## MATROID POWER SERIES

## BODO LASS

ABSTRACT. Ordinary and exponential generating functions have always been the favorite tool in enumerative combinatorics. Generating functions for set functions offer the same advantages and increase the range of applications to graph polynomials. In fact, exponential generating functions operate on set functions, and it is even possible to work with derivatives of set functions. Combinatorial techniques such as the Möbius inversion are then replaced by standard algebraic operations. We introduce matroid power series in order to adapt this approach to matroid polynomials and other aspects of matroid theory.

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