



EUROPEAN
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ALLIANCE



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Smart cities for ageing societies – multidisciplinary seminar

The aim of the on-line seminar is to analyze the concept of smart cities in relation to active ageing. The rationale behind is that ageing is the major challenge faced by cities today and onto the future, in particular in combination with the current and possible future pandemics and the climate change. We want to analyze interactions within the ageing city, which is the first step for planning new policies of motivating and enabling elderly people to work and to remain an active part of a community. In order to do it, we offer a series of research seminars, in which students and scientists interested in ageing and smart city can meet and discuss problems they are investigating, show their work, identify potential research problems and listen to the presentations of invited experts.

Schedule for the academic year 2021/2022:

The seminars take place on Wednesdays, from 9:30 till 11:00.

October 20th, 2021

Grzegorz Kula
University of Warsaw

“Smart cities and ageing – problems and solutions. Introduction”

Abstract:

This presentation serves as an introduction to this year's series. We will briefly discuss the evolution of cities, trying to identify their current problems and their sources. The particular focus will be on the population ageing and its consequences for cities and societies. Smart city concept can serve as a solution to some of the problems and the way to reduce negative consequences of ageing. However, in itself it is a source of new problems for the elderly, caused in particular by the digital divide. Overcoming it is a huge challenge, made more difficult by the pandemics.

October 27th, 2021

Piotr Wójcik
University of Warsaw

“Predicting intra-urban well-being from space with non-linear machine learning”

Abstract:

There is a growing need to analyze welfare at an intra-urban level because cities often evince stark divisions. It is therefore important to identify inequalities within them. However, data are hardly available – or very expensive. The purpose of this article is to test whether non-linear machine learning algorithms provide more accurate predictions of intra-city well-being than the linear models. In addition, we aim to check if freely available and easily accessible data from Open Street Map offer an alternative to high-resolution daytime satellite images from Google Maps in accurately predicting well-being on a local level. Inspired by the Local Human Development Index (UNDP, 2012) we construct a well-being index based on three dimensions: health, education, and welfare. Potential predictors of well-being include indicators related to the urbanization rate, access to natural amenities, the transportation system, and access to public transport. Four non-linear machine learning algorithms (support vector regression with polynomial and radial kernel, random forest and xgboost) are compared with the linear LASSO approach for the 18 districts of Warsaw, Poland. In addition, we apply innovative tools of explainable artificial intelligence (XAI) to identify the most important predictors of well-being (measuring model-agnostic feature importance) and to disclose the shape of relationships between well-being and its most important predictors. We conclude that the application of non-linear machine learning algorithms to modelling well-being not only allows us to reach higher predictive accuracy, but also to better identify and explain the impact of its predictors.

November 10th, 2021

Szymon Horosiewicz
Lublin Municipal Office, Strategy and Entrepreneurship Department

“Title to be announced”

November 17th, 2021

To be announced

November 24th, 2021

To be announced

December 1st, 2021

Monica Pia Cecilia Paiella
INPS-Research Center

“Ealy retirement during COVID”

December 8th, 2021

To be announced

December 15th, 2021

To be announced

December 22nd, 2021

Walter Castelnovo
Università dell'Insubria

“Citizens as providers in the cocreation of Smart cities”

Organizational information:

The coordinators of the seminar:

- Chiara Del Bo (UM),
- Grzegorz Kula (UW),
- Christiane Schwieren (HU)

If you are interested in sharing your research or experience with us, send an e-mail to Grzegorz Kula:

gkula@wne.uw.edu.pl

For some meetings the recordings will be available. If you want to see them, send an e-mail to Grzegorz Kula:

gkula@wne.uw.edu.pl

Students from 4EU+ Alliance, who want to treat this seminar as a course, should check the information [here](#).