UNIWERSYTET IM. ADAMA MICKIEWICZA W POZNANIU

Wydział Nauk Geograficznych i Geologicznych
Instytut Geografii Społeczno-Ekonomicznej i Gospodarki Przestrzennej

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

10 – 14 września 2018r
Pracownia komputerowa WNGiG nr 22

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

10 września 2018 (poniedziałek)   16.00 – 18.00
11 września 2018 (wtorek)   10.00 – 13.00
Graphics and visualization in R - intermediate
How can we condition on continuous or discrete variables to permit visual comparison? How can we combine multiple graphical elements in data visialization?

11 września 2018 (wtorek)   14.00 – 18.00
12 września 2018 (środa)   10.00 – 11.00
Thematic cartography in R
How can we use class intervals and colour palettes to communicate? Rather than "lying with maps", how can we explore the impact of choices made in thematic cartography?

12 września 2018 (środa)   11.00 – 13.00
                                       14.00 – 17.00
Measuring spatial autocorrelation
How may we address the issues raised by the probable presence of spatial autocorrelation in the spatial data that we are using? How can we measure global and local spatial autocorrelation?

12 września 2018 (środa)   17.00 – 18.00
13 września 2018 (czwartek)   10.00 – 13.00
                                       14.00 – 15.00
Fitting spatial regression models
How may we fit regression models to spatial data in the presence of spatial autocorrelation? How can we extend these models to non-Gaussian dependent variables? How can we make predictions using such models?

13 września 2018 (czwartek) **15.00 – 18.00**
14 września 2018 (piątek)   **10.00 – 12.00**

Interpreting spatial regression models

How may we interpret fitted spatial regression models? In what circumstances might we prefer global or local spatial regression models? How should we interpret the coefficients or impacts of spatial regression models?

14 września 2018 (piątek)   **12.00 – 13.00**
               14.00 – 18.00

Fitting multi-level spatial regression models

How may we make use of scale in fitting and interpreting spatial regression models? In what circumstances may we choose to fit multi-level spatial regression models?

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.