Contribution ID: **13** Type: **not specified**

Light scalar and first steps towards heavy axialvector tetraquarks in the BSE/DSE framework

Saturday 2 February 2019 17:00 (30 minutes)

During the last years numerous new states in the charmonium spectrum around threshold have been found. However, they still lack satisfactory explanation. Prominent examples are the XYZ states. In some cases the properties suggest at a minimum four quarks; the so-called tetraquarks. To describe these bound states of the strong force, mainly lattice QCD and potential models have thus far been used. We develop an approach that allows for the calculation of four quark states with continuum QCD methods, namely the BSEs and DSEs. In recent years it has already successfully been applied to the full meson and baryon sector, as well as light scalar tetraquarks.
We present a new method for solving the tetraquark BSE and show its application to light scalars as well as first results in the heavy axialvector (charmonium) sector.

Primary author: WALLBOTT, Paul C.

Co-authors: Prof. FISCHER, Christian S. (Justus-Liebig Universität Gießen); Dr EICHMANN, Gernot (Instituto Superior Tecnico, Universidade de Lisboa)

Presenter: WALLBOTT, Paul C.