

---

# Urban fragmentation of pedestrian passageways in Craiova City (Romania)

Ioan-Eustatiu Marinescu\*†<sup>1</sup>

<sup>1</sup>University of Craiova (UCV) – Al. I. Cuza, No. 13, Romania

## Abstract

Walking is a sustainable way of transportation within middle-sized cities. Motor-oriented urban structure fragments urban pedestrian passageways and has a great impact on cities' sustainability. The aim of this paper is to identify priority pedestrian passageways and to assess the effects of implementing barrier-free pedestrian corridors in the city. For this reason we used already developed methods that integrate GIS network analysis, pedestrian mobility planning, natural-based methods for the analysis of urban fragmentation and connectivity inherited from landscape ecology. Urban fragmentation was assessed by comparing pedestrian travel times between different scenarios. Results indicate that the implementation of specific pedestrian passageways improved travel time by almost 8%. The outputs of this research can be of great interest for local authorities, urban and transport planners, showing that small changes in urban configuration could significantly reduce pedestrian travel times.

**Keywords:** urban fragmentation, GIS, pedestrian passageways, network analysis, sustainable transport, Craiova, Romania

---

\*Speaker

†Corresponding author: [marrinescu.ioan@gmail.com](mailto:marrinescu.ioan@gmail.com)