

ETTORE MAJORANA FOUNDATION AND CENTRE FOR SCIENTIFIC CULTURE

1963–2023

60th ANNIVERSARY OF ACTIVITIES



SUMMARY OF THE 2023 COURSES — ERICE

All Courses are sponsored by the World Federation of Scientists (WFS), the Sicilian Regional Government (ERS), the Italian Ministry of Education, University and Scientific Research and the Galileo Galilei Foundation (GGF). Some of the Courses are under the sponsorship of the Italian Ministry of Foreign Affairs, the Italian Ministry of Health, the North Atlantic Treaty Organization (NATO), the American National Science Foundation (NSF), the Italian National Research Council (CNR), the Weizmann Institute of Science, the European Physical Society (EPS), the Italian National Institute for Nuclear Physics (INFN), the Enrico Fermi Historical Museum of Physics and Study and Research Centre, the World Wildlife Fund (WWF), the Commission of the European Communities (CEC), some of the main Italian and foreign Universities and Research Centres, and the World Laboratory

- INTERNATIONAL SCHOOL OF EPIDEMIOLOGY AND PREVENTIVE MEDICINE «GIUSEPPE D'ALESSANDRO»
Directors: G.M. FARA – G. GIAMMANCO – C. SIGNORELLI – M. SZKLO – F. VITALE
59th Course: *Hospitals and healthcare infrastructures of the future. Planning, designing and managing the facilities for the new global healthcare: Bridging the gap between designers and Public Health professionals*
Directors: S. CAPOLONGO – A. CASUCCIO – D. D'ALESSANDRO – M. FERRANTE
15 – 18 March 2023
- INTERNATIONAL SCHOOL OF QUANTUM ELECTRONICS
Directors: A.N. CHESTER – D.S. WIERSMA
66th Course: *The frontiers of attosecond and ultrafast X-ray science*
Directors: L. DI MAURO – M. NISOLI
26 – 31 March 2023
- INTERNATIONAL SCHOOL OF CARDIAC SURGERY
Directors: G. GEROSA – U.F. TESLER
9th Course: *From minimal invasive to microinvasive cardiac surgery*
Directors: G. GEROSA – M. PILATO
2 – 5 April 2023
- INTERNATIONAL CONFERENCE ON MACHINE LEARNING FOR HEP
Directors: E. KULIKOVA – V. VAGNONI
11 – 18 April 2023
- CONFERENZA ITALIANA DEGLI STUDENTI DI FISICA (CISF) – VII
14 April 2023
- INTERNATIONAL SCHOOL OF MEDICAL SCIENCES AND INTERNATIONAL SCHOOL OF CARDIOLOGY
Directors: A. ZICHICHI – I. CARRECA and A. BRANZI – F. FEDELE – S. NOVO
Joint Workshop: *Meet the experts “Advances in diagnosis and therapy of cancer in adult and elderly people” focus on: Breast cancer (and not only)*
Directors: A.R. GALASSI – G. NOVO – V. POLIZZI
18 April 2023
- INTERNATIONAL SCHOOL OF CARDIOLOGY
Directors: A. BRANZI – F. FEDELE – S. NOVO
23rd Workshop: *Advances in cardiovascular diseases and therapy*
Directors: A.R. GALASSI – G. NOVO – V. POLIZZI
18 – 22 April 2023
- INTERNATIONAL SCHOOL OF NEUTRON SCIENCE AND INSTRUMENTATION
Directors: C. ANDREANI – R.G.M. CACIUFFO – R. MCGREEVY
7th Workshop: *Science diplomacy*
Directors: R.G.M. CACIUFFO – G. OTTAVIANI – A. ZICHICHI
2 – 7 May 2023

- INTERNATIONAL SCHOOL OF ETHOLOGY «DANILO MAINARDI»
Directors: P. PALANZA – S. PARMIGIANI
50th Course: *Ethology: Past, present and future*
Directors: C. AGRILLO – P. PALANZA – S. PARMIGIANI
3 – 7 May 2023
- INTERNATIONAL SCHOOL OF NONEQUILIBRIUM PHENOMENA
Directors: A. LANZARA – M.G. PALMA – B. SPAGNOLO
3rd Workshop: *Waveguide Quantum Electrodynamics (WQED23)*
Directors: H. BARANGER – D. CHANG – F. CICCARELLO – P. RABL
8 – 13 May 2023
- INTERNATIONAL SCHOOL OF ETHOLOGY «DANILO MAINARDI»
Directors: P. PALANZA – S. PARMIGIANI
51st Course: *Play and the evolution of creative societies*
Directors: G. BÜRGHARDT – E. PALAGI – S. PELLIS – J. SCHANK
14 – 18 May 2023
- INTERNATIONAL SCHOOL OF STATISTICAL PHYSICS
Directors: P. HÄNGGI – F. MARCHESONI
23rd Course: *Frontiers in water biophysics*
Directors: A. CESARO – L. COMEZ – G. FRANZESE
19 – 24 May 2023
- INTERNATIONAL SCHOOL OF MATHEMATICS «GUIDO STAMPACCHIA»
Directors: F. GIANNESSI – now G. BUTTAZZO – M. THÉRA
75th Course: *Meeting on nonlinear evolution PDEs, fluid dynamics and transport equations*
Directors: F. ANCONA – L. BERSELLI – S. BIANCHINI – D. DONATELLI – P. SECCHI
25 – 31 May 2023
- INTERNATIONAL SCHOOL OF CRYSTALLOGRAPHY
Director: T.L. BLUNDELL
58th Course: *Structural drug design 2023: Biology, chemistry, and computers*
Directors: C. DEAN – G. SCAPIN – F. VON DELFT
2 – 10 June 2023
- INTERNATIONAL SCHOOL OF PRECISION MEDICINE AND LABORATORY
Directors: M. CIACCIO – F. SALVATORE
1st Course: *Clinical laboratory medicine in the era of precision medicine*
Directors: M. CIACCIO – M. PLEBANI – F. SALVATORE
11 – 13 June 2023
- INTERNATIONAL SCHOOL OF SUBNUCLEAR PHYSICS
Directors: A. ZICHICHI – A. ZOCCOLI
59th Course: *Searching the unexpected: Energy, luminosity, precision, small signals*
Directors: A. BETTINI – A. MASIERO
14 – 23 June 2023
- INTERNATIONAL SCHOOL OF SOLID STATE PHYSICS
Director: G. BENEDEK
83rd Course: *Infrared and Terahertz quantum*
Directors: S. DHILLON – O. MITROFANOV – A. TREDICUCCI – M.S. VITIELLO
25 June – 1 July 2023
- INTERNATIONAL SCHOOL OF MATERIALS FOR SUSTAINABLE DEVELOPMENT AND ENERGY
Director: A. TERRASI
3rd Course: *Materials for renewable energy and sustainability*
Directors: D. CAHEN – D. GINLEY – R. O'HAYRE – A. SLAUOI – A. TERRASI – A. WEIDENKAFF
2 – 9 July 2023
- INTERNATIONAL SCHOOL OF BIOLOGICAL MAGNETIC RESONANCE
Director: J.D. PUGLISI
19th Course: *Frontiers in biophysics*
Directors: J.D. PUGLISI – E. VIANI PUGLISI
10 – 17 July 2023

- INTERNATIONAL SCHOOL OF ATOMIC AND MOLECULAR SPECTROSCOPY
Director: B. DI BARTOLO
37th Workshop: *Advances and future directions in luminescent materials and devices*
Director: M. CESARIA
10 – 18 July 2023
- INTERNATIONAL SCHOOL OF NANOMEDICINE
Directors: M. FERRARI – M. MASSERINI
6th Course: *The glycobiology of cell metabolic processes at the nanoscale in human pathology*
Directors: M. AURELI – O.K. GREINER-TOLLERSRUD
19 – 24 July 2023
- INTERNATIONAL SCHOOL OF PARTICLE ACCELERATORS «KJELL JOHNSEN, GUSTAV VOSS AND EDMUND WILSON»
Director: T.M. TAYLOR
4th Course: *Novel acceleration schemes and enabling technologies*
Directors: R. ASSMANN – L. ROSSI – F. TECKER
27 July – 2 August 2023
- INTERNATIONAL SCHOOL OF SOLID STATE PHYSICS
Director: G. BENEDEK
84th Course: *Quantum complex matter manipulation. From Majorana exchange interaction and Fano resonances to manipulation of quantum entanglement*
Director: A. BIANCONI
3 – 9 August 2023
- INTERNATIONAL SEMINARS ON PLANETARY EMERGENCIES
Chairman: A. ZICHICHI
55th Session – Co-Chairman: C. GALBIATI
18 – 24 August 2023
- HYDROGEN SYMPOSIUM
2nd Session
Chairmen: C. DI FIGLIO – S.F. ZICHICHI
22 – 25 August 2023
- INTERNATIONAL SCHOOL OF LIQUID CRYSTALS
Director: C. ZANNONI
26th Workshop: *Biophotonics at nanoscale: From smart nanomaterials to advanced optical technologies for life, environmental science and nanomedicine*
Directors: A. D’ALESSANDRO – P. PASINI – C. ZANNONI
26 – 31 August 2023
- INTERNATIONAL CONFERENCE ON QUANTUM TECHNOLOGIES SQMS: EARLY RESULTS
Directors: V. BONVICINI – S. LAMI MOSCHENI
1 – 7 September 2023
- INTERNATIONAL SCHOOL OF NEUROSCIENCES «SIR JOHN ECCLES»
Directors: P.F. FERRARI – G. RIZZOLATTI
13th Course: *Neurobiology of social behaviours*
Directors: P.F. FERRARI – V. GRINEVICH – F. PAPALEO – S. WAGNER
8 – 14 September 2023
- GIORNATE INTERNAZIONALI DI STUDI SULL’AREA ELIMA «GIUSEPPE NENCI»
Decime Giornate Internazionali di Studi sull’Area Elima e la Sicilia Occidentale
Directors: C. AMPOLO – R. GIGLIO – A. MAGNETTO
14 – 16 September 2023
- INTERNATIONAL SCHOOL OF NUCLEAR PHYSICS
Directors: A. FAESSLER – now M. BUBALLA – C. FISCHER
44th Course: *From quarks and gluons to hadrons and nuclei*
Directors: M. BUBALLA – C. FISCHER
18 – 24 September 2023

- INTERNATIONAL SCHOOL OF QUANTUM ELECTRONICS
Directors: A.N. CHESTER – D.S. WIERSMA
67th Course: *Progress in photoacoustic and photothermal phenomena: Focus on biomedical, nanoscale, NDE, gas sensing and thermophysical phenomena and technologies*
Directors: R. LI VOTI – A. MANDELIS
24 September – 1 October 2023
- INTERNATIONAL SCHOOL OF PHARMACOLOGY «GIAMPAOLO VELO»
Directors: M. LINDQUIST – P. MINUZ – U. MORETTI
92nd Workshop: *Ecopharmacovigilance: Impact of pharmaceuticals in the environment*
Directors: M.R. EDWARDS – M. LINDQUIST – U. MORETTI – G. PAOLONE – R. SORRENTINO
25 – 28 September 2023
- INTERNATIONAL SCHOOL OF PHARMACOLOGY «GIAMPAOLO VELO»
Directors: M. LINDQUIST – P. MINUZ – U. MORETTI
93rd Workshop: *Platelets and antiplatelet agents*
Directors: P. MINUZ – C. PATRONO
26 – 30 September 2023
- INTERNATIONAL SCHOOL OF STATISTICAL PHYSICS
Directors: P. HÄNGGI – F. MARCHESONI
24th Course: *Quantum technology from fundamental science to real world applications*
Directors: D. BAJONI – S.L. PORTALUPI – R. TROTTA
2 – 7 October 2023
- INTERNATIONAL SCHOOL OF SCIENTIFIC JOURNALISM AND COMMUNICATION
Director: P. CAMPANA
11th Course
Directors: E. COSSI – F. BASSI
7 – 11 October 2023
- INTERNATIONAL SCHOOL OF NONEQUILIBRIUM PHENOMENA
Directors: A. LANZARA – M.G. PALMA – B. SPAGNOLO
4th Course: *New Trends in Nonequilibrium Statistical Mechanics*
Directors: A. CAROLLO – A. LANZARA – M.G. PALMA – B. SPAGNOLO
9 – 15 October 2023
- INTERNATIONAL SCHOOL OF BIOPHYSICS «ANTONIO BORSELLINO»
48th Course: *Memos for biophysics into the future: Lightness, quickness, exactitude, visibility, multiplicity, and consistency*
Directors: M. DALLA SERRA – A. DIASPRO – C. VIAPPIANI
16 – 22 October 2023
- INTERNATIONAL SCHOOL OF ETHOLOGY «DANILO MAINARDI»
Directors: P. PALANZA – S. PARMIGIANI
52nd Course: *The athletic Ape: Merging human evolutionary biology with sport science*
Directors: D. LONGMAN – D. PONZI – S. PARMIGIANI
17 – 21 October 2023
- INTERNATIONAL SCHOOL OF RADIATION DAMAGE AND PROTECTION
Directors: M. BRUGGER – S. ROESLER – V. VYLET
12th Course: *Challenges in radiation damage and radiation protection during design and operation of accelerator facilities and space missions*
Directors: R. GARCIA ALIA – H.-S. LEE – N. MOKHOV
23 – 30 October 2023
- INTERNATIONAL MEETING ON ORTHOPEDICS
Director: C. SUGAMELI
2 – 4 November 2023
- GIORNATE INTERNAZIONALI DI STUDI SULL'AREA ELIMA «GIUSEPPE NENCI»
Undicesime Giornate Internazionali di Studi sull'Area Elima e la Sicilia Occidentale
Directors: C. AMPOLO – R. GIGLIO – A. MAGNETTO
4 – 20 November 2023

- INTERNATIONAL SCHOOL ON TREASURES OF ART AND SCIENCE
 Director: L. ZICHICHI
 13th Seminar
 Director: L. ZICHICHI
 4 – 20 November 2023

- INTERNATIONAL SCHOOL OF ETHOLOGY «DANILO MAINARDI»
 Directors: P. PALANZA – S. PARMIGIANI
 53rd Course: *Urban mammals*
 Directors: M. APOLLONIO – S. BERTOLINO – F. FERRETTI – A. MARTINOLI – N. MUCCINO – M. SCANDURA
 20 – 24 November 2023

- INTERNATIONAL SCHOOL OF EPIDEMIOLOGY AND PREVENTIVE MEDICINE «GIUSEPPE D’ALESSANDRO»
 Directors: G.M. FARA – G. GIAMMANCO – C. SIGNORELLI – M. SZKLO – F. VITALE
 61st Course
 Director: G.M. FARA
 20 – 25 November 2023

- INTERNATIONAL SCHOOL OF NONEQUILIBRIUM PHENOMENA
 Directors: A. LANZARA – M.G. PALMA – B. SPAGNOLO
 5th Course: *Chaos and information dynamics in quantum many body systems*
 Directors: D.A. ABANIN – A. POLKOVNIKOV – A. SILVA
 26 November – 2 December 2023

- INTERNATIONAL SCHOOL OF IUS COMMUNE
 Directors: M. BELLOMO – O. CONDORELLI – W. DECOCK – K. PENNINGTON
 42nd Course: *International law and interfaith relations in the “ius commune” tradition*
 Directors: O. CONDORELLI – W. DECOCK – D. FEDELE
 3 – 7 December 2023

- INTERNATIONAL SCHOOL OF BRAIN CELLS AND CIRCUITS «CAMILLO GOLGI»
 Directors: E. D’ANGELO – C. GANDINI WHEELER-KINGSHOTT
 8th Course: *Modeling the brain*
 Directors: E. D’ANGELO – C. GANDINI WHEELER-KINGSHOTT
 8 – 13 December 2023

**More information about the activities of the Ettore Majorana Foundation
 can be found on the WWW at the following address:
<https://ettoremajoranafoundation.it>**