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Title: Gale–Shapley–Roth algorithms and a course enrollment problem

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Abstract: We review the Gale–Shapley–Roth algorithm for stable marriages and college admission, which has many uses and variants and was worth the 2012 Nobel prize in economics. Its outcome is a pairing between two sets of agents such that, if X, A belong to each set and are not matched to each other, then either X prefers his partner to A , or A prefers her partner to X . We propose an iterated version to produce college course rosters, which must satisfy several constraints on available slots, time conflicts, student scores and preferences.

This is a joint work with Aline Gubitoso.