

Specification properties and intrinsic ergodicity for subshifts

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Workshop on Symbolic Dynamics of Finitely Presented Groups
December 18th, 2014
Santiago, Chile

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- In fact, any mixing SFT has (strong) specification for some N

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 - Implies dense periodic points, positive entropy, and intrinsic ergodicity (unique measure μ of maximal entropy, i.e. $h(\mu) = h^{top}(X)$)
- However, specification is incredibly restrictive!

(Almost) weak specification

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 - Example: all β -shifts with constant mistake function $g(n) = 1$

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- Answer: Neither one does! (independently answered by Kwietniak-Oprocha-Rams and Pavlov)

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- “Phase transition” somewhere btwn. $g = 1$ and $g = 4$
- Open question: does low enough $g(n)$ preclude multiple MMEs completely?

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 - (No restrictions on infinite runs)

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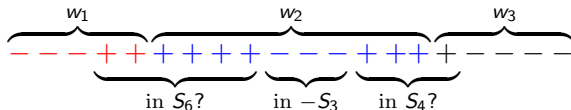
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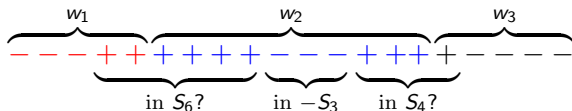
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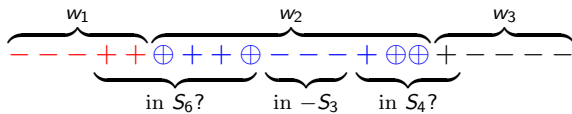
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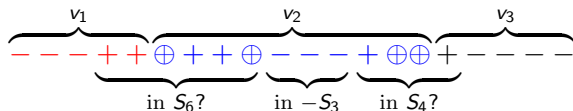
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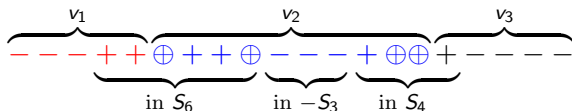
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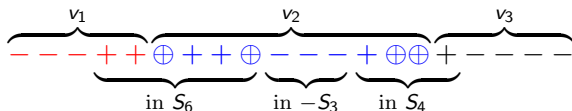
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- At most 4 changes made to any w_i (2 on each end)

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 - Then, uniform Bernoulli measures on $\{1, \dots, N\}$ and $\{-1, \dots, -N\}$ are MMEs
- To show this, need to know: how small can we make sets S_n ?

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 - $B_2(w) = \{v : v, w \text{ differ on at most 2 letters}\}$
- $\forall w, |B_2(w)| \geq \binom{n}{2}$, so $|S_n| \geq N^n \frac{C}{n^2}$

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DIVERGES

Thanks for listening!