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2d ’t Hooft anomaly, orbifolding, and boundary states

Wednesday, 4 December 2019 16:50 (15 minutes)

We study anomalies for a discrete internal global symmetry G in two-dimensional conformal field theories based on twisted torus partition functions. The ‘t Hooft anomaly of G can be seen from the noncommutativity of two symmetry lines inserted along the nontrivial circles of two-torus and we propose a criterion to detect the ‘t Hooft anomaly, which agrees with the truncated modular S-matrix approach as well as the cohomology classification. The obstruction for orbifolding has been recently interpreted as a mixed anomaly between G and large diffeomorphisms. We clarify the relations among ‘t Hooft anomaly-free, orbifolding condition and invariant boundary state condition, focusing on Wess-Zumino-Witten models.

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Session Classification: Short talks