

2024 Workshop on (Mostly) Matroids

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Is There Hope?

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We know the excluded minors for the matroids representable over $\text{GF}(2)$, $\text{GF}(3)$ and $\text{GF}(4)$. What are the chances of explicitly finding the excluded minors for matroids representable over $\text{GF}(5)$?

We have an excellent understanding of the classes that arise when we consider matroids representable over $\text{GF}(2)$ and other fields. We also have an algebraic understanding of the classes that arise for matroids representable over $\text{GF}(3)$ and other fields. What are the chances of describing the classes for $\text{GF}(4)$ and other fields?

Recent explicit descriptions of the excluded minors for the class of 2-regular matroids and 3-regular matroids (almost) can be thought of as baby steps towards the resolution of the questions posed above. But let's be real, is there genuine hope?

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