

Abstract

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The objective of this talk is to discuss a question derived from a construction made in [2]. That is, under which conditions one can construct a regular space with character \mathfrak{b} such that $(X, \tau) \rightarrow (top \ \omega+1)_{\omega}^1$, and $(X, \tau) \dashrightarrow (top \ \omega^2+1)_{\omega}^1$. An original construction of such space was made in this same paper, using \diamond . I will present a construction, made in a joint work with L. Junqueira and G. Fernandes [1], that can be done without CH . We also discuss a new development, relating the existence of such spaces with the existence of a Hajnal-Mat e graph.

References

- [1] CARVALHO, R. FERNANDES, G. AND JUNQUEIRA, L. - *Partitions of topological spaces and a new club-like principle*, to appear at PAMS, 2023
- [2] KOMJ ATH, P. AND WEISS, W. - *Partitioning topological spaces into countably many pieces*, Proceedings of the American Mathematical Society, 101, 4, 767–770, 1987