Quantitative Methods and Spatial Analysis for Geographers

PhD course spring 2017

Coordinators:
Professor: Lena Magnusson Turner, Oslo University
Associate professor: John Östh, Uppsala University

Venue:
Department of Social and Economic Geography, Uppsala University
Address: Kyrkogårdsgatan 10, 4th floor (Ekonomikum), Uppsala, Sweden

Schedule:
5 day workshop
Maj 8 (after lunch) – 12 (lunch).

Course description
During the last decades the computing calculating capacities of computers, and the access to abundant and disaggregate sources of statistics has increased tremendously. This new world of Big Data has already changed how quantitative methods are perceived and used in many scientific fields. However, only in the last few years has computers gained so much computational power that Big Data handling is possible also in a Spatial Analysis and GIS setting.

This offers a unique opportunity for geographers to create and test geographical hypotheses build around these new data registers.

This course is designed to close this knowledge gap and aiming to increase the knowledge of advanced methods within quantitative and spatial analysis among doctoral students in human geography.

The course shall give the participants:
• Increased ability to select the quantitative and spatial methods in relation to research questions
• Acquired skills to assemble, collect and manage big data resources so that they facilitate both statistical as well as geographical studies
• Acquire skills to inference output from statistical and spatial analysis tools.

The course will include:
• Lectures and discussions
• Supervised computer labs

The course will focus on a certain field within quantitative and spatial analysis. The four themes are:
• Regression techniques.
• Spatial analysis and GIS.
• Advanced statistical and spatial analytical tools: Survival analysis, clustering techniques, Scripting, etc.
• The presentation of quantitative and spatial analysis output.
Prerequisites
We will use SPSS and ArcGIS during class. Some skills in SPSS and basic knowledge in descriptive statistics, and hypothesis testing (using t-test, correlation analysis) is assumed. Registered students will be offered a possibility to use a terminal server connection for the access of SPSS and ArcMap for self-studies and to solve course-related tasks.

Examination
Students will be graded with pass or fail after the completion of the course. For a pass grade, students are required to:
  • Be present at each of the days of workshop (exceptions valid only after discussions with Lena or John).
  • Actively participate in discussions, labs and other exercises.
  • Write a paper where more advanced quantitative and/or spatial analytical techniques are employed in the analysis.

Contact person:
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Deadline for application: April 1\textsuperscript{st} 2017
The application should include all contact details as well as a short abstract over the applicant’s research project.