Review of: "Product of Distributions Applied to Discrete Differential Geometry"

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REVIEWER's REPORT

On the paper

Product of Distributions Applied to Discrete Differential Geometry

by Vincenzo Nardozza

In this paper the author gives a formula for evaluating the product of step discontinuous and delta functions and using tensor calculus for evaluating the total curvature of a polyhedron vertex where curvature is infinite and total curvature is finite and therefore the Gaussian curvature can be represented by a Dirac delta function. It is obtained the well known deficiency angle formula which gives the discrete curvature of a polyhedron vertex and it is presented an analytic proof of the known results that the Gauss-Bonnet theorem for smooth surfaces and the Descartes deficiency angle theorem for polyhedron, are the same thing.

The results are new, correct and detailed. The paper is original and doesn't contradict to ethical or policy issues, the question posed by authors is new and well defined, the methods used by authors are appropriate and well described, the data are sound and well controlled, the discussion and conclusions are well balanced, the title and abstract convey the obtained results, the writing is acceptable, the paper contains good scientific results.

The paper doesn't require a revision.

Taking the above into consideration, I recommend the paper for publication, in Qeios.

20.07.2023   Alina Alb Lupas