RegensburgEconNews

Newsletter 2017-09

CALENDAR:

Departmental Seminar
Harry Haupt (University of Passau)
Opportunities and challenges in modeling spatial components complexly associated urban data

Monday, May 22
16:30–18:00
VG H26

Lectures in Leadership
Andreas Greve (Geschäftsführer nextpractice GmbH)
Arbeits- und Führungskultur im Zeitalter von Digitalisierung und hoher Veränderungsdynamik

Registration required
Monday, May 22
18:00
OTH D001

Power Lunch
Staatsministerin Emilia Müller *(CSU)*

Wednesday, May 24
12:00 – 13:00
VG 2.35

ABSTRACTS:

Departmental Seminar

Harry Haupt

Opportunities and challenges in modeling spatial components in complexly associated urban data

Abstract: The spatial concentration of air pollutants or the spatial distribution of affordable housing - to name but a few - are of general interest, have been in the focus of interest recently, and are subject of an extensive body of legislation in many countries. A plethora of data science methods exists for modeling, monitoring, or forecasting respective target variables such as the maximum local concentration of Nitrogen Dioxide (e.g., EC air quality standards) or urban real estate prices (e.g., rent regulation). With ongoing improvements in data availability, computation power and algorithms, an impressive spectrum of methods produces an even more impressive spectrum of results and interpretation opportunities and hence challenges. In this vein the dawning of ultimate Big Spatial Data challenges such as the increased (spatial outdoor and indoor) tracking of individuals and the matching of physical and virtual trajectories of individuals, cliques, networks, etc., suggests that Pandora's Big Data Science Box is already open.

Who will be able to make sense - understand a priori assumptions, assess reliability, and communicate conclusions - of such amounts of data produced by data? The current state of data science mainly is software and algorithm-driven: data administration and visualization as well as ``learning'', interestingly most frequently applied without knowing about corresponding risk.

By example the presentation tries to reflect some challenges and opportunities for modern statistics in this ever growing field of data science. In regression and smoothing models for analyzing the above examples we observe different a priori beliefs about the role of space: are spatial components part of the error component, are the respective effects a nuisance, or do they belong in the systematic component? A large literature relying on parametric model assumptions (e.g., panel (factor) models for common shocks/cross-section dependence) assume spatial error components, even more treat spatial effects as a nuisance (e.g., atmospheric models, conditional parametric models). Semi- and nonparametric methods avoid strong a priori assumptions to cover for misspecification and recently we have perceived considerable effort in modeling both spatial effects and the spatial dimension of structural effects (e.g., structured additive regression, land-use regression). However, interpretations are generally more complex and neither straightforward to communicate nor to illustrate.

TALKS AND PRESENTATIONS:

Steffen Sebastian will give a talk about "Optimal rent control throughout the world" at "Second World Congress of Comparative Economics"(WCCE) which takes place in St. Petersburg from June 15 – 17.

SAVE THE DATE:

Next **Lectures in Leadership** with Andreas Greve: Monday, May 22, 2017 at 18:00.
Details at http://www.roots-lecture.de/.

We gratefully acknowledge financial support of the Departmental Seminar by the Regensburger Universitätsstiftung Hans Vielberth.

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Wednesday, May 24 – 11 pm

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