

Programfor

Chengdu-CUSTIPEN workshop on theory of rare nuclear decays

May 13-18, 2018, Chengdu, China

Supported by

Sichuan University (SCU)

China-U.S. Theory Institute of Physics with Exotic Nuclei (CUSTIPEN)

China Center of Advanced Science and Technology (CCAST)

Peking University (PKU)

May 13 (Sunday)

14:00-22:00	Registration at guest house of Sichuan University
18:00-19:30	Welcome dinner at guest house of Sichuan University

Morning May14 (Monday):

Place: Guest House of Sichuan University

Opening	Chair: Chunlin Bai
8:30-8:40 (5'+5')	Welcome addresses: <i>Local address from Sichuan University</i> <i>Yanlin Ye (Co-director of CUSTIPEN, President of Chinese Nuclear Physics Society)</i>
8:40-9:15 (30'+5')	Faddeev Approach to (d,p) Reactions as Tool to Study Exotic Nuclei <i>Charlotte Elster, Ohio University</i>
9:15-9:50 (30'+5')	Reaction Mechanisms of Exotic Nuclear Systems and Decays of Extremely Proton-rich Nuclei <i>Chengjian Lin, CIAE</i>
9:50-10:20	Conference Photo and Coffee Break
	Chair: Huanqiao Zhang
10:20-10:55 (30'+5')	A solution to the puzzle of quenched beta decays <i>Gaute Hagen, ORNL</i>
10:55-11:30 (30'+5')	<i>Cluster decay of super heavy nuclei</i> <i>Michal Warda, Maria Curie-Skłodowska University</i>
11:30-12:05 (30'+5')	Some neutrino-related physics based on the nuclear structure studies <i>Xiaobao Wang, Huzhou University</i>
12:05-14:00	Lunch

Afternoon, May14 (Monday);

Place: Guest House of Sichuan University

	Chair: Zhigang Xiao
14:00-14:35 (30'+5')	Realistic shell model calculations of nuclear matrix elements for neutrinoless double-beta decay <i>Luigi Coraggio, INFN - Naples</i>
14:35-15:10 (30'+5')	Description of nuclear structure and reactions at drip-lines using the Gamow Shell Model <i>Nicolas Michel, MSU</i>
15:10-15:45 (30'+5')	Application of some semiconductor detector <i>Chunlei Zhang, Beijing Normal University</i>
15:45-6:15	Coffee Break
	Chair: Angelina Gargano
16:15-16:50 (30'+5')	Recent Quantum Monte Carlo calculations of nuclei and few neutron systems <i>Stefano Gandolfi, LANL</i>
16:50-17:25 (30'+5')	Structure and dynamics of 2p decay on light and mid-heavy nuclei <i>Simin Wang, MSU</i>
17:25-18:00 (30'+5')	Nuclear Physics with Laser <i>Guoqiang Zhang, Shanghai Institute of Applied Physics, CAS</i>
18:30	Dinner

Morning, May15 (Tuesday);

Place: Guest House of Sichuan University

	Chair: Yanlin Ye
8:30-9:05 (30'+5')	Selected Topics of the GRETINA Physics Program <i>Augusto Macchiavelli, LBNL</i>
9:05-9:40 (30'+5')	Gamma-spectroscopy of 63,65,67Mn and the implication in Urca neutrino cooling in accreted neutron star crust <i>Zhong Liu, IMP-CAS</i>
9:40-10:15 (30'+5')	β -delayed neutron emission of extremely neutron-rich nuclei relevant to A=130 r-process abundance peak <i>Jiajian Liu, University of Hong Kong</i>
10:15-10:45	Coffee Break
	Chair: Anatoli Afanasjev
10:45-11:20 (30'+5')	How do we reconcile our understanding of nuclear symmetry energy with the isospin breaking? <i>Gianluca Colo', University of Milano and INFN</i>

11:20-11:55 (30'+5')	Effects of tensor force in the relativistic scheme <i>Haozhao Liang, RIKEN</i>
12:00-14:00	Lunch

Afternoon, May15 (Tuesday);

Place: Guest House of Sichuan University

	Chair: Luigi Coraggio
14:00-14:35 (30'+5')	<i>Ab initio</i> calculations of electroweak decays in medium- and heavy-mass nuclei <i>Jason Holt, TRIUMF</i>
14:35-15:10 (30'+5')	Neutron-proton pairs and beta decay <i>Chong Qi, KTH, Sweden</i>
15:10-15:45 (30'+5')	Realistic Gamow shell model for nuclear resonance and continuum <i>Baishan Hu, PKU</i>
15:45-16:15	Coffee Break
	Chair: Caiwan Shen
16:15-16:50 (30'+5')	Status of realistic shell model for nuclear structure calculations <i>Angelina Gargano, INFN-Naples</i>
16:50-17:25 (30'+5')	Possibility to probe the bubble nucleus by giant monopole resonance <i>Jun Su, Sun Yat-sen University</i>
17:25-17:50 (20'+5')	Effects of tensor and $T = 0$ pairing interactions on nuclear β^+ / EC decay <i>Feng Wu, CIAE</i>
18:30	Banquet

Morning, May16(Wednesday);

Place: Guest House of Sichuan University

	Chair: Gianluca Colo'
8:30-9:05 (30'+5')	Calculations of nuclear Schiff moments for atomic EDM measurements <i>Jacek Dobaczewski, University of York</i>
9:05-9:40 (30'+5')	Rare processes: from light to hyperheavy nuclei <i>Anatoli Afanasjev, Mississippi State U.</i>
9:40-10:15 (30'+5')	Effects of deformation, pairing and tensor correlation on evolution of bubble structure within Skyrme-Hartree-Fock method <i>Xian-Rong Zhou, China Easter Normal University</i>
10:15-10:45	Coffee Break

	Chair: Bingwei Long
10:45-11:20 (30'+5')	Fission of heaviest nuclei <i>Gurgen Adamian, JINR (Dubna)</i>
11:20-11:55 (30'+5')	Beyond mean-field description of beta-decay half-lives <i>Yifei Niu, Eli-NP</i>
12:00-14:00	Lunch

Afternoon, May16 (Wednesday); Place: Guest House of Sichuan University

	Chair: Yuhu Zhang
14:00-14:35 (30'+5')	Nuclear Astrophysics Studies with Heavy-Ion Storage Rings <i>Yury Litvinov, GSI</i>
14:35-15:10 (30'+5')	Stellar half-life of ^{63}Ni and its experimental determination <i>Baohua Sun, Beihang University</i>
15:10-15:45 (30'+5')	Evidence for high excitation energy resonances in the 7 alpha disassembly of ^{28}Si and the question of toroidal high-spin isomers <i>Xiguang Cao, Shanghai Institute of Applied Physics, CAS</i>
15:45-16:15	Coffee Break
	Chair: Stefano Gandolfi
16:15-16:50 (30'+5')	Many-Body renormalization effects in superfluid nuclei <i>Enrico Vigezzi, University of Milano</i>
16:50-17:25 (30'+5')	<i>Thermal Fission Studies with Temperature Dependent Fission Barriers</i> <i>Junchen Pei, PKU</i>
17:25-18:00 (30'+5')	Predictions for Cross Sections of Proton-rich Isotopes of $Z=10-19$ <i>Chun-Wang Ma, Henan Normal University</i>
18:30	Dinner

Morning, May 17 (Thursday); Place: Guest House of Sichuan University

	Chair: Calvin Johnson
8:30-9:05 (30'+5')	$N=90$ isotones – $X(5)$ symmetry or independent particle motion <i>Ramon Wyss, KTH</i>
9:05-9:40 (30'+5')	Recent progress on spin and spin-isospin excitations <i>Hiroyuki Sagawa, RIKEN/University of Aizu</i>
9:40-10:15 (30'+5')	Proton shell evolution in the "southwest" of ^{132}Sn <i>Zihuan Li, PKU</i>
10:15-10:45	Coffee Break

	Chair: Gaute Hagen
10:45-11:20 (30'+5')	Simple effective interaction for exotic helium isotopes <i>Kevin Fossez, MSU</i>
11:20-11:55 (30'+5')	Covariant density functional theory for nuclear spectroscopy: on and beyond the mean field <i>Pengwei Zhao, PKU</i>
12:00-14:00	Lunch

Afternoon, May 17(Thursday)

	Chair: Furong Xu
14:00-14:35 (30'+5')	Transition sum rules in ab initio calculations <i>Calvin Johnson, San Diego State University</i>
14:35-15:10 (30'+5')	beta decay of neutron rich nuclei with realistic force based QRPA <i>Dong-Liang Fang, Jilin University</i>
15:10-15:45 (30'+5')	<i>Effective Field Theory Studies of Halo Nuclei</i> <i>Chen Ji, Central Chinal Normal University</i>
15:45-16:20 (30'+5')	Nucleon radius, nuclear matter EOS and neutron stars <i>Ang Li, Xiamen University</i>
16:20-16:50	Coffee Break
18:00	Dinner

May 18 (Friday)

8:00-18:00	Chair: Chunlin Bai Discussions and Collaboration
18:30	Dinner

Organizing committee:

Chunlin Bai (Chair, SCU); PawelDanielewicz (MSU); Bao-An Li (Texas A&M Commence);
Bingwei Long (SCU); Yugang Ma (SINAP-CAS); WitekNazarewicz (MSU); Zhongzhou Ren (TJU);
Furong Xu (PKU); Yanlin Ye (PKU); Fengshou Zhang (BNU); Huanqiao Zhang (CIAE);
Yuhu Zhang (IMP-CAS); Shan-Gui Zhou (ITP-CAS)