May 8, 2020

Dear Associate Editor/Editor,

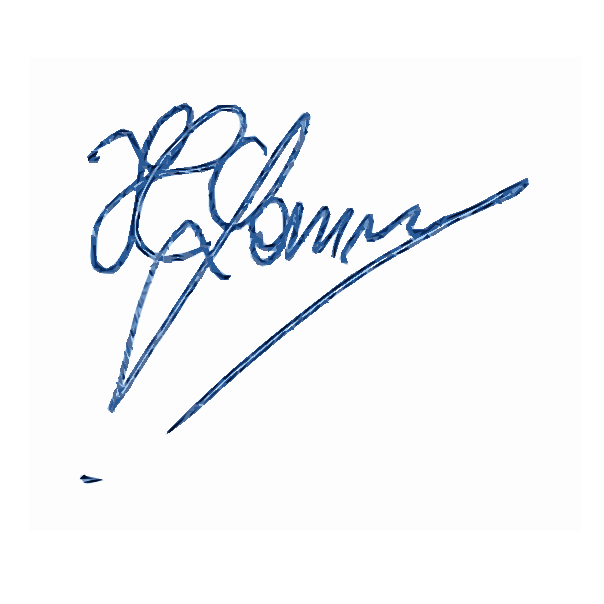
We are submitting the manuscript entitled “**An** **Index for Quantifying Geometric Point Disorder in Geospatial Applications”** to be considered for publication in *Computers & Geosciences*.

Geometric order, such as the curvilinear gridding of an orchard as opposed to the random placement of a natural forest stand, represents an additional dimension of analysis that can be used in e.g., classification problems. Yet, there exists at present few methods for quantifying the geometric orderedness of coordinate data at all, and none respect that special qualities and constraints of geospatial investigations. Though the inherent order of orchards, planned building developments and other anthropogenic structures makes such structures immediately differentiable from natural structures to the human eye, no previous work has allowed quantification of this phenomenon.

The manuscript describes a novel metric and associated algorithm, the Index of Disorder (IoD) for quantifying the geometric disorder present in geospatial point datasets and applies the algorithm to real and synthetic data in order to demonstrate its ability to differentiate ordered and disordered points. We have found that the IoD can indeed distinguish between ordered and disordered points, and that the IoD has potential applications in forestry and urban planning among other fields.

This paper (or closely related research) has not been published or accepted for publication. No other papers using the same data set have been published.

We appreciate the opportunity to publish our work in *Computers & Geosciences*.

Sincerely,

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