

## **The study of suburban morphology in CITTA**

**Miguel Serra**

CITTA – Research Centre for Territory, Transports and Environment  
Faculty of Engineering, University of Oporto, [alvim.serra@fe.up.pt](mailto:alvim.serra@fe.up.pt)  
Phone/fax numbers: 00 351 225081903 - 00 351 225081486

Contemporary suburban areas present a challenge to urban morphology. In Portugal, as elsewhere, extensive metropolitan urbanization has produced new patterns of urban development with physical and spatial characteristics that are totally unfamiliar to traditional morphological classifications.

Nevertheless, due to the global intensification of the suburbanization process, the study of its spatial and physical dimensions arises not only as a legitimate, but also as an important endeavor. This paper reports the work developed at CITTA regarding the issue of contemporary suburban morphology, using the Oporto Metropolitan Region as study territory. We have studied the evolution of the urban grids from five representative areas of the Oporto urban fringe, throughout the last fifty years, using a diversified methodological approach, combining diachronic cartographic redrawing with space syntax and street pattern analysis. Besides the confirmation of space syntax as a particularly relevant tool for approaching the morphology of peripheral urban areas, our findings provide evidence of different suburban growth patterns with different configurational outcomes (namely clear intelligibility inequalities between study areas), that are explainable by the morphological composition of their urban grids. Building on these results, we propose a set of recommendations for the spatial planning of these territories, aiming at the enhancement of their structural spatial properties.

**Keywords:** Suburban, morphology, Oporto, space syntax, intelligibility.