



# PHYSIKALISCHES KOLLOQUIUM

des Fachbereichs Physik der Johann Wolfgang-Goethe-Universität  
Frankfurt, gemeinsam veranstaltet mit dem CRC-TR 211

Mittwoch, den 30.06.2021, 16 Uhr c.t.

Virtuell via ZOOM: [LINK](#)

(Zoom ID: 977 6078 1390, Passwort: 001024)



**Dr. Laura Tolos**

ICE Barcelona

## *"Strange Mesons in Nuclei and Neutron Stars"*

Understanding the dynamics of hadrons with strangeness has received a lot attention over the past decades in connection with the study of exotic atoms, the analysis of strangeness production in particle and nuclear research facilities, and the investigation of different strange phases in the interior of neutron stars. One venue of interest in the field of strangeness is the study of strange mesons ( $K$  and  $\bar{K}$ ), and their dynamics with nucleons and nuclear matter.

In this talk I will comment on the  $\bar{K}N$  interaction, that is governed by the presence of the  $\Lambda(1405)$ , and discuss the formation of exotic bound states, such as  $\bar{K}NN$ . Moreover, I will analyze the properties of  $K$  and  $\bar{K}$  in dense nuclear matter, paying a special attention to kaonic atoms, strangeness production in nuclear collisions and the possible formation of a kaon condensed phase in neutron stars.

Die Dozenten der Physik

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