## Tracing real and apparent time language changes: Linguistic maps and GIS

CHITSUKO FUKUSHIMA University of Niigata Prefecture

Geographical distributions in linguistic maps tell us what linguistic changes occurred in the surveyed area. In Japan, two national geolinguistic surveys were conducted in the past: Language Atlas of Japan (LAJ) mainly concerned about lexical distributions and Grammar Atlas of Japan (GAJ) exclusively concerned grammatical distributions. Recently the third nation-wide geolinguistic survey is being conducted throughout Japan: Field-Research Project for Analyzing the Formation Process of Japanese Dialects (FPJD) concerned about pronunciation, vocabulary and grammar. We also have linguistic atlases of a local area such as Linguistic Alas of Niigata Prefecture (LAN). The informants of these surveys are all elderly. We can compare these linguistic maps conducted more than one generation apart and examine real-time linguistic changes occurring over the generations. In addition, the author has geolinguistic data of young people living in one prefecture, which can also be compared with the data above and examine the apparent time changes. Superimposed distributions using Geographic Information System (GIS) clearly show changes in the past and on-going.

The results to be presented include:

1. The consecutive linguistic changes are traced back using the data from three different generations.

2. The last nation-wide survey confirms the recent, on-going changes because of the rather scarce density of survey locations.