

p-adic N-point open strings amplitudes

Ángela Rocío Fuquen Tibatá, CINVESTAV, México

ABSTRACT

We study in a rigorous mathematical way p-adic quantum field theories whose N-point amplitudes are the expectation of products of vertex operators. We show that this type of amplitudes admits a series expansion where each term is an Igusa's local zeta function. The lowest term in this series is a regularized version of the p-adic open Koba-Nielsen string amplitude.