Contribution ID: **59** Type: **not specified**

Vacuum polarization around cosmic strings in anti-de Sitter spacetime

Thursday, 15 June 2023 15:00 (15 minutes)

Local properties of scalar, fermionic and electromagnetic vacua are discussed in the presence of cosmic string type topological defects. As important characteristics of the vacuum state we consider the expectation values of the squared fields, of the energy-momentum tensor and of the current density in the case of charged fields. The topological contributions are extracted from the vacuum expectation values and their asymptotic behavior is studied near the core of the defect and at large distances. The effects of the presence of branes are discussed and applications are described in braneworld models of the Randall-Sundrum type.

Primary author: Prof. SAHARIAN, Aram (Professor, Head of the Chair of Theoretical Physics, Yerevan State University)

Presenter: Prof. SAHARIAN, Aram (Professor, Head of the Chair of Theoretical Physics, Yerevan State University)

Session Classification: Thursday afternoon session