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Reducing the size and number of linear programs in a dynamic Groebner basis algorithm.

Joint work with J.Perry.

The dynamic algorithm to compute a Gröbner basis is nearly twenty years old, yet it seems to have arrived stillborn; aside from two initial publications, there have been no published followups. One reason for this may be that, at first glance, the added overhead seems to outweigh the benefit; the algorithm must solve many linear programs with many linear constraints. This talk describes two methods that reduce both the size and number of these linear programs.