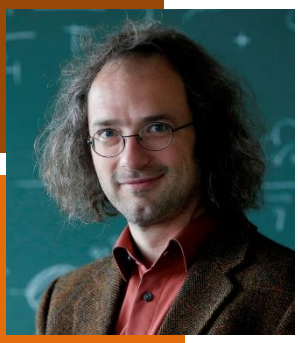
PHYSIKALISCHES KOLLOQUIUM

des Fachbereichs Physik
der Johann Wolfgang Goethe-Universität Frankfurt

Mittwoch, den 05.07.2023, 16 Uhr c.t.
Großer Hörsaal, Raum _0.111,
Max-von-Laue-Str. 1



Prof. Christian Fischer

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Quarks & co: dynamical mass generation and restoration at finite temperature and density

The physics of the strong interaction (QCD) of quarks and gluons has profound implications for the world we live in. Almost all the mass of visible matter is generated dynamically be the strong interaction and the loss of this mechanism at large temperatures and densities is important for the physics of the early universe and dense stellar objects such as neutron stars.

In this colloquium talk we discuss the interplay of dynamical mass generation from the strong and electroweak interactions and explore the consequences for phase transitions of the strong interaction at finite temperature and chemical potential. Using a functional approach to QCD we illustrate the search for a critical end point and outline possible strategies to explore the cold and dense region of the QCD phase diagram.

Die Dozentinnen und Dozenten der Physik

local host: Prof. Dr. Dirk Rischke, drischke@itp.uni-frankfurt.de