analysis on *advice seeking* within a company, it was monitored whether people were senior employees (coded: 2) or not (coded: 1). One out of four employees was a senior employee. Assume the parameters for this *senior* covariate have been estimated as $\beta_{ego} = -0.5$, $\beta_{alter} = 0.7$ and $\beta_{same} = 0.4$, all of them significant. What kind of information is provided by these parameters? What are the *senior*-related contributions to the objective function?