

## Enumeration of extensions of the cycle matroid of a complete graph

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The growth of the number of matroids on  $n$  elements is known to grow doubly exponentially in  $n$ . This growth can be studied by considering extensions and coextensions, so it is natural to ask which classes of matroids have a doubly exponential number of extensions or coextensions and which do not. In this talk, we will investigate the class of matroids that are a single extension of the cycle matroid of a complete graph on  $n + 1$  vertices. I will show that this class is, surprisingly, doubly exponential in  $n$ .

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