

## **Randomization and nondeterminism are comparable for ordered read-once branching programs**

Ablayev F.

*Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia*

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### **Abstract**

© Springer-Verlag Berlin Heidelberg 1997. In [3] we exhibited a simple boolean functions  $f_n$  in  $n$  variables such that:  $f_n$  can be computed by polynomial size randomized ordered read-once branching program with one sided small error; any nondeterministic ordered read-once branching program that computes  $f_n$  has exponential size. In this paper we present a simple boolean function  $g_n$  in  $n$  variables such that:  $g_n$  can be computed by polynomial size nondeterministic ordered read-once branching program; any two-sided error randomized ordered read-once branching program that computes  $f_n$  has exponential size. These mean that BPP and NP are incomparable in the context of ordered read-once branching program.

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