Surface entropies of subshifts of finite type

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Résumé

Subshifts of finite type (SFTs) enjoy a deep link with computability theory. This link was uncovered by the characterization of entropies of SFTs as the right recursively enumerable numbers by Hochman and Meyerovitch. In this talk, we will focus on the related notion of surface entropy introduced in Dennis Pace's thesis: if the number of nxn patterns of the subshift grows as e^{hn^2+2Cn}, then h is the classical topological entropy while C is the surface entropy. In particular, we will prove that the surface entropies of 2D SFTs are exactly the $Π0_3$*real numbers of the arithmetical hierarchy of real numbers*.

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