Spread approximations for forbidden intersection problems

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In this talk, we'll discuss a general method to approach Turán-type problems, which complements the existing Delta-system method and junta approximation method. We refer to it as 'spread approximations method', and it is based on the notion of r-spread families and builds on the recent breakthrough result of Alweiss, Lovett, Wu and Zhang for the Erdős–Rado 'Sunflower Conjecture'.

We will present some of its applications to the questions about intersecting families of sets and permutations.