

From nuclear structure to particle-transfer reactions and back

ECT*, November 4-8, 2013

Monday, November 4

- 9:00 – 9:30 Registration
- 9:30 – 9:45 W. Weise, ECT*
Opening of the workshop
- 9:45 – 10:20 L. Corradi, INFN-Legnaro
Signatures of pair correlations in heavy ion transfer reactions : where
we are and what we need (an experimentalist's view)
- 10:35 – 11:05 Coffee break
- 11:05 – 11:40 K. Sekizawa, Univ. of Tsukuba
Time-dependent Hartree-Fock calculation for multinucleon transfer
processes in heavy-ion reactions
- 11:55 – 12:30 K. Bennaceur, Univ. of Lyon/Univ. of Jyvaskyla
Density-independent effective interaction for mean-field and
beyond mean-field calculations
- 12:45 – 14:30 Lunch
- 14:30 – 15:05 F. Flavigny, KU-Leuven
Probing the semi-magicity of ^{68}Ni via the $^3\text{H}(^{66}\text{Ni},^{68}\text{Ni})^1\text{H}$ and
 $^2\text{H}(^{66}\text{Ni},^{67}\text{Ni})^1\text{H}$ transfer reactions
- 15:20 – 15:55 L. Fortunato, Univ. of Padova
Two-neutron pairing correlations in ^{112}Sn , ^{32}Mg and ^{68}Ni ,
investigated through transfer reactions: new insights
- 16:10 – 16:40 Coffee break
- 16:40 Discussion (Convener: L. Corradi, INFN-Legnaro)
- 19:00 Dinner at ECT*

Tuesday, November 5

- 9:00 – 9:35 P. Navratil, TRIUMF
Ab initio many-body calculations of nuclear scattering and reactions
- 9:50 – 10:25 N. Orr, LPC-Caen
Transfer and knockout to probe continuum states of light very neutron-rich nuclei
- 10:40 – 11:10 Coffee break
- 11:10 – 11:45 D. Beaumel, IPN-Orsay
Test of overlap functions from transfer reactions at the neutron dripline
- 12:00 – 14:00 Lunch
- 14:00 – 14:35 M. Grasso, IPN-Orsay
Probing the pairing interaction through two-neutron transfer effects
- 14:50 – 15:25 N. Tsoneva, Univ. of Giessen/INRNE Sofia
Low-energy electric and magnetic excitations relevant to the astrophysics
- 15:40 – 16:10 Coffee break
- 16:10 Discussion (Convener: P. Navratil, TRIUMF)

Wednesday, November 6

- 9:00 – 9:35 B. Tsang, MSU-East Lansing
Neutron spectroscopic factors of the deep-hole states in N=27 isotones
- 9:50 – 10:25 M. Horoi, CMU-Mount Pleasant
The origin of the proton-neutron correlations revealed by the spectroscopic factors of N=28 isotones
- 10:40 – 11:10 Coffee break
- 11:10 – 11:45 E. Viguzzi, INFN-Milano
Medium polarization effects and transfer reactions
- 12:00 – 14:00 Lunch
- 14:00 ECT* Colloquium
M. Ploszajczak (GANIL)
Weakly bound systems: clustering, correlations, and reactions
- 15:00 Individual discussions and collaboration meetings

Thursday, November 7

- 9:00 – 9:35 W. Catford, Univ. of Surrey
Living with transfer as an experimental spectroscopist
- 9:50 – 10:25 A. Gillibert, CEA-Saclay
One nucleon transfer reactions at high neutron-proton asymmetry
- 10:40 – 11:10 Coffee break
- 11:10 – 11:45 A. Macchiavelli, LBNL-Berkley
Three-body forces in the Ca isotopes studied by neutron KO reactions
- 12:00 – 14:00 Lunch
- 14:00 – 14:35 E. Simpson, Univ. of Surrey
Core recoil effects in two-nucleon knockout reactions
- 14:50 – 15:25 A. Deltuva, Univ. of Lisbonne
Recent work on (d,p), (p,d), (p,pn) and (d,d') reactions including excitations of the nuclear core in the Faddeev/AGS equations
- 15:40 – 16:10 Coffee break
- 16:10 Discussion (Convener: W. Catford, Univ. of Surrey)
- 20:00 Conference dinner

Friday, November 8

- 9:00 – 9:35 R.A. Broglia, Univ. of Milano
Where Cooper pair transfer and structure meet: absolute cross sections and new modes of nuclear excitation
- 9:50 – 10:25 M. Matsuo, Niigata Univ.
Two-neutron transfer amplitude having extended tail: from the pair rotation to the giant pair vibration in Sn isotopic chain
- 10:40 – 11:10 Coffee break
- 11:10 – 11:45 D. Delion, NIPNE-Bucharest
Probing pairing interaction by two-proton emission
- 12:00 – 14:00 Lunch
- 14:00 – 14:35 A. Petrovici, NIPNE-Bucharest
Shape coexistence effects on the structure and dynamics of $A \sim 70$ proton-rich nuclei within beyond mean-field
- 14:50 Perspectives (Convener: J. Tostevin, Univ. of Surrey)
- 16:00 Closing of the workshop