ALPEN-ADRIA UNIVERSITÄT KLAGENFURT

INVITATION TO A GUEST LECTURE

On Lifts of Strictly Ergodic Subshifts by Permutative Sliding Block Codes

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Chaired by David Rackl | Department of Mathematics

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HS 2

ABSTRACT

Permutative sliding block codes — in the sense of Hedlund — give rise to finite-to-one extensions of subshifts. We provide criteria under which minimality and unique ergodicity are preserved by this lifting procedure and illustrate the findings by means of some natural example families. As a specific example, we consider the sliding block code which maps the Thue–Morse subshift to the period-doubling subshift and show that it also lifts the Fibonacci subshift to a strictly ergodic system, which is a two-to-one extension of Fibonacci. Further examples of minimal lifts include the Tribonacci, silver mean, noble means, and period-multiplying substitutions. Moreover, Toeplitz subshifts can be used to demonstrate certain interesting phenomena, such as the existence of lifts of strictly ergodic subshifts which are minimal but fail to be uniquely ergodic.

We hope to see you there!