ECT*
EUROPEAN CENTRE FOR THEORETICAL STUDIES IN NUCLEAR PHYSICS AND RELATED AREAS

FONDAZIONE BRUNO KESSLER

Director: Prof. **Jochen Wambach**
(Trento and TU Darmstadt)

2020
PROGRAMME OF ACTIVITIES

10-14 FEBRUARY
Determination of the Effective Electron (Anti)-Neutrino Mass
Organisers: L. Gastaldo, (*University of Heidelberg*), K. Valerius (*KIT, Karlsruhe*)

24-28 FEBRUARY
Heavy-Flavor Transport in QCD Matter
Organisers: R. Rapp (*Texas A&M University*), R. Averbeck (*GSI, Darmstadt*), X. Dong (*LBL, Berkeley*), P. Gossiaux (*Subatech, Nantes*), X.-N. Wang (*CCNU, Wuhan*)

23-27 MARCH
Machine Learning for High Energy Physics, on and off the Lattice
Organisers: A. Athenodorou (*Pisa University*), D. Giataganas (*National and Kapodistrian University of Athens*), B. Lucini (*Swansea University*), E. Rinaldi (*Arithmer Inc., Tokyo*), K. Cranmer (*New York University*), C. Alexandrou (*University of Cyprus*)

20-24 APRIL
New Physics Searches in Heavy Ion Collisions
Organisers: M. Drewes (*UCLouvain*), D. D'Enterria (*CERN*), A. Giammanco (*UCLouvain*), J. Hajer (*UCLouvain*)

18-22 MAY
Nuclear Physics Meets Condensed Matter: Symmetry, Topology, and Gauge
Organisers: A. Gezerlis (*University of Guelph*), A. Roggero (*University of Washington*), C. Sa de Melo (*Georgia Institute of Technology*)

25-29 MAY
Neutron Stars as Multi-Messenger Laboratories for Dense Matter
Organisers: I. Tews (*LANL*), B. Giacomazzo (*University of Milano*), S. Guillot (*CNRS, Toulouse*), J. Margueron (*IPN, Lyon*), S. Nissanke (*University of Amsterdam*)

08-12 JUNE
Relativistic Fermions in Flatland: Theory and Application
Organisers: S. Hands (*Swansea University*), H. Gies (*Friedrich-Schiller-Universität Jena*), J. Gracey (*University of Liverpool*), I. Herbut (*Simon Fraser University*)

15-19 JUNE
Tomography of Light Nuclei at an EIC
Organisers: A. Freese (*ANL*), W. Cosyn (*Ghent University & Florida International University*), I. Cloët (*ANL*), P. Shanahan (*MIT*)

22-26 JUNE
Key Reactions in Nuclear Astrophysics
Organisers: A. Tumino (*Università degli Studi di Enna "Kore" & INFN-LNS, Catania*), J. José (*Technical University of Catalonia*), C. Bertulani (*Texas A&M University-Commerce*), R. Diehl (*MPI Munich*), L. Trache (*IFIN-HH Bucharest-Magurele*)

22 JUNE – 10 JULY
TALENT School:
Machine Learning applied to Nuclear Physics, Experiment and Theory
Organisers: M. Hjorth-Jensen (*Michigan State University and University of Oslo*), D. Bazin (*Michigan State University*), M. Kuchera (*Davidson College*), S. Liddick (*Michigan State University*), R. Ramamujan (*Davidson College*)

30 JUNE – 4 JULY
Diffractive and Electromagnetic Processes at High Energies
Organisers: R. Schicker (*University of Heidelberg*), G. Contreras Nuno (*Czech Technical University*), E. Kryshen (*Kurchatov Institute*), A. Szczurek (*Institute of Nuclear Physics Krakow*)

06-10 JULY
Saturation and Diffraction at the LHC and the EIC
Organisers: C. Royon (*Kansas University*), A. Sabio Vera (*Universidad Autónoma de Madrid*), S. Schlichting (*University of Bielefeld*), A. Deshpande (*Stony Brook University*), G. Soyez (*IphT, Saclay*), M. Hentschinski (*Universidad de Las Americas Puebla*)

06-31 JULY
Doctoral Training Programme:
High-Energy and Nuclear Physics within Quantum Technologies
Organisers: P. Hernandez (*University of Valencia*), S. Montangero (*University of Padova*), Y. Omar (*University of Lisbon*), E. Rico (*UPV/EHU, Ikerbasque*)

13-17 JULY
Probing Nuclear Physics with Neutron Star Mergers
Organisers: C. Fryer (*LANL & George Washington University*), J. Lippuner (*LANL*), M. Mumpower (*LANL*), A. Steiner (*University of Tennessee*), B. Cote (*Konkoly Observatory*), R. Surman (*University of Notre Dame*), S. Rosswog (*Stockholm University*)

20-24 JULY
STRANU: Hot Topics in STRANgeness NUclear and Atomic Physics
Organisers: K. Piscicchia (*Centro Fermi, Roma*), C. Curceanu (*LNF-INFN, Frascati*), D. Gazda (*Czech Academy of Sciences*), E. Hyama (*Kyushu University - RIKEN Nishina Center, Wako*), P. Moskal (*Jagiellonian University, Krakow*), F. Sakuma (*RIKEN Nishina Center, Wako*)

07-11 SEPTEMBER
Theoretical and Experimental Challenges in Flavour Hadrons, Heavy Quarkonia and Multiquark Physics
Organisers: M. Barabanov (*JINR, Dubna*), B. El-Bennich (*Universidade Cruzeiro do Sul*), E. Santopinto (*INFN, Genova*), E. Epelbaum (*Ruhr-Universität Bochum*), A. Bashir (*Universidad Michoacana de San Nicolás de Hidalgo*)

28 SEPTEMBER – 02 OCTOBER
Exploring High-MuB Matter With Rare Probes
Organisers: E. Scomparin (*INFN, Torino*), T. Galatyuk (*GSI & TU Darmstadt*), M.P. Lombardo (*INFN, Florence*), R. Rapp (*Texas A&M University*), G. Usai (*University of Cagliari & INFN*)

05-09 OCTOBER
Spin and Hydrodynamics in Relativistic Nuclear Collisions
Organisers: F. Becattini (*University of Florence & INFN*), W. Florkowski (*Jagellonian University, Krakow*), X.-G. Huang (*Fudan University*), D. Rischke (*Goethe-Universität Frankfurt*)

12-16 OCTOBER
LFC20: Strong Interactions from QCD to New Strong Dynamics at LHC and Future Colliders
Organisers: G. Corcella (*LNF-INFN, Frascati*), S. De Curtis (*INFN, Florence*), S. Moretti (*University of Southampton*), G. Pancheri (*LNF-INFN, Frascati*), R. Tenchini (*INFN, Pisa*), M. Vos (*IFIC, Valencia*)

26-30 OCTOBER
Nuclear and Atomic Transitions as Laboratories for High Precision Tests of Quantum Gravity Inspired Models
Organisers: A. Marciano (*Fudan University*), S. Alexander (*Brown University, Providence*), E. Barberio (*Melbourne University*), C. Curceanu (*LNF-INFN, Frascati*), K. Piscicchia (*Centro Fermi, Roma*), N. Yunes (*University of Illinois at Urbana-Champaign*)

02-06 NOVEMBER
Advances in Many-Body Theories: From First Principle Methods to Quantum Computing and Machine Learning
Organisers: M. Hjorth-Jensen (*Michigan State University & University of Oslo*), D.J. Dean (*ORNL, Oak Ridge*), T. Papenbrock (*University of Tennessee & ORNL, Oak Ridge*), M. Savage (*INT & University of Washington*), G. Hagen (*ORNL, Oak Ridge*), S. Gandolfi (*LANL*), J. Holt (*TRIUMF, Vancouver*)

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