**SSNET 2024** 



ID de Contribution: 12

Type: Non spécifié

## Beyond-mean-field approach to shape coexistence phenomena in neutron-rich nuclei

jeudi 7 novembre 2024 12:20 (20 minutes)

Shape coexistence dominates the exotic structure and dynamics revealed by neutron-rich nuclei in the A=100 mass region. Sudden variations in the structural evolution with spin, excitation energy, and particle number, the occurrence of isomeric states, their decays and the exotic features of the daughter states represent various facets of shape coexistence and mixing. We addressed different open questions concerning shape coexistence phenomena in odd-odd and even-even nuclei including the nature of low-lying isomeric states and their allowed and first-forbidden  $\beta$  decay.

Aiming to a simultaneous description of the multifaceted impact of shape coexistence and mixing we investigated the structure and dynamics of neutron-rich Rb, Sr, Y, and Zr nuclei in the frame of the beyond-meanfield complex Excited Vampir variational model using the effective interaction derived from a nuclear matter G matrix based on the charge-dependent Bonn CD potential in a large model space. Recent results on the comprehensive treatment of the exotic behavior manifested in the structure and dynamics of these nuclei will be presented and compared to available data.

Author: PETROVICI, Alexandrina (IFIN-HH, Magurele, Romania) Orateur: PETROVICI, Alexandrina (IFIN-HH, Magurele, Romania) Classification de Session: Session 14