



Contribution ID: 171

Type: **Oral presentation**

Searching for Yang-Lee zeros in $O(N)$ models

Wednesday, 28 July 2021 05:30 (15 minutes)

Near the second order phase transition point, QCD with two flavours of massless quarks can be approximated by an $O(4)$ model, where a symmetry breaking external field H can be added to play the role of quark mass. The Lee-Yang theorem states that the equation of state in this model has a branch cut along the imaginary H axis for $|\text{Im}[H]| > H_c$, where H_c indicates a second order critical point. This point, known as Lee-Yang edge singularity, is of importance to the thermodynamics of the system. We report here on ongoing work to determine the location of H_c via complex Langevin simulations.

Primary authors: ATTANASIO, Felipe (Universität Heidelberg); PAWLOWSKI, Jan M. (University of Heidelberg)

Presenter: ATTANASIO, Felipe (Universität Heidelberg)

Session Classification: Theoretical developments and applications beyond particle physics

Track Classification: Theoretical developments and applications beyond particle physics