

Small-world networks have proven to be optimal navigational structures, by insuring an adequate balance between local and global network efficiency. In the particular case of road networks, small-world-oriented research has led to widely diverging results, depending on modelling procedures: while traditional, geometric, road-based models fail to observe small-world properties in road networks, a new street-based modelling approach has obtained opposite results, by observing small-world properties for both named-based and angularity-based street graphs. These results are however hampered by the fact that street-based modelling has so far overlooked road asymmetry. Given this, the present research aims at evaluating the impact of road asymmetry on street network "small-worldness", by comparing symmetric and asymmetric street graphs by means of a structural indicator recently developed in brain network analysis. Results show that taking into account road asymmetry better highlights not only the small-world nature of street networks, but also the exceptional structure of name-based (odonymic) street topologies.