

Built-up structure criticality

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The built-up land represents an important type of overall landscape. In this paper the built-up land structure in the largest cities in the Czech Republic and selected cities in the U.S.A. is analysed using the framework of statistical physics. We calculate the variance of the built-up area and the number variance of built-up landed plots in discs. In both cases the variance as a function of a disc radius follows a power law. The obtained values of power law exponents are comparable through different cities. The study is based on cadastral data from the Czech Republic and building footprints from GIS data in the U.S.A.

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