Analizy społeczno-ekonomiczne danych geograficznych z wykorzystaniem R (kurs dla początkujących)

26 luty - 2 marca 2018r
Pracownia komputerowa WNGiG nr 22

Prof. Roger Bivand – NHH - Norvegian School of Economics BERGEN

26 luty 2018 (poniedziałek)   16.00 – 18.00
27 luty 2018 (wtorek)   10.00 – 13.00

Introduction to R: getting to know R and RStudio

What is R: programming language, community, ecosystem? What may it be used for in analysing spatial data in a social science setting? What are the basic data structures in R? How can we start writing an R markdown notebook

27 luty 2018 (wtorek)   14.00 – 18.00
28 luty 2018 (środa)   10.00 – 11.00

Help, built-in datasets and examples in R

How to access help in using R? How to use built-in data sets and why? How to write reproducible examples? What can we learn from code examples? How can R help us in furthering reproducible research?

28 luty 2018 (środa)   11.00 – 13.00
                                14.00 – 17.00

Graphics and visualization in R - introduction

How can one choose between the basic graphics functions and devices in R? How can one make simple thematic maps using R? What forms of expression and colour scales are available in R?

28 luty 2018 (środa)   17.00 – 18.00
01 marca 2018 (czwartek)   10.00 – 13.00
                                14.00 – 15.00

Data input, file formats and output

How may we read data into R? From files, including spatial data files, and from online resources? How can we choose between output formats for notebooks and other output media?

01 marca 2018 (czwartek)   15.00 – 18.00
02 marca 2018 (piątek)   10.00 – 12.00
Merging data from different sources

How may we integrate data from different sources? How may we aggregate data? Which data structures are helpful in handling data?

02 marca 2018 (piątek)   12.00 – 13.00
**   14.00 – 18.00**
Data objects with structure (spatial, temporal)

When our data include spatial data objects, in which ways may they be represented in R? May we use R "like a GIS"? How may we structure temporal and spatio-temporal data?

Roger Bivand has been a professor since 1996, after joining the Norwegian School of Economics in 1988 from previous academic positions in Bodø, Norway, and in Poznań, Poland.

He received his PhD degree in geography from the London School of Economics in 1975, after undergraduate study in Geography at the University of Cambridge. He holds a post-doctoral degree (dr habil.) in geography from Adam Mickiewicz University, Poznań, Poland (1982). He first visited the Norwegian School of Economics as a student doing fieldwork in 1970, work which continued in his PhD thesis on regional economic development in Norway.

His current research interests are in developing and supporting the development of open source software for analysing spatial data, including spatial econometrics; his software (written with collaborators) has diffused to many organisations, including FAO (statistical yearbook production).

He has been active in the R community since 1997, and is now an auditor of the R Foundation. He is an editor of the *Journal of Statistical Software, the R Journal, Journal of Geographical Systems, Geographical Analysis and Norsk Geografisk Tidsskrift.* He is often invited to teach external PhD courses in applied spatial data analysis.