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Tutte polynomials and split matroids

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Surprisingly many interesting invariants of graphs, hyperplane arrangments and matroids are valuative. The two most prominent examples of valuative matroid invariants are the Tutte polynomial and the \mathcal{G} -invariant. The relevance of the \mathcal{G} -invariant steams from its universal property that any other valuative invariant can be obtained as a specialization. Nevertheless, the most intense studied invariant of matroids is clearly the Tutte polynomial as it respects deletion and contraction. An interesting question therefore is on which minor and duality closed classes of matroids is the Tutte polynomial universal. In my talk I will give answer to this question in which the well structured class of (elementary) split matroids plays a prominent role.

This talk is based on joint work with Luis Ferroni.

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