

From nuclear structure to particle-transfer reactions and back II

ECT*, November 10-14, 2014

Monday, November 10

- 9:00 – 9:30 Registration
- 9:30 – 9:45 Opening of the workshop
- 9:45 – 10:20 Lorenzo Corradi, INFN-Legnaro
Pair correlations in heavy ion transfer reactions II
- 10:35 – 11:05 Coffee break
- 11:05 – 11:40 Ron Johnson, University of Surrey
Three-body models of (d,p) reactions: Where on earth do they come from?
- 11:55 – 12:30 Francesco Raimundi, TRIUMF
Ab-initio many-body calculations of single-nucleon transfer reaction and application to the astrophysically relevant reaction ${}^7\text{Li}(d,p){}^8\text{Li}$
- 12:45 – 14:30 Lunch
- 14:30 – 15:05 Riccardo Broglia, University of Milano
Probing pairing vibrations and pigmy resonance in halo nuclei with two-nucleon transfer reactions
- 15:20 – 15:55 Andrea Idini, University of Jyvaskyla
Nuclear Field Theory as a tool for particle transfer calculations
- 16:10 – 16:40 Coffee break
- 16:40 – 17:15 Nicolas Michel, GANIL
Towards a unified picture of structure and reaction in the Gamow Shell Model
- 17:30 Discussion session
*Conveners: Riccardo Broglia, University of Milano
Lorenzo Corradi, INFN-Legnaro*
- 19:00 Dinner at ECT*

Tuesday, November 11

- 9:00 – 9:35 Thomas Duguet, SPhN Saclay
Non-observable nature of the nuclear shell structure: meaning, illustrations and consequences
- 9:50 – 10:25 Wojtek Satula, Warsaw University
Simple regularization scheme for multi-reference DFT
- 10:40 – 11:10 Coffee break
- 11:10 – 11:45 George Papadimitriou, Iowa State University
Describing nuclei on the edge of nuclear stability
- 12:00 – 14:00 Lunch
- 14:00 – 14:35 Silvia Lenzi, University of Padova
Systematic study of energy differences between analogue excited states
- 14:50 – 15:25 Lorenzo Fortunato, University of Padova
Neutron correlations at the drip-line and neutron transfer reactions
- 15:40 – 16:10 Coffee break
- 16:10 – 16:45 Jeremy Bonnard, University of Padova
New constrained-path quantum Monte-Carlo approach for the shell model
- 17:00 Discussion session
Convener: Thomas Duguet, SPhN Saclay

Wednesday, November 12

- 9:00 – 9:35 Piotr Magierski, Warsaw University of Technology
Nuclear reactions within Time Dependent Superfluid Local Density Approximation
- 9:50 – 10:25 Alexis Diaz-Torres, ECT* Trento
Time-dependent few-body approaches to low-energy reaction dynamics of rare isotopes
- 10:40 – 11:10 Coffee break
- 11:10 – 11:45 Kazuyuki Sekizawa, University of Tsukuba
Transfer dynamics in the TDHF theory deduced from particle-number projection method
- 12:00 – 14:00 Lunch
- 14:00 – 14:35 Nadezda Smirnova, CENBG
Isospin non-conserving shell model with applications to decay modes of proton-rich nuclei and nuclear astrophysics
- 14:50 – 15:25 Alexandrina Petrovici, NIPNE-Bucharest
Isospin-symmetry-breaking and shape-coexistence effects in $A \sim 70$ analogs within beyond-mean-field approach
- 15:40 – 16:10 Coffee break
- 16:10 Discussion session
Conveners: Silvia Lenzi, University of Padova
Piotr Magierski, Warsaw University of Technology
- 20:00 Conference dinner in Trattoria Pie di Castello

Thursday, November 13

- 9:00 – 9:35 Wilton Catford, University of Surrey
Studying the structure of exotic nuclei via nucleon transfer with
gamma-ray coincidences
- 9:50 – 10:25 Arnoldas Deltuva, University of Vilnius
Calculation of transfer and charge exchange reactions in three- and
four-body systems
- 10:40 – 11:10 Coffee break
- 11:10 – 11:45 Susumu Shimoura, University of Tokyo
Nucleon transfer reactions at intermediate energy to exotic nuclei
using inverse kinematics
- 12:00 – 14:00 Lunch
- 14:00 – 14:35 Adrien Matta, University of Surrey
Testing nuclear overlap at and beyond the drip line
- 14:50 – 15:25 Jose Antonio Lay Valera, University of Padova
Two-nucleon transfer with light and heavy nuclei
- 15:40 – 16:10 Coffee break
- 16:10 – 16:45 Sevdalina Dimitrova, INRNE Sofia
Proton induced alpha-particle emission into the continuum of
outgoing energies
- 17:00 Discussion session
Conveners: Pierre Capel, Université Libre de Bruxelles
Wilton Catford, University of Surrey

Friday, November 14

9:00 – 9:35	Pierre Capel, Université Libre de Bruxelles Breakup reactions as a tool to study exotic cluster structures
9:50 – 10:25	Doru Delion, NIPNE-Bucharest Pairing versus quarteting coherence length in nuclei
10:40 – 11:10	Coffee break
11:10 – 12:00	General Discussion & Close Out
12:00 – 14:00	Lunch

