

Complete hypergeometric L-functions

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I am currently studying hypergeometric motives with Fernando Rodriguez-Villegas and Mark Watkins. One of our emphases is determining associated L-functions and numerically checking their conjectured functional equations. At present the L-functions are completely known except for factors coming from wildly ramified primes. These bad factors are much harder to determine than the good factors, but computations nonetheless suggest considerable regularity. The talk will give an overview of the current state of the project, with an emphasis on the bad factors. General techniques will be illustrated with examples that show the limits of what can be presently computed.