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*Non-crossing and non-nesting bases for the coordinate ring of the Grassmannian.*

The classical subject of standard monomial theory is a way of constructing explicit bases for the coordinate rings of Grassmannians and related spaces. I'll explain a new alternative construction of a "non-crossing basis", due to myself, Pavlo Pylyavsky and Kyle Petersen. This basis is related to LeClerc and Zelvinsky's weakly separated sets and is well suited for computations with cluster algebras and total positivity. (Received February 09, 2009)