SMARANDACHE PARADOXIST GEOMETRY

by

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Abstract:
This new geometry is important because it generalizes and unites in the same time all together: Euclid, Lobachevsky/Bolyai/Gauss, and Riemann geometries. And separates them as well!
It is based on the first four Euclid's postulates, but the fifth one is replaced so that there exist various straight lines and points exterior to them in such a way that none, one, more, and infinitely many parallels can be drawn through the points in this mixted smarandacheian space.

Key Words: Non-Euclidean Geometry, Euclidean Geometry, Lobacevskyian Geometry, Riemannian Geometry, Smarandache Geometries, Geometrical Model

Introduction:
A new type of geometry has been constructed by F.Smarandache[5] in 1969 simultaneously in a partial euclidean and partial non-euclidean space by a replacement of the Euclid's fifth postulate (axiom of parallels) with the following five-statement proposition:

a) there are at least a straight line and a point exterior to it in this space for which only one line passes through the point and does not intersect the initial line;
[1 parallel]

b) there are at least a straight line and a point exterior to it in this space for which only a finite number of lines $l_1, ..., l_k$ ($k >= 2$) pass through the point and do not intersect the initial line;
[2 or more (in a finite number) parallels]

c) there are at least a straight line and a point exterior to it in this space for which any line that passes through the point intersects the initial line;
[0 parallels]

d) there are at least a straight line and a point exterior to it in this space for which an infinite number of lines that pass through the point (but not all of them) do not intersect the initial line;
[an infinite number of parallels, but not all lines passing throught]

e) there are at least a straight line and a point exterior to it in this space for which any line that passes through the point does not intersect the initial line;
[an infinite number of parallels, all lines passing throught the point]

I have found a partial geometrical model, different from Popescu's [1], by putting together the Riemann sphere (Ellyptic geometry), tangent to the Beltrami disk (Hyperbolic geometry), which is tangent to a plane (Euclidean geometry). But is it any better one?
(because this doesn't satisfy all the above required axioms).

References:

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