

**International Conference on
Nuclear Theory in the
Supercomputing Era –2024
(NTSE-2024)**

Report of Contributions

Contribution ID: 1

Type: **not specified**

Opening

Monday, 2 December 2024 09:50 (10 minutes)

Presenter: KIM, Youngman (CENS, IBS)

Contribution ID: 2

Type: **not specified**

Emerging nuclear landscape and CI calculations on supercomputers

Monday, 2 December 2024 10:00 (30 minutes)

Presenter: OTSUKA, Takaharu (RIKEN / University of Tokyo)

Contribution ID: 3

Type: **not specified**

A weak entanglement approximation for nuclear structure

Monday, 2 December 2024 10:30 (30 minutes)

Presenter: JOHNSON, Calvin (San Diego State University)

Contribution ID: 4

Type: **not specified**

Quasi-particle vacua shell model for medium-heavy nuclei and its applications

Monday, 2 December 2024 11:30 (30 minutes)

Presenter: SHIMIZU, Noritaka (University of Tsukuba)

Contribution ID: 5

Type: **not specified**

Understanding collective dipole excitations near the neutron separation energies in spherical molybdenum isotopes

Monday, 2 December 2024 12:00 (30 minutes)

Presenter: IN, Eunjin (Lawrence Livermore National Laboratory (LLNL))

Contribution ID: 6

Type: **not specified**

Structure of light nuclei using two Schrödinger-like equations

Monday, 2 December 2024 14:00 (30 minutes)

Presenter: MONDAL, Chandan (Institute of Modern Physics, Chinese Academy of Sciences)

Contribution ID: 7

Type: **not specified**

Speculations about isospin analogues of tetraneutron

Monday, 2 December 2024 14:30 (30 minutes)

Presenter: SHIROKOV, Andrey (Lomonosov Moscow State University)

Contribution ID: 8

Type: **not specified**

Coulomb interaction with HORSE formalism

Monday, 2 December 2024 15:30 (30 minutes)

Presenter: KULIKOV, Vasily (Lomonosov Moscow State University)

Contribution ID: 9

Type: **not specified**

Role of the Light Mass Nuclear Reactions in the r-process Nucleosynthesis

Monday, 2 December 2024 16:00 (30 minutes)

Presenter: Dr KIM, Kyungil (Institute for Rare Isotope Science, Institute for Basic Science)

Contribution ID: **10**

Type: **not specified**

Discussions

Monday, 2 December 2024 16:45 (1h 15m)

Contribution ID: 11

Type: **not specified**

For memory of Prof. Ruprecht Machleidt

Tuesday, 3 December 2024 09:30 (30 minutes)

Presenter: SAMMARRUCA, Francesca (University of Idaho)

Contribution ID: 12

Type: **not specified**

For memory of Prof. Ruprecht Machleidt

Tuesday, 3 December 2024 10:00 (15 minutes)

Presenter: EPELBAUM, Evgeny (Ruhr University Bochum)

Contribution ID: 13

Type: **not specified**

For memory of Prof. Ruprecht Machleidt

Tuesday, 3 December 2024 10:15 (15 minutes)

Presenter: NAVRATIL, Petr (TRIUMF)

Contribution ID: 14

Type: **not specified**

For memory of Prof. Ruprecht Machleidt

Tuesday, 3 December 2024 10:30 (15 minutes)

Presenter: VARY, James (Iowa State University)

Contribution ID: 15

Type: **not specified**

OPEN MIC: For memory of Prof. Ruprecht Machleidt

Tuesday, 3 December 2024 10:45 (15 minutes)

Contribution ID: 16

Type: **not specified**

Effective shell-model interactions from Daejeon16

Tuesday, 3 December 2024 11:30 (30 minutes)

Presenter: SMIRNOVA, Nadezhda (LP2IB, University of Bordeaux, France)

Contribution ID: 17

Type: **not specified**

Nuclear structure input to low-energy precision tests of the Standard Model via superallowed $0^+ \rightarrow 0^+$ Fermi β -decay

Tuesday, 3 December 2024 12:00 (30 minutes)

Presenter: XAYAVONG, Latsamy (Yonsei University)

Contribution ID: **18**

Type: **not specified**

Ab initio no-core shell-model study for $Z=5-11$ nuclei

Tuesday, 3 December 2024 14:00 (30 minutes)

Presenter: SRIVASTAVA, Praveen C. (ndian Institute of Technology-Roorkee, India)

Contribution ID: 19

Type: **not specified**

Resonant and bound states in neutron rich nuclei

Tuesday, 3 December 2024 14:30 (30 minutes)

Presenter: LAZAUSKAS, Rimantas (IPHC, Strasbourg)

Contribution ID: 20

Type: **not specified**

Advances in coupled-cluster computations of nuclei

Tuesday, 3 December 2024 15:30 (30 minutes)

Presenter: HAGEN, Gaute (Oak Ridge National Laboratory)

Contribution ID: 21

Type: **not specified**

Low-energy photodisintegration in cluster EFT

Tuesday, 3 December 2024 16:00 (30 minutes)

Presenter: LEIDEMANN, Winfried (University of Trento)

Contribution ID: 22

Type: **not specified**

Discussions

Tuesday, 3 December 2024 16:45 (1h 15m)

Contribution ID: 23

Type: **not specified**

Neutron-Rich Systems: Current Status of Ab Initio Predictions vs. Empirical Constraints

Wednesday, 4 December 2024 09:30 (30 minutes)

Presenter: SAMMARRUCA, Francesca (University of Idaho)

Contribution ID: 24

Type: **not specified**

An alternative energy density functional based on the hyperradial density

Wednesday, 4 December 2024 10:00 (30 minutes)

Presenter: ORLANDINI, Giuseppina (University of Trento)

Contribution ID: 25

Type: **not specified**

Chiral EFT for nuclear systems: New developments

Wednesday, 4 December 2024 10:30 (30 minutes)

Presenter: EPELBAUM, Evgeny (Ruhr University Bochum)

Contribution ID: 26

Type: **not specified**

Carbon and Oxygen isotopes in Nuclear Lattice Effective Field Theory

Wednesday, 4 December 2024 11:30 (30 minutes)

Presenter: SONG, Young-Ho (RISP, IBS)

Contribution ID: 27

Type: **not specified**

Driplines in lattice EFT with Woods- Saxon potential

Wednesday, 4 December 2024 12:00 (30 minutes)

Presenter: KIM, Myungkuk (CENS/IBS)

Contribution ID: 28

Type: **not specified**

Large scale ab initio investigation of electroweak processes in atomic nuclei

Wednesday, 4 December 2024 14:00 (30 minutes)

Presenter: NAVRATIL, Petr (TRIUMF)

Contribution ID: 29

Type: **not specified**

Ab initio calculations of the structure and reactions of light nuclei

Wednesday, 4 December 2024 14:30 (30 minutes)

Presenter: MARIS, Pieter (Iowa State University)

Contribution ID: **30**

Type: **not specified**

Intruder structure and shape mixing from an ab initio perspective

Wednesday, 4 December 2024 15:30 (30 minutes)

Presenter: CAPRIO, Mark (University of Notre Dame)

Contribution ID: 31

Type: **not specified**

Machine learning in the problem of no core shell model result extrapolations

Wednesday, 4 December 2024 16:00 (30 minutes)

Presenter: MAZUR, Aleksandr (Pacific National University)

Contribution ID: **32**

Type: **not specified**

Discussions

Wednesday, 4 December 2024 16:45 (1h 15m)

Contribution ID: 33

Type: **not specified**

Accelerating scientific research through multidisciplinary collaboration in computation and machine learning

Thursday, 5 December 2024 09:30 (30 minutes)

Presenter: NG, Esmond (Lawrence Berkeley National Laboratory)

Contribution ID: 34

Type: **not specified**

Lattice QCD and supercomputing for nuclear physics

Thursday, 5 December 2024 10:00 (30 minutes)

Presenter: PARK, Sungwoo (Lawrence Livermore National Laboratory)

Contribution ID: 35

Type: **not specified**

Heavy ion collision simulation using DJBUU

Thursday, 5 December 2024 10:30 (30 minutes)

Presenter: LEE, Chang-Hwan (Pusan National University)

Contribution ID: 36

Type: **not specified**

Probing the symmetry energy with gravitational waves

Thursday, 5 December 2024 11:30 (30 minutes)

Presenter: HYUN, Chang Ho (Daegu University)

Contribution ID: 37

Type: **not specified**

Possible $3\phi\text{H}$, $9\phi\text{Be}$, and $6\phi\phi\text{He}$ hypernuclei with HAL QCD interaction

Thursday, 5 December 2024 12:00 (30 minutes)

Presenter: KEZERASHVILI, Roman (New York City College of technology, City University of New York)

Contribution ID: 38

Type: **not specified**

Exploring the Realm Beyond Exponential Decay in Open Quantum Systems

Thursday, 5 December 2024 14:00 (30 minutes)

Presenter: WANG, Simin (Fudan University)

Contribution ID: 39

Type: **not specified**

Large-scale shell model study of β^- - decay properties of N = 126, 125 nuclei along the r-process path

Thursday, 5 December 2024 14:30 (30 minutes)

Presenter: KUMAR, Anil (Center for Computational Sciences, University of Tsukuba, Tsukuba)

Contribution ID: 40

Type: **not specified**

Daejeon16 beyond the p-shell nuclei

Thursday, 5 December 2024 15:30 (30 minutes)

Presenter: SHIN, Ik Jae (IRIS / IBS)

Contribution ID: 41

Type: **not specified**

Nuclear Theory in the KISTI-6 Supercomputing Era

Thursday, 5 December 2024 16:00 (30 minutes)

Presenter: CHO, Kihyeon (KISTI)

Contribution ID: 42

Type: **not specified**

Discussions

Thursday, 5 December 2024 16:45 (1h 15m)

Contribution ID: 43

Type: **not specified**

Relativistic He-3 light-front wave function

Friday, 6 December 2024 09:30 (30 minutes)

Presenter: KARMANOV, Vladimir (Lebedev Physical Institute of Russian Academy of Sciences, Moscow)

Contribution ID: 44

Type: **not specified**

Nucleon structure from light-front quantization

Friday, 6 December 2024 10:00 (30 minutes)

Presenter: ZHAO, Xingbo (Institute of Modern Physics, Chinese Academy of Sciences)

Contribution ID: 45

Type: **not specified**

Light Hadron structure in Minkowski space

Friday, 6 December 2024 10:30 (30 minutes)

Presenter: FREDERICO, Tobias (Instituto Technologica Aeronautica, Brazil)

Contribution ID: 46

Type: **not specified**

Ab-initio nuclear physics from hadrons to nuclei, light-front Hamiltonian approach (Basis Light- Front Quantization)

Friday, 6 December 2024 11:30 (45 minutes)

Presenter: VARY, James (Iowa State University)

Contribution ID: 47

Type: **not specified**

Discussions and closing remarks

Friday, 6 December 2024 12:15 (1h 30m)

Contribution ID: 48

Type: **not specified**

Free discussions

Friday, 6 December 2024 15:00 (3 hours)