dipartimento di TRIESTE fisica

UNIVERSITÀ DEGLI STUDI DI TRIESTE

INFN TRIESTE Istituto Nazionale di Fisica Nucleare Sezione di Trieste

SEMINAR

Tagging B flavor at the intensity frontier -- toward the search for new physics at Belle II.

Measurements associated with the weak interactions of quarks, and especially with charge-parity (CP) violation in bottom (B) mesons, offer promising opportunities to search for non-standard model physics at the intensity frontier. With a new, state-of-the-art detector and an expected data set 50 times that of its predecessor, the Belle II experiment will play a leading role in this endeavor. After an introduction to CP violation studies at Belle II, I focus on the development, validation, and optimization of a novel machine learning-based algorithm for the identification of the quark content of neutral B mesons (flavor tagging) -- an essential capability for the Belle II program. Finally, physics-reach projections on a few key decay channels are discussed.

Speaker: Dr. Fernando Abudinen (MPI Munich)

Wednesday, October 24, 2.30pm – Aula C, Dipartimento di Fisica