The authors generalize the well-known formula for topological entropy of a subshift of finite type (topological Markov chain) to the case of a symbolic system with a general set of prohibited words $S$.

The topological entropy is $h = -\log |z_0|$, where $z_0$ is the smallest-in-modulus zero of the function

$$1 - |A|z + \sum_{j=2}^{\infty} z^j \sum_{n=1}^{j-1} (-1)^{n-1} |P_S(j, n)|,$$

where $|\cdot|$ denotes the cardinality of a finite set, $A$ is the set of symbols, and $P_S(j, n)$ is the set of words of length $j$ built from $n$ interchained prohibited words (for example, if $a_1a_2a_1a_3$ and $a_1a_3a_4a_1a_2$ are prohibited, then $a_1a_2a_1a_3a_4a_1a_2 \in P_S(7, 2)$).

The authors also prove a theorem measuring the change of topological entropy caused by adding an extra word to $S$.

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