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Karlis Podins* (podins@latnet.lv), Jekabpils 2-7, Riga, LV1003, Latvia. *Universally Accepting Nondeterministic Automata.*

Universally accepting nondeterministic automata (\forall NFA) is the dual model to nondeterministic automata(NFA). We show how to reason about \forall NFA by reasoning about NFA for complementary language. We prove that \forall NFA and NFA have the same state-complexity when simulated by deterministic finite automata, namely to simulate a m -state \forall NFA with deterministic automaton with $f(m)$ states, $f(m) = O(2^m)$ (for unary alphabet $f(m) = O(e^{\sqrt{m \ln m}})$) and there exist languages such that $f(m) = \Omega(2^m)$ (for unary alphabet $f(m) = \Omega(e^{\sqrt{m \ln m}})$). We show that the set of languages accepted by m -state NFA and the set of languages accepted by m -state \forall NFA are not equal, but have the same cardinal number. (Received February 28, 2007)