

Large Multi-Path Matroids

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Abstract. We introduce multi-path matroids, a new class of transversal matroids that is both minor-closed and duality-closed; furthermore, the Tutte polynomial of any multi-path matroid can be computed in polynomial time. This class of matroids, which properly contains the class of lattice path matroids introduced by Bonin, de Mier, and Noy, includes all whirls, swirls, and their generalizations. This is joint work with Omer Giménez of Universitat Politècnica de Catalunya.