Contribution ID: 72

Type: not specified

## Evolution and coexistence of nuclear shapes in transitional regions

Wednesday 13 July 2022 09:00 (30 minutes)

The phenomena of shape phase transitions and shape coexistence are prominent aspects of nuclear structure. Experiments using radioactive-ion beams have allowed to study these phenomena in thus far unknown nuclei, and stimulate timely systematic and reliable theoretical predictions. This presentation will review recent theoretical studies on the shapes and the related collective excitations in transitional, neutron-rich nuclei within the framework of the interacting boson model that is formulated microscopically by using the mean-field methods. Topics to be discussed during the presentation include the shape phase transitions, shape coexistence, and octupole correlations in the mass A=70-100 nuclei, and the inclusion of the particle-boson coupling for the odd-even and odd-odd systems, which further points to a simultaneous description of the low-lying structures, and the single- and double-beta decay properties of the transitional nuclei in a wide mass region.

**Presenter:** NOMURA, Kosuke (University of Zagreb)

Session Classification: Symmetries of interacting boson and/or fermion systems

Track Classification: Symmetries of interacting boson and/or fermion systems