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Duality theorems for graphs, codes, and matroids.

Wei's Duality Theorem states a simple, elegant, and fundamental dual property for linear codes. This talk demonstrates how this theorem can be generalised successively to give two very general duality theorems for a broad class of combinatorial objects. Corollary results including new and simple, yet fundamental, duality theorems for graphs and matroids; a new result on matroid designs; and the poset-code generalisation of Wei's Duality Theorem.