From editor

In the world there are hundreds journals for logicians and tens thousand journals for programmers, but there is no journal combining these two sciences.

Now such journal exists.

The logic and programming were developed completely separately from each other up to middle of 60-th.

In 1965 J.Robinson published the work about the resolution rule and the new direction in logic and programming. He also introduced the term "computational logic".

In 1971 E.Codd published the work on programming language Alpha, based on logic. He introduced the term "relational calculus". This term differs from the term "predicate calculus" by presentation of functions as relations. Relations are simpler for computer processing than functions.

In 1973 A.Colmerauer published the work on the programming language Prolog based on logical clauses. He introduced the term "logic programming".

Then all three directions in programming were developed intensively, but almost separately from each other. All of them were developing by using classic logic, but classic logic continued developing separately from them.

The relational logic removes all these separations. It units classic logic and each of the three directions of programming in one science.

Laws of logic, as well as laws of other natural sciences, are objective. In the nature there is only one logic. We must remove from classic logic everything that contradicts laws of programming. We also must remove from programming everything that contradicts basic laws of classic logic.

So the classic set theory contradicts to existing experience of programming. It follows from this experience, that empty set is not unique, that every natural number is not any set, that an n-tuple is not any set too and so on.

So the classic set theory is unnatural but it can be consistent.

And nevertheless it is very doubtful - theory with transitive sets can not be consistent.

Sets must be non-transitive, i.e.

$$X_1 \in X_2 \wedge X_2 \in X_3 \rightarrow X_1 \notin X_3$$

where X_1, X_2 and X_3 are arbitrary sets.

It means, any set (X_3) and its member (X_2) have no common member (X_1).

One hundred years ago D. Gilbert introduced 23 problems of mathematics for the decision. Follow to him we must introduce new problems in new century. One of these problems is inconsistency of classic set theory. In the next issue of "Relational logic" we shall introduce one more problem. We plan to introduce a new problem in each issue of the journal.

We like our readers to introduce such problems too. The best problems will be marked by the special premium.

The problem of inconsistency of classic set theory is very important. The decision of this problem will allow to liberate the whole army of scientists worked at the classic set theory and they can work at really important problems of logic. This decision will also allow to save huge means spent for nothing because of investigation of the false theory.

Especially we like problems that allow to save means and labor of thousands investigators.

Doubtless one of such problem is the artificial intelligence. We believe the new century will be the age of artificial intelligence. This problem is closely connected to logic and programming. A part of the problem is the automatic theorem prover, too.

We look for like-minded readers and call them to unite with us and with our journal. Write us please!