JIDM reviews

First, we wish to thank all reviewers for their valuable comments and suggestions.

Answer: An answer to a question of the reviewer;

Action: An action took based on the reviewer comment.

Reviewer **A**

Reviewer comments	Answers and Actions
Comment 1: Unfortunately, the authors seem to be confusing mobility patterns with just measures extracted from the movements. This was partially evident in the first version of the paper, and is now clear in some answers and actions of the authors in response to the reviewers' comments. Notice that radius of gyration and displacement distance are just measures taken from the movements. The authors themselves sometimes call things such as radius of gyration indicators (see their answer for C1 and C2, of reviewer A, for example) and measures (see the answer for C7). Please, notice that mobility patterns are more elaborate things, such as regularities (patterns) such as the ones found in the distribution of these measures in space, time, and for particular moving objects (such as Twitter users). In addition, there are many other kinds of patterns, such as zig-zag, flock, chasing, sequences of activities usually performed, sequences of (kinds of) places usually visited, etc. Some of the papers that the authors cite in their paper (e.g., Luo et. 2016, Hassan et al 2013) are consistent with these definitions. However, the authors comments, and he paper (even its new version) make confusions. Please, it is necessary to take a careful look in the literature, and try to correct these confusions in your paper, i.e., give proper definitions for patterns, and describe concisely the patterns extracted by the proposed approach, if the paper really goes beyound just extracting measures. For correcting these confusions and making your contributions more clear it is still necessary to carefully review your text, correcting several passages where these confusions arise (too many to describe in detail here).	Answer: We agree with the reviewer comment. In many steps of the article, we were passing the intent to analyze mobility patterns in deep. As stated in the text ("The fourth step extracts statistical properties that express mobility patterns") the objective is to extract mobility metrics/properties that can express some mobility behaviors. In this article, there is intention to provide new methods of calculating mobility metrics. Other works also extract those metrics, as well as extract home and activities centers. The novelty in this work is to relate these metrics with social indicators, extracting statistical correlations from them. Action: The text was revised in order to make clear that we extract mobility metrics, instead of mobility patterns from the data. The title of the article was changed to clearly reflect this intention.
Comment 2: Regarding comment C10 of reviewer A the authors could provide details in supplementary material (e.g., a technical report) and insert a link or citation to easily find that material from your paper.	Action: In this version, we improved the description of how the values of the result tables were obtained, including new

	statistical references about the correlation coefficient and the p-value. Links were added in the footnote in order to direct to the supplementary. In this new version, as required by the reviewer, we included a formal description (algorithm) of the 5 step "Generating the correlation matrix". Unfortunately, there is no more space available in the article to include much more content.
Comment 3: In addition, some of my following comments seem to have been just ignored. Some formal definition, data structures, and algorithm(s) could be useful to fully and properly explain your proposal. For example, you could provide more formal description of the other tasks, specially "5. Generating the correlation matrix". Proper examples, showing each step of your data processing could also help a lot. I suggest the authors to carefully choose examples and the kind of correlation that you investigate. Finally, you could consider about what could be done with extracted correlations, trying to do something of clear practical importance.	Answer: The main parts of the proposed model were already described in the text by algorithms. New formalization of metrics was added in this new version (for example, the user displacement metric). Additionally, we added the algorithm of the fifth step, as highlighted by the reviewer. But, as mentioned in the previous comment, due to the JIDM page limit, there is no more space to add all reviewer requests without affecting the content required by the other reviewers.

Action: The algorithm of the fifth step was added ("Generating the correlation matrix"). New content briefly describing possible applications of the results were also added/improved, especially in the introduction. |