

The 2nd CUSTIPEN Workshop on

Advances in the computational nuclear many-body problems

Time: December 15---December 17, 2013

Place: Building of Institute of Modern Physics, Room 101, Peking University

**Sponsored by China-U.S. Theory Institute for Physics with Exotic Nuclei (CUSTIPEN),
China Center of Advanced Science and Technology (CCAST) and Peking University**

December 15		
Chair: Furong Xu		
9:00-9:10	Welcome address	
9:10-9:50 (35'+5')	Joe Carlson	Quantum Monte Carlo Approaches to Nuclear Structure and Dynamics
9:50-10:30 (35'+5')	Xiangfei Meng	Tianhe supercomputers and applications
10:30-10:50	Break	
Chair: J. Vary		
10:50-11:30 (35'+5')	Yuhu Zhang	Precision Mass measurements for short-lived nuclides at CSR
11:30-12:00 (25'+5')	Chong Qi	Shell-model structure of nuclei around ¹⁰⁰ Sn: Simple ideas vs complex computation
12:00	Lunch	
Chair: Yuhu Zhang		
2:00-2:40 (35'+5')	A. Afanasjev	Nuclear landscape in covariant density functional theory

2:40-3:10 (25'+5')	Chunlin Bai	Effects of tensor and T=0 pairing interactions
3:10-3:40 (25'+5')	Cenxi Yuan	Shell model study of light nuclei
3:40-4:00	Break	
Chair: J. Carlson		
4:00-4:40 (35'+5')	Shan-Gui Zhou	Multi-dimensional constraint covariant density functional theories
4:40-5:10 (25'+5')	Bo Zhou	New perspective on cluster structure of ^{20}Ne
5:10-5:40 (25'+5')	Zhihuan Li	Isomeric decays in neutron rich ^{128}Ag
5:40-6:00 (15'+5')	Zhengxiang Xu	Monte Carlo method in the complex energy plane
6:00	Dinner	
December 16		
Chair: Yanlin Ye		
9:00-9:40 (35'+5')	W. Nazarewicz	Atomic Nuclei: Many-Body Open Quantum Systems
9:40-10:10 (25'+5')	Junchen Pei	Exotic shapes and continuum effects in weakly-bound deformed nuclei
10:10-10:40	Break and conference photo	
Chair: A. Afanasjev		
10:40-11:20 (35'+5')	Wei Zuo	Nucleon momentum distributions in nuclear matter and three-body force effect

11:20-11:50 (25'+5')	Chang Xu	Density dependence of symmetry energy in nuclear matter
12:00	Lunch	
Chair: Fengshou Zhang		
2:00-2:40 (35'+5')	Calvin Johnson	Randomness, symmetries, and regularities in many-body systems
2:40-3:10 (25'+5')	Yue Shi	Self-consistent tilted-axis-cranking mean-field calculations in Er-158 nucleus and related Kerman-Onishi conditions
3:10-3:40 (25'+5')	Siming Wang	AMD study of light nuclei
3:40-4:10	break	
Chair: C. Johnson		
4:10-4:50 (35'+5')	Yanan Luo	Nuclear shape phase transition in SD-pair shell model
4:50-5:20 (25'+5')	Jianlin Lou	Study on the ground state structure of ^8He via $1n$ and $2n$ transfer reactions
5:20-5:40 (15'+5')	Changfeng Jiao	Angular Momentum Projected PES
6:30	Banquet	
December 17		
Chair: Shangui Zhou		
9:00-9:40 (35'+5')	James Vary	<i>ab initio</i> no core shell model – progress and prospects

9:40-10:20 (35'+5')	Furong Xu	Spectroscopy of seniority states and higher-order deformations
10:20-10:40	break	
Chair: W. Nazarewicz		
10:40-11:10 (25'+5')	Gaolong Zhang	study of three body force by 100MeV/u 12C+12C elastic scattering
11:10-11:30 (15'+5')	Guoxiang Dong	Collectivity of Neutron-rich Mg isotopes
11:30-12:00	CUSTIPEN discussions	
12:00	Lunch	
14:00-17:00	Excursion: visit to Yuan Ming Yuan	