
Basic quasi-matrix logics

© Yu.V. Ivlev

Lomonosov Moscow State University, Moscow, 119991, Russia

Possibilities of applying matrix logics outside the scope of logics are known. They are relay-contact schemes and abstract automata. In case of applying matrix logics to the description of the abstract automata, dependencies of input automata signals on its output conditions and actions are expressed by means of functions. Quasi-matrix logics makes it possible to express these dependences using quasi-functions. Since a function is a particular case of a quasi-function, there appears a possibility of developing new kinds of automata applicable to a broader range of problems. However, since the decision problem of quasi-matrix logics is not still solved, quasi-matrix logics cannot be used in the considered area. The solution of this problem is given in the article.

Keywords: *matrix logics, quasi-matrix logics, quasi-function, semantic completeness, decidability of calculus*

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Ivlev Yu.V., Dr. Sci. (Philos.), Professor, Faculty of Philosophy, Department of Logics, Professor Emeritus of Lomonosov Moscow State University, Honorary Figure of Russian Higher Education, Lomonosov Moscow State University Award Winner, Member of the Russian Academy of Natural Sciences. e-mail: ivlev.logic@yandex.ru
