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Combinatorial reciprocity for non-intersecting paths

Combinatorial reciprocity is when the counting function for one enumeration problem, evaluated at negative inputs, yields the counting function for another, related problem. We prove a combinatorial reciprocity result for the enumeration of non-intersecting paths in a linearly growing sequence of acyclic planar networks. We explain two applications of this theorem: reciprocity for fans of bounded Dyck paths, and reciprocity for Schur function evaluations with repeated values. This talk is based on joint work with Gjergji Zaimi.