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Splitting Polyomino Ideals

Computing the graded Betti numbers of homogeneous ideals in polynomial rings is central to numerous open problems. We often restrict to families of ideals generated by combinatorial objects in order to gain additional insight. In this talk, we investigate polyomino tilings to generate monomial ideals. We apply the theory of splittings to obtain a recursive formula for the graded Betti numbers of these ideals. This is joint work with Serena Werbowesky.