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 16\(^{th}\), 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 example of use

March 18th, Morning
Continuation of computer work

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