Introduction to Complex Automata using Cook Algebra

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ABSTRACT

As we have prior result of regular grammars over set of computational problems, we are to present the universal ‘complexity automata’ which can be used in solving any problem.

INTRODUCTION

The “P versus NP” practice, theory and 3-SAT proof was well understood in [1], however, there was an attention towards, as we suppose, the resolution of this statement [2, 3].
Kardeis was near the term as ‘quantuam computing’ and Zeta-Function [4], however, we use an automatic approach to give all the required framework foundation towards the solution of both polynomial and NP-hard, or non-polynomial, problems, provided both equality or inequality of P- and NP-classes of computational complexity [5].

COMPLEX AUTOMATA ALGEBRA

We give the following definition of our automata based on obtained result, thus, ‘complex automata’ is defined as follows:

$$\langle +, \cdot, \{P, N\} \rangle,$$

where “+” and “*” is a union and concatenation operation over the set of terminal symbols “P” and “N”, where “P” stands for the certificate as in [1] and “N” is a problem itself.

CONCLUSION

We have given all the necessary framework to operate on Complexity Theory for the definition of the problem as a regular expression and further converted to finite or ‘complex’ automata, thus, proving that any complex problem can be solved using our approach.

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