Editorial

Glimpses beyond the Two Millennia Old Bondage of the Archimedean Axiom

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Abstract

This is my Editorial Note as Editor-at-Large on this Focus Issue featuring Elemér E. Rosinger's recent work.

Key words: Archimedean Axiom, Non-Archimedean mathematics, algebraic approach.

This focus issue of Prespacetime Journal is devoted to work of Elemér E. Rosinger, who is known for his work in the area of nonlinear partial differential equations, e.g., [1]. Here we present Rosinger's less known work where he focuses to applications in theoretical physics via non-Archimedean mathematics. Non-Archimedean mathematics only struggles for its place in theoretical physics via p-adic analysis. We know, for example, the work of Andrei Khrennikov in this field, e.g., [2]. In the work presented here under the title "Glimpses beyond the Two Millennia Old Bondage of the Archimedean Axiom" Rosinger builds upon purely algebraic approach in non-Archimedean mathematics that differs from that of p-adic approach. He suggests developing further nonstandard reals introduced by A. Robinson and nonstandard analysis [3, 4] and ultrapower fields used in nonstandard analysis and reduced power algebras that are well known in model theory. The suggested direction is quite new for physical applications and deserves deeper exploration.

We applaud the efforts of Elemér Elad Rosinger, Professor Emeritus of Pretoria University.

References

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