There are several well-known problems regarding the existence of special almost disjoint (a.d.) families of subsets of ω that have certain strong combinatorial properties. These combinatorial properties take the form of some close relationship between the a.d. family $\mathscr{A}$ and $\mathcal{I}(\mathscr{A})$, the ideal generated by $\mathscr{A}$. Examples of such special a.d. families include *completely separable a.d. families*, $\aleph_0$*-m.a.d. families*, and *weakly tight families*.

Shelah introduced a new technique for constructing a.d. families in 2010, and used it in [1] to show that a completely separable a.d. family exists if $\mathfrak{c} < \aleph_\omega$. Several people have built-on his technique, resulting in a flexible method that can be used to treat several special a.d. families. My aim will be to present Shelah's basic technique and some of its applications, emphasizing the key role played by the analysis of certain cardinals invariants in all the constructions. There is much room for discovering new applications of Shelah's method, and so many open questions will be mentioned.

Time permitting, I will try to present the following constructions: the construction of a completely separable a.d. family from $\mathfrak{s} \leq \mathfrak{a}$ from [3]; the result from [1] that a completely separable separable a.d. family exists if $\mathfrak{c} < \aleph_\omega$; the existence of a weakly tight family from $\mathfrak{s} \leq \mathfrak{b}$ proved in [2]; the result from [4] that a weakly tight family exists if $\mathfrak{c} < \aleph_\omega$; and the construction of a Laflamme family under various hypotheses also from [4].

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