

International Conference on String Field Theory and String Perturbation Theory



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Open, closed and heterotic strings at one loop: Elliptic multiple zeta values versus modular graph forms

Wednesday, 8 May 2019 12:00 (55 minutes)

This talk is dedicated to one-loop amplitudes in open, closed and heterotic string theories and aims to illustrate connections between their low-energy expansions. For open strings, the coefficients in the one-loop α' -expansion are elliptic multiple zeta values which arise from moduli-space integrals over punctured cylinders. Closed and heterotic strings in turn introduce moduli-space integrals over punctured tori which evaluate to so-called modular graph forms. These modular forms are observed to exhibit striking parallels to the elliptic multiple zeta values in open-string expansions which should generalize the single-valued projection of multiple zeta values known from genus zero.

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Session Classification: Talks