

# RCNP NUCLEAR PHYSICS THEORY SEMINAR

Title	First-forbidden vector modes in neutron-rich nuclei
Speaker	Kenichi Yoshida (Kyoto University)
Date/Time	Friday, September 8, 2017, at 13:00
Place	Lecture room 1, 6th floor, RCNP

## Abstract:

Response of atomic nuclei to external fields reveals the occurrence of a variety of modes of excitation, and the quest for unique modes of excitation in exotic nuclei has been a major subject. The low-energy dipole mode or the pygmy dipole resonance (PDR) has been a central issue for its collectivity and the correlation with the neutron skin thickness. The isovector (IV) dipole modes can be excited by the charge-exchange reactions as well. Then, the investigation of the IV modes not only in the  $T_z = 0$  but  $T_z = 1$  and  $-1$  excitations could lead us to a deeper understanding of the character of the excitation modes, such as the isospin character of the PDR. In this seminar, I will discuss the possibility of the emergence of the low-lying charge-exchange dipole modes uniquely in neutron-rich nuclei based on nuclear density functional theory.

Contact persons: Masahiro ISAKA