

Seminar Announcement

Jumping pure grammars

Alexander Meduna (Brno University of Technology)

Tuesday 17th July 2018, 3 p.m.

Room 7, Via Archirafi 34, 90123 Palermo

As opposed to classical grammars, pure grammars use alphabets that are not divided into the alphabet of terminals and the alphabet of nonterminals. This talk introduces and studies *jumping pure grammars*, which are conceptualized just like pure grammars except that during the applications of their productions, they can jump over symbols in either direction within the rewritten strings. More precisely, a jumping pure grammar rewrites a string z according to a rule $x \rightarrow y$ in such a way that it selects an occurrence of x in z , erases it, and inserts y anywhere in the rewritten string, so this insertion may occur at a different position than the erasure of x .

The talk concentrates its attention on investigating the generative power of jumping pure grammars. More specifically, it compares this power with that of classical pure grammars while distinguishing between their versions with and without erasing productions. Apart from sequential versions, the talk makes an analogical study in terms of parallel versions of jumping pure grammars. It demonstrates that any version of these grammars with erasing productions is stronger than the same version without them. Furthermore, it shows that most of the language families generated by the grammars mentioned above are pairwise incomparable—that is, any two families are not subfamilies of each other and, simultaneously, they are not disjoint.

In its conclusion, the talk formulates several open problems and suggests future investigation areas.

For further information:

Gabriele Fici

T 091 238 91130

gabriele.fici@unipa.it

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