



CSGT 2014, June 9–13 2014, Teplice nad Bečvou

49th Czech-Slovak Conference on Graph Theory 2014

Department of Applied Mathematics

VŠB – Technical University Ostrava, 17. listopadu 15, Ostrava–Poruba

GENERALIZED THUE SEQUENCES

MARTINA MOCKOVČIAKOVÁ

A sequence is *Thue* or *nonrepetitive* if it does not contain a repetition of any length. In this talk we introduce a generalization of this notion. A k -subsequence of a sequence S is a subsequence containing every k -th term of S . A k -*Thue sequence* is a sequence in which every ℓ -subsequence, for $1 \leq \ell \leq k$, is also Thue.

We show that four symbols are enough to build a 2-Thue sequence of any length. Moreover, we prove that four symbols suffice also for circular 2-Thue sequences, with three exceptions. As a corollary, the tight bounds for total Thue coloring of paths and cycles are obtained.