



International Conference  
“Nuclear Theory  
in the Supercomputing Era”  
[www.ntse-2014.khb.ru](http://www.ntse-2014.khb.ru)

# Program

Pacific National University, Khabarovsk, Russia.  
June 23 – 28, 2014

## Sunday, June 22.

Arrival.

Evening: 15:00 Picnic

## Monday, June 23. 9:00 – 16:30 Conference Hall

9:30 – 10:00	Registration
10:00 – 10:50	Conference opening
10:50 – 11:20	Coffee break
	<b>Chair: Yutaka Utsuno</b>
11:20 – 12:10	<b>Takashi Nakatsukasa.</b> Time-dependent density-functional calculation of nuclear response functions.
12:10 – 13:00	<b>Jun Terasaki.</b> Effects of QRPA correlations to nuclear matrix elements of neutrinoless double-beta decay through overlap matrix.
13:00 – 14:00	Lunch
	<b>Chair: Kazuhiro Yabana</b>
14:00 – 14:50	<b>Junchen Pei.</b> Exotic halos and collective excitations in weakly-bound deformed nuclei.
14:50 – 15:10	Coffee break
	<b>Chair: Andrey Shirokov</b>
15:10 – 17:00	Discussions, additional questions to speakers ( <i>room 201</i> )
18:00	Welcome party

## Tuesday, June 24. 9:00 – 16:30 Conference Hall

	<b>Chair: Alexander Motovilov</b>
9:00 – 9:50	<b>Yutaka Utsuno.</b> Large-scale shell-model studies for exotic nuclei: probing shell evolution.
9:50 – 10:40	<b>Alexander Volya.</b> Computational approaches to many-body dynamics of unstable nuclear systems.
10:40 – 11:10	Coffee break
	<b>Chair: Takashi Abe</b>
11:10 – 12:00	<b>Kazuhiro Yabana.</b> Cluster structures of light nuclei superposing multiple Slater determinants.
12:00 – 12:50	<b>Yurii Tchuvil'sky.</b> Study of cluster reactions in advanced shell model approaches.
13:00 – 14:00	Lunch
	<b>Chair: Takashi Nakatsukasa</b>
14:00 – 14:50	<b>Furong Xu.</b> From Gogny force to shell-model calculations.
14:50 – 15:40	<b>Tomáš Dytrych.</b> Emergence of simple patterns in complex atomic nuclei from first principles.
15:40 – 16:10	<b>Andrey Chibisov.</b> <i>Ab initio</i> investigation of oxygen absorption by titanium nanoparticles.
16:10 – 16:30	Coffee break
	<b>Chair: Jun Terasaki</b>
16:30 – 18:10	Discussions, additional questions to speakers ( <i>room 201</i> )

## Wednesday, June 25. 9:00 – 13:30 – Conference Hall

	<b>Chair: Evgeny Epelbaum</b>
9:00 – 9:50	<b>Leonid Blokhintsev.</b> Vertex Functions and Asymptotics of Nuclear Bound-State Wave Functions.
9:50 – 10:40	<b>Alexander Motovilov.</b> Bounds on variation of the spectrum and spectral subspaces of a few-body Hamiltonian.
10:40 – 11:10	Coffee break
	<b>Chair: Furong Xu</b>
11:10 – 12:00	<b>Charlotte Elster.</b> The Coulomb Problem in Momentum Space without Screening.
12:00 – 12:50	<b>Sergey Yurev.</b> Three-nucleon calculations within Bethe-Salpeter approach with separable kernel.
13:00 – 14:00	Lunch
	<b>Chair: Kimiko Sekiguchi</b>
14:00 – 14:50	<b>Konstantin Kouzakov.</b> Problems of theoretical interpretation of COLTRIMS results on ionization of helium by fast bare-ion impact.
14:50 – 15:10	<b>Maxim Aleshin.</b> Quasi-Sturmian functions in the continuum spectrum problems.
15:10 – 16:00	<b>Sergey Zaytsev.</b> Convolutated quasi-Sturmians basis in Coulomb three-body problems.
16:00 – 16:20	Coffee break
	<b>Chair: Tomáš Dytrych</b>
16:20 – 18:00	Discussions, additional questions to speakers ( <i>room 201</i> )

## Thursday, June 26. 9:00 – 16:00 – Conference Hall

	<b>Chair: Leonid Blokhintsev</b>
9:00 – 9:50	<b>James Vary.</b> <i>Ab Initio</i> no core shell model – recent results and future prospects.
9:50 – 10:40	<b>Takashi Abe.</b> No-core Monte Carlo shell model in light nuclei.
10:40 – 11:00	Coffee break
	<b>Chair: Ruprecht Machleidt</b>
11:00 – 11:50	<b>Andrey Shirokov.</b> Recent results obtained with JISP16.
11:50 – 12:40	<b>Alexander Mazur.</b> J-matrix analysis of resonant states in the shell model.
12:40 – 13:00	<b>Igor Mazur.</b> J-matrix analysis of resonant states in the shell model: charged particles.
13:00 – 14:00	Lunch
	<b>Chair: Alexander Volya</b>
14:00 – 14:50	<b>Ik Jae Shin.</b> <i>Ab initio</i> study of natural and unnatural parity states of ${}^6\text{Li}$ .
14:50 – 15:40	<b>Nikolay Khokhlov.</b> Electromagnetic deuteron form factors in point form of relativistic quantum mechanics.
15:40 – 16:00	Coffee break
	<b>Chair: Junchen Pei</b>
16:00 – 17:50	Discussions, additional questions to speakers ( <i>room 201</i> )
18:00	Conference dinner

## Friday, June 27. 9:00 – 11:00 – Conference Hall

	<b>Chair: Charlotte Elster</b>
9:00 – 9:50	<b>Kimiko Sekiguchi.</b> Approach to three nucleon forces from experiment.
9:50 – 10:40	<b>Evgeny Epelbaum.</b> Chiral nuclear forces: State of the art and future perspectives.
10:40 – 11:00	Coffee break
	<b>Chair: James Vary</b>
11:00 – 11:50	<b>Ruprecht Machleidt.</b> Chiral EFT and nuclear forces: Are we in trouble?
11:50 – 13:30	Discussions, additional questions to speakers ( <i>room 201</i> )
13:30 – 14:00	<b>Conference closing</b> ( <i>Conference Hall</i> )
14:00 – 15:00	Lunch
15:00 – 17:00	Excursion
17:00	Picnic