

EDITOR'S NOTE:
BURGIN AND THE THEORY OF NAMED SETS

Regular readers of the *Abstracts of Papers Presented to the American Mathematical Society* will have noticed the presence over the last eight years of a large number of abstracts by mathematician M.S. Burgin devoted to the theory of named sets and to various applications of the theory to logic and foundations of mathematics, set theory and combinatorics, universal algebra, computer science, information theory, and to various aspects of category theory. Burgin first presented a definition in English of named sets in his joint abstract with algebraist and logician L.A. Kaloujnine (Lev Arkadevich Kaluzhnin) of Kiev State University in the *Abstracts* in (1983); he presented a definition of categories as named sets in *Abstracts* in (1988), and gave a brief category-theoretic sketch of the concept of named sets and of the basic ideas of the theory of named sets in *Abstracts* in (1991). Prior to his development of the theory of named sets, his work was primarily centered on recursion theory and functional analysis, and, with E.S. Burgina, on theory of formal language. Together with philosopher of science V.I. Kuznetsov, he has written extensively in Russian applying the theory of named sets to problems in mathematical psychology, linguistics, information theory, and scientific theory formation.¹

Until now, there have been only the scattered abstracts written by Burgin available to English readers on the theory of named sets and its applications. This paper for the first time offers logicians, category-theorists and philosophers interested in the category-theoretic philosophy of mathematics a sustained account of the theory of named sets and its application to a category-theoretic analysis of the structure and development of mathematical theories. The translation from the Russian is by the authors, with copy-editing assistance from Modern Logic Publishing. Copy editing of the authors' translation was restricted to rendering their work

¹ Two of their most recent books are described briefly on p. 104 of this issue.

into grammatically and idiomatically correct English, and no attempt was made to alter the presentation of concepts or to interpret the content of the paper. In a few cases, an exception was made, and Modern Logic Publishing then undertook fresh translation. The authors' 'named set theory' has been rendered 'theory of named sets' (to distinguish their theory from well-known set theories which bear the names of their principal creators – e.g. Zermelo-Fraenkel set theory, Cantorian set theory, Gödel-von Neumann-Bernays set theory).

REFERENCES.

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- 1991. *Independent exposition of named sets theory*, Abstracts of Papers Presented to the American Mathematical Society 12, 384 (#91T-04-110).
- & Kaloujnine, L.A.. 1983. *Named sets and their categories*. Preliminary report, Abstracts of Papers Presented to the American Mathematical Society 4, 291 (#83T-04-170).