Gemeinsame Veranstaltung von
Humboldt-Universität zu Berlin, Institut für Physik
(Theorie der Elementarteilchen / Computerorientierte Theoretische Physik)
DESY, Zeuthen

SEMINAR
Feldtheorie auf dem Gitter und Phänomenologie der Elementarteilchen

Am Dienstag, dem **5 Dezember, um 15:30 Uhr s.t.** spricht

Dr. **Benoit Blossier**

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zum Thema

Towards a numerical solution of the "1/2 vs. 3/2" puzzle

Abstract

Precision tests of the Standard Model and search of a new physics need a deep understanding of the current theory because systematic errors on fundamental parameters are now dominated by the theoretical ones. As an illustration one can bound V_{cb} by measuring the $B \to D^{**}$ P wave decay rates: experimentally it is found that $\Gamma(B \to D(1/2)l\nu) >> \Gamma(B \to D(3/2)l\nu)$ whereas the opposite hierarchy is theoretically expected, leading to the "1/2 vs. 3/2" puzzle. In the HQET framework these decays are parameterised by the Isgur-Wise functions $\tau_{1/2}$ and $\tau_{3/2}$. In this talk, after a review on the theoretical expectations and the experimental measurements of $B \to D^{**}$, I will present the method to compute on the lattice $\tau_{1/2}$ and $\tau_{3/2}$ at zero recoil.

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