Physics Division Colloquium

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Opportunities and Challenges in Low-Energy Nuclear Theory

This talk presents some of the recent progress in exploiting scale separations and computational methods that scale well with mass number for the description of atomic nuclei. It focuses on (i) coupled-cluster computations of charge radii in exotic isotopes of neon and magnesium based on potentials from chiral effective field theory (EFT), (ii) interpretations of Coriolis forces as gauge potentials and Berry phases in EFT descriptions of odd-mass deformed nuclei, and (iii) opportunities in quantum computing of atomic nuclei.

To meet with the speaker (remotely), please contact the host Kévin Fossez.