Program of the MAFE Workshop "Sequence Analysis"

March 16-18 2011

- **Morning: 9h30--12h30**
- **Afternoon: 14h00--17h00**
- **Program used**: **Program Stata**
- **Location:** IT lab (3rd floor), INED – Institut National d'Etudes Démographiques, 133 boulevard Davout, 75020 Paris - Metro : Porte de Montreuil (line 9) or Porte de Bagnolet (line 3)
- **Training Team:** Arnaud Bringé (INED) & Elisabeth Morand (INED)

March 16th, Morning

Introduction to sequence analysis,

- What kind of problem what kind of data sets ?
- Different kinds of objects ; states, events, transitions.
- An example

Presentation of the projects

Computer work : Data student's preparation

- Sequence data representations and data preparation for Stata
- An example from MAFE

March 16th, Afternoon

- Descriptive analysis: more frequent states, most common sequences, most common sequences by group (sex,…)
- How to render sequences ? Basic plots

Introduction to the Stata module SQ-Ados, a bundle of Stata routines implementing sequence analysis techniques.

- Stata Example : Presentation
- Sequence analysis Commands
- Sequence analysis graphs
- Descriptive statistics and visualization of state sequence sets

March 17th, Morning

Tools to describe sequences

- Indicators to extract information from a sequence or to summarize a sequence (or a set of sequences): number of states in a sequence, mean time duration in a state, other measures (entropy, complexity…)
- Sub-sequences
- Some problems with sequences

Computer work : Data student's description sequence sets

March 17th, Afternoon
Round table discussion. Presentation of student's analyses

Advanced methods and applications

- Optimal matching : Elements of Theory and example
- Package R Traminer
    - R language basics
    - An exemple of use

March 18th, Morning
Continuation of computer work

March 18th, Afternoon
Presentations, questions and discussion, work with students' own data