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*Combinatorics of ideals — selectivity versus density*

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**Abstract:** This note is devoted to combinatorial properties of ideals on the set of natural numbers. By a result of Mathias, two such properties, selectivity and density, in the case of definable ideals, exclude each other. The purpose of this note is to measure the “distance” between them with the help of ultrafilter topologies of Louveau.

**Keywords:** ideals on natural numbers; ultrafilter topology

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#### REFERENCES

- [1] Bartoszyński T., Judah H., *Set Theory. On the Structure of the Real Line*, A K Peters, Wellesley, MA, 1995.
- [2] Grigorieff S., *Combinatorics on ideals and forcing*, Ann. Math. Logic **3** (1971), 363–394.
- [3] Kechris A.S., *Classical Descriptive Set Theory*, Graduate Texts in Mathematics, 156, Springer, New York, 1995.
- [4] Laflamme C., *Filter games and combinatorial properties of winning strategies*, Contemp. Math. **192** (1996), 51–67.
- [5] Louveau A., *Une méthode topologique pour l'étude de la propriété de Ramsey*, Israel J. Math. **23** (1976), 97–116.
- [6] Mathias A.R.D., *Happy families*, Ann. Math. Logic **12** (1977), no. 1, 59–111.
- [7] Thümmel E., *Ramsey theorems and topological dynamics*, PhD. Thesis, Charles University of Prague, 1996.
- [8] Todorčević S., *Topics in Topology*, Lecture Notes in Mathematics, 1652, Springer, Berlin, 1997.
- [9] Todorčević S., *Oscillations of sets of integers*, Adv. in Appl. Math. **20** (1998), no. 2, 220–252.
- [10] Todorčević S., *Introduction to Ramsey Spaces*, Annals of Mathematics Studies, 174, Princeton University Press, Princeton, 2010.