Program of the Topical Meeting

« Future directions for nuclear structure and reaction theories:
Ab initio approaches for 2020 »

Monday, March 14, 2016

9:15	Registration
9:30	Welcome
	Chairman: M. Ploszajczak, GANIL
9:35 – 10:05	Willem H. Dickhoff (Washington University) Is there a crisis in nuclear-matter theory?
10:20 – 10:50	Coffee break
10:50 – 11:20	Thomas Duguet (SPhN Saclay) Ab initio-driven nuclear energy density functional method: A proposal for safe/correlated/improvable parametrizations of the off-diagonal EDF kernels
11:35 – 12:05	Wojtek Satula (University of Warsaw) DFT rooted NCCI approach and its applications to N~Z nuclei
12:20 – 13:30	Lunch
	Chairman: P. Van Isacker, GANIL
13:30 – 14:00	Ionel Stetcu (Los Alamos National Laboratory) Fission of actinides in time-dependent density functional theory
14:15 – 14:45	Jimmy Rotureau (Michigan State University) Microscopic optical potential from Coupled Cluster calculation
15:00 – 15:30	Jorge Dukelsky (CSIC Madrid) Polynomial Similarity Transformation Theory: From coupled cluster doubles to number projected BCS
15:45 – 16:15	Coffee break
16:15	Discussion session *Conveners: W.H. Dickhoff, Washington University* *Th. Duguet, SPhN Saclay*

Tuesday, March 15, 2016

Chairman: N. Barnea, Hebrew University, Jerusalem

9:30 – 10:00 Takeshi Koike (Tohoku University)
Study of ΛN interaction via the A=4 mirror Λ hypernuclei: ${}^{4}_{\Lambda}\mathrm{H}$ and ${}^{4}_{\Lambda}\mathrm{He}$

10:15 – 10:45 Coffee break

10:45 – 11:15 Bira Van Kolck (IPN Orsay/University of Arizona)
Effective Theory of Triton and Helion

11:30 – 12:00 Betzalel Bazak (IPN Orsay)
Short range EFT for few-body systems

12:15 – 13:30 Lunch

Chairman: Th. Neff, GSI Darmstadt

13:30 – 14:00 Heiko Hergert (Michigan State University)
The In-Medium Similarity Renormalization Group: applications and perspectives

14:15 – 14:45 Jason D. Holt (TRIUMF)
Ab initio interactions and operators for the sd shell

15:00 – 15:30 Christian Forssen (Chalmers University of Technology)
Theoretical uncertainty quantification and precision nuclear physics

15:45 – 16:15 Coffee break

16:15 Discussion session
Conveners: Ch. Forssen, Chalmers University of Technology
U. Van Kolck, IPN Orsay/University of Arizona

Wednesday, March 16, 2016

Chairman: W. Satula, University of Warsaw

9:30 – 10:00 Miguel Marquez (LPC Caen)
Can four neutrons tango?

10:15 – 10:45 Coffee break

10:45 – 11:15 Thomas Neff (GSI Darmstadt)
Transitions to the Continuum in Fermionic Molecular Dynamics

11:30 – 12:00 Bruce R. Barrett (University of Arizona)
Fluorine isotope systematics: ab initio vs phenomenological analyses

12:15 – 13:30 Lunch

Chairman: L. Coraggio, INFN Naples

13:30 – 14:00 James Vary (Iowa State University)
Ab initio No Core Shell Model with consistent electromagnetic properties

14:15 – 14:45 Julien Gibelin (LPC Caen)
Probing the structure of the most neutron-rich isotopes of Boron and Carbon

15:00 – 15:30 Francesco Raimondi (University of Surrey)
Ab initio many-body calculations of single-nucleon transfer reactions with deuteron projectile

15:45 – 16:15 Coffee break

16:15 Discussion session
Conveners: H. Hergert, Michigan State University
P. Navratil, TRIUMF

Thursday, March 17, 2016

Chairman: J.D. Holt, TRIUMF

9:30 – 10:00 Evgeny Epelbaum (Ruhr University, Bochum)
Precision physics with chiral nuclear forces

10:15 – 10:45 Coffee break

10:45 – 11:15 Petr Navratil (TRIUMF)
Bound and unbound states of nuclei from chiral interactions

11:30 – 12:00 Nir Barnea (Hebrew University, Jerusalem)
The nuclear contact and the photoabsorption cross section

12:15 – 13:30 Lunch

Chairman: J. Dukelsky, CSIC Madrid

13:30 – 14:00 Nasser Kalantar-Nayestanaki (KVI-CART)
From few-body to many-body systems

14:15 – 14:45 David J. Dean (Oak Ridge National Laboratory)
Nuclei, quantum entanglement, and qubits

15:00 – 15:30 Coffee break

15:30 Discussion session
Conveners: D.J. Dean, Oak Ridge National Laboratory
E. Epelbaum, Ruhr University, Bochum

20:00 Conference dinner

Friday, March 18, 2016

Chairman: I. Stetcu, Los Alamos National Laboratory

9:00 – 9:30 Haik Simon (GSI Darmstadt)
Exploring the continuum proton and neutron rich on the way to FAIR

9:45 – 10:00 Coffee break

10:00 – 10:30 Luigi Coraggio (INFN Naples)
Perspectives of large-scale shell model with realistic effective hamiltonian

10:45 Discussion session
Conveners: M. Marquez, LPC Caen
J. Vary, Iowa State University

Summary talk
B.R. Barrett, University of Arizona

12:45 End of the Meeting