Contribution ID: **169** Type: **Parallel**

Quantum computing zeta-regularized vacuum expectation values

Saturday 22 June 2019 11:15 (30 minutes)

The zeta-regularization allows to establish a
connection between Feynman's path
integral and Fourier integral operator
zeta-functions. This fact can be utilized to perform a
regularization of vacuum expectation values in quantum field theories.
In this talk, we will describe the concept of this
zeta-regularization, give a simple example and demonstrate
that quantum computing can be employed to numerically evaluate
zeta-regulated vacuum expectation values.

Author: Dr JANSEN, Karl (NIC, DESY)

Co-author: Dr HARTUNG, Tobias (King's College)

Presenter: Dr JANSEN, Karl (NIC, DESY)

Session Classification: Plenary

Track Classification: Theoretical Developments