

# Reimei Workshop “Intersection of Nuclear Structure and Direct Reaction”

Tokai Culture Center, February 28 - March 1, 2024

## Program

Each talk includes 5-minutes discussions.

February 28

9:00-9:50 Registration

Chair: Y. Utsuno (JAEA)

9:50-10:00 Y. Utsuno (JAEA)

Opening

10:00-10:30 A. Obertelli (TU Darmstadt)

Shadowing in one-nucleon knockout reactions

10:30-11:00 M. L. Cortes (RIKEN)

From SEASTAR to HYPATIA: Probing nuclear structure via direct reactions at the RIBF with an upgraded gamma-ray spectrometer

Break (11:00-11:30)

Chair: K. Wimmer (GSI)

11:30-12:00 T. Uesaka (RIKEN)

TBA

12:00-12:30 K. Yoshida (JAEA)

Studies on nucleon and alpha knockout reaction theory

Lunch (12:30-13:30)

Chair: P. Garrett (Guelph)

13:30-14:00 M. Kimura (RIKEN)

Shape of nuclei and knockout reactions

14:00-14:30 M. Enciu (TU Darmstadt)

Extended  $p_{3/2}$  neutron orbital and the N=32 shell closure in  $^{52}\text{Ca}$

14:30-15:00 K. Washiyama (Tsukuba)

Large-amplitude collective dynamics in low-lying states of transitional nuclei with collective Hamiltonian method

Break (15:00-15:30)

Chair: F. Flavigny (LPC Caen)

15:30-16:00 K. Wimmer (GSI)

Probing isospin symmetry by direct reactions

16:00-16:30 A. Kumar (Tsukuba)

Shell model studies in nuclear beta decay

16:30-17:00 S. Ogawa (Kyushu)

Theoretical study on the dineutron knockout reaction

February 29

Chair: T. Uesaka (RIKEN)

9:30-10:00 T. Nakatsukasa (Tsukuba)  
Nuclear pairing and alpha particle formation

10:00-10:30 W. Horiuchi (Osaka Metropolitan)  
Nuclear cluster structure studied with proton scattering

Break (10:30-11:00)

Chair: T. Nakatsukasa (Tsukuba)

11:00-11:30 T. Otsuka (RIKEN)  
Prevailing triaxiality and its experimental investigations

11:30-12:00 N. Hinohara (Tsukuba)  
Pairing rotation and pairing properties in ground states

12:00-12:30 J. Smallcombe (JAEA)  
Experimental studies of nuclear shapes with electron and gamma-spectroscopy

Lunch (12:30-13:30)

Chair: T. Otsuka (RIKEN)

13:30-14:00 P. Garrett (Guelph)  
Single- and multi-nucleon transfer studies of collective and shape-coexisting structures

14:00-14:30 Y. Chazono (RIKEN)  
Reaction model for correlated two-nucleon pairs knockout

14:30-15:00 Y. Tsunoda (CNS)  
Nuclear structure studied by shell model calculations using two-nucleon amplitudes

Pre-banquet excursion & Dinner at Mito

March 1

Chair: R. Orlandi (JAEA)

- 9:30-10:00 F. Flavigny (LPC Caen)  
Search for intruder states in  $^{83}\text{Ge}$  by one-neutron knockout with HICARI@RIBF
- 10:00-10:30 T. Edagawa (RCNP)  
Effective polarization and gamma-ray angular distribution in alpha knockout reactions

Break (10:30-11:00)

Chair: M. L. Cortes (RIKEN)

- 11:00-11:30 T. Nakamura (Tokyo Tech)  
Halo and deformation in  $^{31}\text{Ne}$  revealed by Coulomb and nuclear breakup reactions
- 11:30-12:00 T. Pohl (RIKEN)  
Reaction mechanisms in one-nucleon removal direct reactions at intermediate energies
- 12:00-12:30 A. Stefanescu (TU Darmstadt)  
STRASSE: an advanced detection setup for nuclear structure studies

Lunch (12:30-13:30)

Chair: K. Yoshida (JAEA)

- 13:30-14:00 T. Kawabata (Osaka)  
Search for alpha condensed states in  $^{20}\text{Ne}$  and  $^{24}\text{Mg}$
- 14:00-14:30 T. Furumoto (YNU)  
Construction of density-dependent alpha-nucleon interaction and its application to alpha-nucleus elastic scattering

Break (14:30-15:00)

Chair: A. Obertelli (TU Darmstadt)

- 15:00-15:30 K. Nishio (JAEA)  
Fission study of actinides using multinucleon transfer reactions
- 15:30-16:00 R. Orlandi (JAEA)  
Multi-nucleon transfer reactions and nuclear structure studies in the heavy actinide region
- 16:00-16:10 A. Obertelli (TU Darmstadt)  
Closing