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The Curtis-Hedlund-Lyndon Theorem for generalized sliding block codes between Ott-Tomforde-Willis shift spaces

The generalized sliding blocks were proposed as an alternative definition for sliding block codes between shift spaces. Such a definition coincides with the usual definition in the case that shift space is defined over a finite alphabet, but they encompass a larger class of maps when the alphabet is infinite. In any case, generalized sliding block codes are maps with local rules.

The Ott-Tomforde-Willis shift spaces were proposed as a compactification of one-sided shift spaces over infinite alphabets, taken with an eye towards C*-algebra applications. Roughly, an Ott-Tomforde-Willis shift space is a type of "multi-point compactification" that is obtained by adding finite sequences to the original displacement space.

In this talk we will prove Curtis-Hedlund-Lyndon theorem for Ott-Tomforde-Willis shift spaces, finding sufficient and necessary conditions under which the class of generalized sliding block codes coincides with the class of continuous shift-commuting maps.

This is a joint work with D. Gonçalves (UFSC-Brazil) and C. Starling (uOttawa-Canada).