

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 Montag, dem **19. Mai**, um **15:30 Uhr s.t.** spricht

Dr. Elisabetta Pallante

University of Groningen

zum Thema

The Physics of Many Flavours

Abstract

Non abelian gauge theories like the theory of strong interactions describe an incredibly rich variety of phenomena, driven by the interplay of confinement and asymptotic freedom. Experiments give us a tangible evidence of this richness, with the finding of new phases of matter like the quark-gluon plasma phase. LHC might let us discover, not without a certain degree of surprise, that new regimes of strongly interacting matter play among the main characters in what we call the physics beyond the Standard Model.

All of this gives a practical reason for a purely theoretical question: What happens when we increase the matter content of a non-abelian gauge theory? Is the theory entering a conformal phase before the loss of asymptotic freedom? During this talk I will give part of the answer, based on very recent works. Using a lot of the physics of phase transitions, I will explore the way we might draw the complete picture.

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