

**Zbl 1076.03048**

**Sergeyev, Yaroslav D.** (Sergeev, Ya. D.)

**Arithmetic of infinity.** (English)

Cosenza: Edizioni Orizzonti Meridionali. viii, 104 p. EUR 34.00 (2003). ISBN 88-89064-01-3/pbk

The author attempts to introduce new kinds of number systems that he claims have important applications. First, he reviews some facts about the ordinary number systems and set theory. (Here, there is some confusion about alephs and the continuum hypothesis. For example, he defines aleph-one to be the size of the power set of the set of natural numbers.) The systems he deals with consist of objects which are called extended real numbers, but the descriptions of these objects and their properties are not clear enough to permit any warranted judgments about the assertions made by the author about these systems.

*Elliott Mendelson (Flushing)*

*Keywords* : number systems; infinity; infinitesimals

*Classification* :

- \*03H15 Nonstandard models of arithmetic
- 03-02 Research monographs (mathematical logic)
- 03E10 Ordinal and cardinal arithmetic
- 00A30 Philosophy of mathematics