

• Paper / Proposal Title:

Adaptation of the Walkability Index as a first step to study its correlation with the number of fatal pedestrian accidents on urban roads. Case Study: Avenue Hélio Prates, Ceilândia, Brasília, Brazil.

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• Abstract (300 words):

Quantifying the impact of urban form variables on the quality of pedestrian paths is essential for implementing sustainable and safe urban mobility designs. Such analysis allows the accurate identification of the main problems to be addressed, as well as the indirect impact that governmental organizations would cause by improving these paths. In order to quantify the suitability of the urban space for pedestrians, walkability can be expressed as numerical indices. Normally, the methodologies available to calculate these indices account for on-site surveys, application of questionnaires and/or analyses using satellite images/georeferenced resources. However, using these sources of information may not be feasible, especially when the number of path sections to be assessed is large and when there is a situation of restricted pedestrian circulation, as observed in the current context of COVID-19 pandemic, which make it difficult to conduct face-to-face surveys. Thus, illustrated by a case study, the present research aims
to describe adaptations of these methodologies in order to allow the entirely remote calculation of the walkability index. For this, simple tools (Google Maps and Street View) and data collection on official websites will be used. We chose the methodology proposed by the Institute of Transportation and Development Policy-ITDP Brazil, v2.0, to calculate the walkability index and adapted it. Avenue Hélio Prates, in the city of Ceilândia-Federal District (DF), has been chosen as the case study object because it is the urban road with the most accident occurrences involving pedestrians in the State.

This article is the first stage of a broader study, which seeks to quantitatively analyze which characteristics of the urban environment present risks for pedestrians. In special, this paper instigates the debate about applying this methodology to assess a possible correlation between unsatisfactory walkability indices and the number of fatal traffic accidents involving pedestrians.

• Author(s) Biography (200 words each):

**J.C.M. Ozelim** received her B.Sc. in Architecture and Urbanism from the Faculty of Architecture and Urbanism (FAU) of the University of Brasília (UnB), Brazil, in 2016. Currently, she is a Master's student at FAU-UnB, whose research interests are related to Urban Design, Urban Planning and Walkability. She has been an intern in both local architecture design offices as well as federal public agencies.

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**M.F. Gondim** received her B.Sc. in Architecture and Urbanism from the Bennett Methodist Institute, Brazil, in 1980. In 2001 she received her M.Sc. degree from the Federal University of Rio de Janeiro (UFRJ), while in 2014, she received her D.Sc. degree from the Faculty of Architecture and Urbanism (FAU) of the University of Brasília (UnB), Brazil. She has experience in the area of Urban Planning, Urbanism and Transport. In addition to the issues of planning, design, urban and transport research, she is interested in studies of the city's archetypes and mobility in the formation of Western thought. Currently, she is an Adjunct Professor at the Department of Design, Expression and Representation at FAU-UnB.
V.A.S Medeiros received his B.Sc. in Architecture and Urbanism from the Federal University of Rio Grande do Norte (UFRN), Brazil, in 2001. In 2006 he received his D.Sc. degree from the Faculty of Architecture and Urbanism (FAU) of the University of Brasília (UnB), Brazil, with an internship at University College London, UK, at the same year. In 2011-2012, he carried out a post-doctoral research at Instituto Superior Técnico, University of Lisbon, Portugal. He is currently a Research Collaborator at FAU-UnB and Legislative Analyst (Attribution Architect) at the Chamber of Deputies of Brazil. He has experience in Architecture and Urbanism, with an emphasis on Urban Design and Planning, working mainly on the following themes: urban configuration and morphology, spatial syntax, geographic information systems, mobility and urban history. In addition, he investigates the spatial structure of complex buildings (Parliaments).