

► ASSAF RINOT, *Higher Souslin trees constructions*.

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Three classical results of Jensen reads as follows:

1. $\text{GCH} + \diamond_{E_{\kappa^+}}$ implies the existence of a κ^+ -Souslin tree, for a regular cardinal κ ;
2. $\text{GCH} + \square_{\kappa}$ implies the existence of a κ^+ -Souslin tree, for a singular cardinal κ ;
3. \square_{κ}^* is equivalent to the existence of a special κ^+ -Aronszajn tree, for every κ .

In this talk, we shall introduce a combinatorial principle that implies the existence of Souslin trees over successor cardinals, and which is general enough to follow from either of the hypotheses of items 1 and 2 above. We then study its validity.

We shall also outline the proof of [1] that a special \aleph_{ω_1+1} -Aronszajn tree may (consistently, from large cardinals) be introduced by a forcing that shoots a club to \aleph_2 .

[1] ASSAF RINOT, *A cofinality-preserving small forcing may introduce a special Aron-szajn tree*, **Archive for Mathematical Logic**, vol. 48 (2009), no. 8, pp. 817–823.

[2] ——— *A unified approach to higher souslin trees constructions*, work in progress.