

VII International Conference “Models in Quantum Field Theory”
(MQFT-2022)



Contribution ID: 136

Type: **not specified**

Anomaly inflow for local boundary conditions

Monday, 10 October 2022 16:45 (25 minutes)

Anomaly inflow is a relation between anomalies in quantum field theory on a manifold and anomalies in effective theories on the boundary. Relevant examples of the anomalies are the parity anomaly (the η invariant) and the global chiral anomaly (the Index of a Dirac operator). We study the η -invariant of a Dirac operator on a manifold with boundary subject to local boundary conditions with the help of heat kernel methods. In even dimensions, we relate this invariant to η -invariants of a boundary Dirac operator, while in odd dimension, it is expressed through the index of boundary operators. We stress the necessity of the strong ellipticity condition for the applicability of our methods. We show that the Witten–Yonekura boundary conditions are not strongly elliptic, though they are very close to strongly elliptic ones. This talk is based on a joint work with A. V. Ivanov (POMI), arXiv:2208.00476.

Presenter: VASSILEVICH, Dmitri (UFABC)

Session Classification: Section A

Track Classification: Section A: Mathematical methods in QFT