Julius-Maximilians-
UNIVERSITÄT
WÜRZBURG

EARTH OBSERVATION RESEARCH

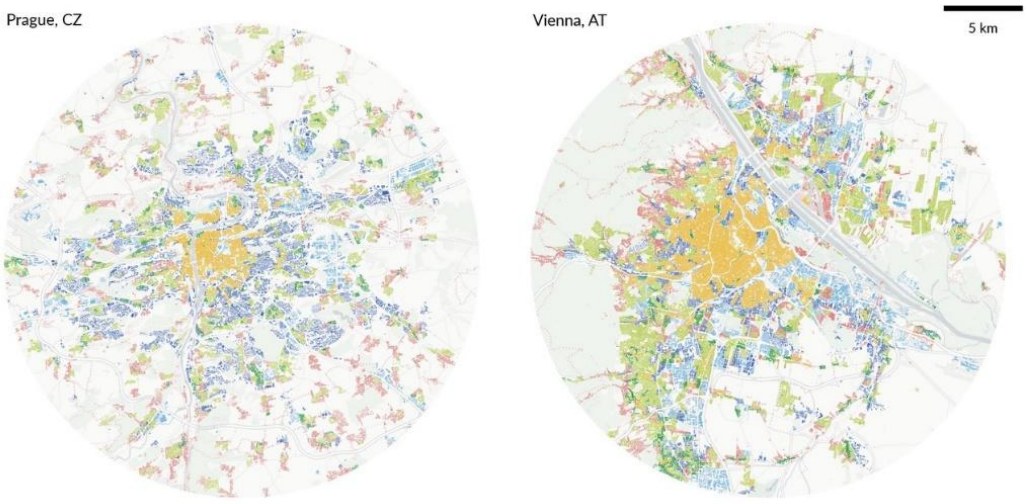
EORC TALK – Talk at the Earth Observation Research Cluster

Martin Fleischmann[1], Krasen Samardzhiev[1], Anna Brázdová[1], Daniela Dančejová[1], Lisa Winkler[2], Eliška Pospěchová[1]

[1]Department of Social Geography and Regional Development, Faculty of Science, Charles University, Prague, Czechia
[2]Chair of Environmental Meteorology, Faculty of Environment and Natural Resources, University of Freiburg, Freiburg, Germany

Understanding the Structure of Space: Urban Morphometrics as a Backbone of Urban Taxonomy

Built environments, formed of a plethora of patterns of building, streets, and plots, have a profound impact on how cities are perceived and function. While various methods exist to classify urban patterns, they often lack a strong theoretical foundation, are not scalable beyond a local level, or sacrifice detail for broader application. This talk outlines the Hierarchical Morphotope Classification (HiMoC), a novel, theory-driven, and computationally scalable method of classification of built form. HiMoC operationalizes the idea of a morphotope – the smallest locality with a distinctive character – using a bespoke regionalization method to delineate contiguous, morphologically distinct localities. These are further organized into a hierarchical taxonomic tree reflecting their dissimilarity based on morphometric profile derived from buildings and streets retrieved from open data, allowing flexible, interpretable classification of built fabric that can be applied beyond a scale of a single country. The resulting classification is a foundation of the Urban Taxonomy, a project that aims to understand the structure of cities, currently covering a subset of countries in Europe, grouping over 170 million building footprints into over 1,000,000 morphotopes, and those into a flexible tree. In this talk, you will learn how the urban taxonomy is generated, what it can tell about the ways we have built our cities, and how you can interact with it yourself.



Wednesday, 03rd of December, 04 p.m. | Seminar room 1 (00.B.04), Earth Observation Research Cluster, John-Skilton-Str. 4a

Contact: sarah.schoenbrodt-stitt@uni-wuerzburg.de