



SESSION 3 - MODELLING TOOLS
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GEOMETRIA DO MOTORISTA DE TÁXI E SUA EMERGÊNCIA NO PLANO DA CIDADE João Ventura Lopes

ABSTRACT

This paper presents Taxicab Geometry to a generalist audience, frames its historical context within the non-Euclidean geometries, points its practical and educational potential, and introduces the theory of its emergence in the layout of cities. This is a geometry that differs from Euclidean geometry only in the definition of distance (metric) which is illustrated, in the literature, for the movement (taxis eventually) in routes conditioned by orthogonal urban networks. The effects of applying this metric (taxi-metric) are sometimes surprising, and are described, in this paper, through some simple geometric constructions. According to Krause, while Euclidean geometry can be considered a good model for the natural world, *GMT* is a better model for the artificial landscape built by man, namely the planned settlements. At the end of the paper we present some examples of the emergence of taxi-circles in urban reticulated grids idealized in different historical periods. We believe that the conscious or unconscious nature of the use of taxi geometric figures can be discussed based on the empirical notion of distance measured by the time elapsed.