

# Programma INFN2022

## Lunedì 9 maggio

### 8:30 REGISTRAZIONE

09:00 – 09:15 Saluti. E. Previtali (Direttore Laboratori Nazionali del Gran Sasso)

### Astrofisica nucleare I (chair G. Pagliaroli)

09:15 – 09:45 (25+5) Nuclear Physics and Neutron Stars Observations: Probing the Dense Matter Equation of State, F. Burgio

09:45– 10:15 (25+5) Beyond Iron peak: focus trasversale sulle sorgenti di neutroni  $^{13}\text{C}(\alpha,n)$  e  $^{22}\text{Ne}(\alpha,n)$ , e sulla  $^{12}\text{C}+^{12}\text{C}$ , C. Massimi

10:15 – 10:35 (15+5) Was GW190814 a Black Hole–Strange Quark Star system?, D. Logoteta

10:35 – 10:55 (15+5) Numerical and experimental investigation on compact binary ejecta plasma opacity relevant for kilonova transient signals, A. Pidotella

### 10:55 – 11:15 pausa caffè e poster session

### Plasma di quark e gluoni I (chair P. Antonioli)

11:15 – 11:45 (25+5) Produzione e trasporto di quark pesanti nel QGP, L. Oliva

11:45 – 12:15 (25+5) ALICE upgrade and physics perspectives in LHC Run 3, D. Colella

12:15 – 12:35 (15+5) The physics program of the NA60+ experiment at the CERN SPS, G. Alocco

12:35 – 12:55 (15+5) Coalescence plus fragmentation approach for heavy hadrons production: spectra and ratios in AA and pp collisions, V. Minissale

### 12:55 – 14:30 pranzo

### Astrofisica nucleare II (chair D. Santonocito)

14:30 – 14:50 (15+5) The relevance of Muons and Trapped Neutrinos in the microphysics of Binary Neutron Star mergers, E. Loffredo

14:50 – 15:10 (15+5) LUNA at LNGS: Status and perspectives, A. Cacioli

15:10 – 15:30 (15+5) Thermal effects on nuclear matter properties, L. Tonetto

15:30 – 15:50 (15+5) ERNA commissioning for  $^{12}\text{C}(\alpha,\gamma)^{16}\text{O}$ , C. Santonastaso

15:50 – 16:10 (15+5) Shedding light on  $^{17}\text{O}(n,\alpha)^{14}\text{C}$  reaction at astrophysical energies with Trojan Horse Method and Asymptotic Normalization Coefficient, G.L. Guardo

### 16:10 – 16:20 pausa caffè e poster session

### Dinamica di quark e adroni I (chair E. Santopinto)

16:20 – 16:50 (25+5) Hadron structure, spectroscopy and exotics at JLab, EIC and LHCb: the theory perspective, J. Ferretti

16:50 – 17:20 (25+5) Baryon structure and spectrum, A. D'Angelo

17:20 – 17:40 (15+5) Beyond hadronic physics @ JLAB, M. Bondì

17:40 – 18:00 (15+5) Tetraquarks and pentaquarks at LHCb, A. Giachino

18:00 – 18:30 (25+5) Il progetto INFN\_E: applicazioni di rivelatori e tecnologie nel campo dell'energia, M. Ripani

18:30 – 19:30 POSTER SESSION

## Martedì 10 Maggio

### Struttura nucleare e dinamica delle reazioni I (chair G. Colo')

09:00 – 09:30 (25+5) Nuclear spectroscopy with the gamma-ray tracking array AGATA at LNL, J.J. Valiente-Dobon.

09:30 – 10:00 (25+5) The NUMEN project: probing nuclear response to weak interaction by nuclear reactions, D. Carbone

10:00 – 10:30 (25+5) Ab Initio Computations of Ground States and Optical Potentials in Nuclei, C. Barbieri

10:30 – 10:50 (15+5) Study of intruder states in  $^{83}\text{Se}$  via lifetime measurements, J. Pellumay

### 10:50 – 11:05 pausa caffè e poster session

### Plasma di quark e gluoni II (chair G. Bruno)

11:05 – 11:25 (15+5) Inspecting the charm hadronization via measurements of charm baryon production in hadronic collisions with the ALICE experiment at the LHC, M. Faggin

11:25 – 11:45 (15+5) Strange hadron production in and out of jets in proton-proton collisions with ALICE, C. De Martin

11:45 – 12:05 (15+5) Charged particle production as a function of underlying event-activity and search for jet-like modifications in small systems with ALICE, S. Tripathy

12:05 – 12:25 (15+5) Measurement of light (anti)nuclei production with ALICE A. Albino

12:25 – 12:45 (15+5) Strangeness production in pp as a function of particle multiplicity and effective energy with ALICE, F. Ercolessi

### 12:45– 14:20 pranzo

### Dinamica di quark e adroni II (chair A. Fantini)

14:20 – 14:40 (15+5) Particle Identification by the forward and backward RICHes of ATHENA collaboration at EIC, C. Chatterjee

14:40 – 15:00 (15+5) Kaonic atoms with SIDDHARTA-2 at the DAFNE collider, F. Sgaramella

15:00 – 15:20 (15+5) Kaonic atoms beyond SIDDHARTA-2: future measurements and perspectives at the DAFNE collider, A. Scordo

15:20 – 15:40 (15+5) The dual Ring Imaging Cherenkov detector for the Electron-Ion Collider, S. Vallarino

### 15:40 – 16:20 pausa caffè e poster session

### Simmetria e Interazioni fondamentali (chair M. Viviani)

16:20 – 16:50 (25+5) Esperimento LEA, Antimateria a bassa energia, L. Venturelli

16:50 – 17:20 (25+5) The search for electric dipole moments of charged particles using storage rings, G. Tagliente

17:20 – 17:40 (15+5) Underground tests of Quantum Mechanics: the Pauli Exclusion Principle violation and Collapse Models, C. Curceanu

17:40 – 18:00 (15+5) The FAMU experiment: measurement of the ground state hyperfine splitting of muonic hydrogen, C. Pizzolotto

19.00 **SOCIAL DINNER**

# Mercoledì 11 maggio

## Struttura nucleare e dinamica delle reazioni II (chair R. Nania)

- 09:00 – 09:20 (15+5) Investigating three-nucleon forces with current and future gravitational wave detections, A. Sabatucci
- 09:20 – 09:40 (15+5) Heavy ion double charge exchange reactions and their role in probing double beta decay nuclear matrix elements, J. Bellone
- 09:40 – 10:00 (15+5) Ruolo del grado di clusterizzazione del  ${}^6\text{Li}$  nelle reazioni di transfer dirette, S.S. Perrotta
- 10:00 – 10:20 (15+5) The PREX-II measurement of the  ${}^{208}\text{Pb}$  Neutron Skin Thickness, G. M. Urciuoli

## 10:20 – 10:50 pausa caffè e poster session (Riunione per valutazione poster)

## Applicazioni e interdisciplinarietà della fisica nucleare (chair E. Scifoni)

- 10:50 – 11:20 (25+5) Nuclear Physics applications in Medicine: State of the Art, F. Tommasino
- 11:20 – 11:40 (15+5) The FOOT (Fragmentation of Target) experiment: an overview and first results, M. Morrocchi
- 11:40 – 12:00 (15+5) Proton-induced nuclear reactions on natV and  ${}^{49}\text{Ti}$  for the theranostic  ${}^{47}\text{Sc}$  production: preliminary cross-section results, L. De Dominicis
- 12:00 – 12:20 (15+5) Nuclear Quantum Simulations on Quantum Computers in the Optimal Control Context, P. Luchi

## 12:20 – 14:00 pranzo

## Sessione conclusiva (chair M. Mannarelli and A. Formicola)

- 14:00 – 14:20 (15+5) Rivelazione di neutrini solari della catena pp e del ciclo CNO in Borexino, N. Rossi
- 14:20 – 14:40 (15+5) ECFA: Early-Career Researchers Panel, V. Zaccolo

## 14:40 – 16:00 Premiazione poster da parte dei Presidenti di commissione e talk brevi

## 16:00 FINE LAVORI e VISITA IN GALLERIA