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FUNCTION REPRESENTATION OF THE BOOLEAN-VALUED UNIVERSE

A. E. Gutman and G. A. Losenkov

For an abstract Boolean-valued system, a function analog is proposed that is a model whose elements are functions and the basic logical operations are calculated "pointwise."

The new notion of continuous polyverse is introduced and studied which is a continuous bundle of models of set theory. It is shown that the class of continuous sections of a continuous polyverse is a Boolean-valued system satisfying all basic principles of Boolean-valued analysis and, conversely, every Boolean-valued algebraic system can be represented as the class of sections of a suitable continuous polyverse.

Key words and phrases: Boolean-valued analysis, function representation, Stone space, continuous bundle, continuous section.

Gutman Aleksandr Efimovich
Sobolev Institute of Mathematics,
630090 Novosibirsk, Russia.
E-mail: gutman@math.nsc.ru

Losenkov Georgij Anatol'evich
Novosibirsk State University,
630090 Novosibirsk, Russia.
E-mail: losenkov@math.nsc.ru

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