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Local zeta functions and p -adic string amplitudes

In this talk we explain some connections between p -adic local zeta functions and p -adic Koba-Nielsen type string amplitudes. The convergence of these amplitudes is related with the convergence of Igusa-type integrals depending on several complex parameters. Hence, the string amplitudes are "essentially" local zeta functions, and thus, they are algebraic-geometric objects that can be studied over several ground fields, for instance \mathbb{R} , \mathbb{C} , \mathbb{Q}_p , $\mathbb{C}((t))$, and that on each of these fields these objects have similar mathematical properties.