

**Zeta and  $L$ -functions in function field arithmetic**

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Abstract: This talk deals with analytic functions interpolating zeta and  $L$ -values, fundamental in number theory. In the years 1980 David Goss introduced a class of zeta and  $L$ -values in function field arithmetic. They can be associated to eg. representations of the absolute Galois group of a global field of positive characteristic through the torsion of a Drinfeld module, and generalize the variants of zeta values previously introduced by Carlitz in the years 1930. Along with this class of zeta values, Goss also introduced some sort of recipe to construct analytic interpolation. In this talk we are going to discuss another way to interpolate these values, by constructing certain rigid analytic functions over curves defined over finite fields and we will explain how certain arithmetic properties emerge from the study of these functions