



UNIVERSITÀ
DEGLI STUDI
DI PALERMO

Dipartimento di Matematica e Informatica

Words
and
Automata
Research
Group

Seminar Announcement

Universal Lyndon Words

Gabriele Fici, University of Palermo

Thursday 15th May 2014, 3 p.m.

Room 7, Via Archirafi 34, 90123 Palermo

A word w over an alphabet Σ is a Lyndon word if there exists an order defined on Σ for which w is lexicographically smaller than all of its conjugates. A universal Lyndon word of degree n is a word over an n -letter alphabet that has length $n!$ and such that all of its conjugates are Lyndon words. We show that universal Lyndon words exist of any degree and exhibit combinatorial properties of these words. We then define particular prefix codes, that we call Hamiltonian lex-codes, and show that every Hamiltonian lex-code is in bijection with the set of the shortest unrepeated prefixes of the conjugates of a universal Lyndon word. This allows us to give an algorithm for constructing all the universal Lyndon words of any degree.

For further information:

Gabriele Fici

T 091 238 91130

gabriele.fici@math.unipa.it

All interested people, in particular students, are invited to participate