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Abstracts of Short Communications and Posters

Section:

14. Mathematical Aspects of Computer Science

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$NP = P$
There exists the polynomial Algorithm solving the Problem of CNF executing. The next Reasons and Assertions are used:
1) The bipartitive graph of a given CNF consists of the vertices corresponding to the variables $x_1, x_2, \ldots, x_n$, the vertices corresponding to the disjunctions $y_1, y_2, \ldots, y_m$. If the disjunction y_i contains the variable x_j, it has the edge (y_i, x_j) with the sign $+$, if it contains their negation, this edge has got the sign $-$. There is a CNF equivalent to the given one in that each variable is included into 1 or 2 disjunctions and its negation is included into 1 negation. There are two cycles with the change of signs: each vertex x_j in such a cycle is incident with the edges $(x_j, y_{i'})$ and $(x_j, y_{i''})$ with different signs. There is the evaluation that is smaller than m^2 and is connected with these cycles. There is the consequence of Reductions $\mathrm{CNF}_1 \to \mathrm{CNF}_2 \to \ldots \to \mathrm{CNF}_n$ with decrease of the aforementioned evaluation.