

«ETTORE MAJORANA» FOUNDATION AND CENTRE FOR SCIENTIFIC CULTURE

TO PAY A PERMANENT TRIBUTE TO ARCHIMEDES AND GALILEO GALILEI, FOUNDERS OF MODERN SCIENCE
AND TO ENRICO FERMI, THE "ITALIAN NAVIGATOR", FATHER OF THE WEAK FORCES



SUMMARY OF THE 2024 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 CARDIOLOGY
Directors: A. BRANZI – F. FEDELE – S. NOVO
24th Workshop: *Advances in cardiovascular diseases and therapy*
Director: S. NOVO
20 – 24 March 2024
- INTERNATIONAL SCHOOL OF PHARMACOLOGY «GIAMPAOLO VELO»
Directors: M. LINDQUIST – P. MINUZ – U. MORETTI
94th Course: *Inflammation and lipid signaling in disease pathogenesis*
Directors: B. BRÜNE – P. PATRIGNANI – A. SALA – D. STEINHILBER
25 – 28 March 2024
- INTERNATIONAL SCHOOL ON BIOELECTROMAGNETISM «ALESSANDRO CHIABRERA»
Directors: F. BERSANI – M.R. SCARFÌ
12nd Workshop: *Electromagnetic fields and health – Epidemiological approach*
Directors: M. GUXEN – A. HUSS
6 – 12 April 2024
- INTERNATIONAL SCHOOL OF EPIDEMIOLOGY AND PREVENTIVE MEDICINE «GIUSEPPE D'ALESSANDRO»
Directors: G.M. FARA – G. GIAMMANCO – C. SIGNORELLI – M. SZKLO – F. VITALE
61st Course: *Embracing a one health strategy to fight healthcare associated infections and antimicrobial resistance: Public health priorities and challenges*
Directors: A. AGODI – M. BARCHITTA – M.T. MONTAGNA – S. TAFURI
13 – 18 April 2024
- INTERNATIONAL SCHOOL OF MOLECULAR ONCOLOGY
Director: F.M. BUONAGURO
3rd Course: *Molecular characterization of cancers and target therapy*
Directors: F. PERRI – M.L. TORNESELLO
19 – 22 April 2024
- INTERNATIONAL SCHOOL OF COMPLEXITY
Director: A. ZICHICHI – Co-Directors: G. BENEDEK – A. RAPISARDA – C. TSALLIS
18th Course: *Machine learning approaches for complexity*
Directors: M. LULLI – A. MARCIANO – R. PASECHNIK – E. ZAPPALA
22 – 28 April 2024
- INTERNATIONAL SCHOOL OF SOLID-STATE PHYSICS
Director: G. BENEDEK
85th Workshop: *Nonequilibrium phenomena in strongly correlated ultracold matter*
Directors: G. DEL PACE – M. INGUSCIO – G. ROATI
9 – 15 May 2024
- INTERNATIONAL SCHOOL OF ETHOLOGY «DANILO MAINARDI»
Directors: P. PALANZA – S. PARMIGIANI
54th Course: *Sexual selection in a changing world*
Directors: A. PILASTRO – G. ROSENTHAL – T. SZEKELY
17 – 21 May 2024

- INTERNATIONAL SCHOOL OF MATHEMATICS «GUIDO STAMPACCHIA»
Directors: F. GIANNESSE – now G. BUTTAZZO – M. THÉRA
76th Workshop: *Advances in nonlinear analysis and optimization*
Directors: A. BARBAGALLO – H. FRANKOWSKA – L. MALLOZZI – G. MOSCARIELLO
23 – 29 May 2024
- INTERNATIONAL SCHOOL OF CRYSTALLOGRAPHY
Directors: T.L. BLUNDELL – now G. SCAPIN
59th Course: *Powder diffraction: Advancing real materials in the information era*
Directors: D. BILLING – M. LEONI – D. SISAK JUNG
31 May – 8 June 2024
- INTERNATIONAL SCHOOL OF NEUROSCIENCES «SIR JOHN ECCLES»
Directors: P.F. FERRARI – G. RIZZOLATTI
14th Course: *Minimal cognition: Brained or brainless biological intelligence*
Directors: P.F. FERRARI – L. REGOLIN – G. VALLORTIGARA
9 – 13 June 2024
- INTERNATIONAL SCHOOL ON TREASURES OF ART AND SCIENCE
Director: L. ZICHICHI
17th Seminar: *Warhol, Schifano e la Pop Art*
Directors: G. BRUNO GUERRI – M. DI CAPUA – P. LETTIERI
13 June – 4 November 2024
- INTERNATIONAL SCHOOL OF SUBNUCLEAR PHYSICS
Directors: A. ZICHICHI – A. ZOCCOLI
60th Course: *News from the four interactions*
Directors: A. BETTINI – A. MASIERO
14 – 23 June 2024
- INTERNATIONAL SCHOOL OF STATISTICAL PHYSICS
Directors: P. HÄNGGI – F. MARCHESONI
25th Course: *Quantum network for education and scientific training*
Directors: M. MARSI – M.G. PALMA – R. TROTTA
24 – 29 June 2024
- INTERNATIONAL SCHOOL OF ETHOLOGY «DANILO MAINARDI»
Directors: P. PALANZA – S. PARMIGIANI
55th Course: *Towards a new science of mental disorders: Bridging evolution and genetics*
Directors: M. DEL GIUDICE – A.D. HUNT
1 – 5 July 2024
- INTERNATIONAL SCHOOL OF NANOMEDICINE
Directors: M. FERRARI – M. MASSERINI
7th Course: *Challenges and prospects of nanomedicine for brain targeting*
Director: F. RE
1 – 5 July 2024
- INTERNATIONAL SCHOOL OF SOLID-STATE PHYSICS
Director: G. BENEDEK
86th Workshop: *Structured materials and structured light*
Directors: F. CAPASSO – O. MITROFANOV – M.S. VITIELLO
6 – 12 July 2024
- INTERNATIONAL SCHOOL OF SOLID STATE PHYSICS
Director: G. BENEDEK
87th Workshop: *Unconventional computing: Materials, science, informatics, hardware, software*
Directors: V. BRAGAGLIA – M. FANCIULLI – S. STEPNEY – W.G. VAN DER WIEL
6 – 12 July 2024
- INTERNATIONAL SCHOOL OF SOLID STATE PHYSICS
Director: G. BENEDEK
88th Workshop: *Epioptics and Xenos*
Directors: A. CRICENTI – A. MOLLE
6 – 12 July 2024
- INTERNATIONAL SCHOOL OF MATERIALS FOR SUSTAINABLE DEVELOPMENT AND ENERGY
Director: A. TERRASI
4th Course: *Nanostructured solid liquid interface – NanoSoLI 2024*
Directors: E. ERDEM – L. FALCIOLA – S. MIRABELLA
13 – 18 July 2024

- INTERNATIONAL SCHOOL OF BIOLOGICAL MAGNETIC RESONANCE
Director: J.D. PUGLISI
20th Course: *Frontiers in biophysics*
Directors: A. GRONENBORN – J.D. PUGLISI – E. VIANI
19 – 25 July 2024
- INTERNATIONAL SCHOOL OF COSMIC RAY ASTROPHYSICS «MAURICE M. SHAPIRO»
23rd Course: *Multi messenger astroparticle physics*
Directors: J.R. HÖRANDEL – R. SPARVOLI – T.S. STANEV – J.P. WEFEL
20 – 28 July 2024
- NATIONAL SEMINAR ON: LA CASSA L'AVVOCATURA, IL TEMPO E LE ISTITUZIONI
Directors: V. GALLUZZO – S. LONGO
26 July 2024
- INTERNATIONAL SCHOOL OF NONEQUILIBRIUM PHENOMENA
Directors: A. LANZARA – M.G. PALMA – B. SPAGNOLO
6th Course: *Astroparticle physics, dark matter and high energy physics*
Directors: G. MARSELLA – S. MC MULDRICH – E. PIAN
1 – 7 August 2024
- INTERNATIONAL SEMINARS ON PLANETARY EMERGENCIES
Chairman: A. ZICHICHI
56th Session – Co-Chairman: C. GALBIATI
8 – 14 August 2024
- INTERNATIONAL SCHOOL ON TREASURES OF ART AND SCIENCE
Director: L. ZICHICHI
18th Seminar
Director: L. ZICHICHI
14 – 24 August 2024
- INTERNATIONAL SCHOOL OF MUSICAL SCIENCES
Director: R. GIULIANI
5th Course: *L'Europa musicale di Giacomo Puccini (1858–1924)*
14 – 24 August 2024
- INTERNATIONAL SCHOOL OF MATHEMATICS «GUIDO STAMPACCHIA»
Directors: F. GIANNESI – now G. BUTTAZZO – M. THÉRA
77th Workshop: *Variational analysis and applications*
Directors: M. AKIAN – M. HINTERMÜLLER – F. TOMARELLI
1 – 7 September 2024
- INTERNATIONAL SCHOOL ON MASS SPECTROMETRY
Director: G. GIORGI
2nd Course: *Ion mobility mass spectrometry. Fundamentals, advances, and applications*
Director: D.E. CLEMMER
9 – 14 September 2024
- INTERNATIONAL SCHOOL OF NUCLEAR PHYSICS
Directors: A. FAESSLER – now M. BUBALLA – C. FISCHER
45th Course: *Nuclei in the laboratory and in stars*
Directors: M. BUBALLA – C. FISCHER
16 – 22 September 2024
- INTERNATIONAL SCHOOL OF IUS COMMUNE
Directors: M. BELLOMO – O. CONDORELLI – W. DECOCK – K. PENNINGTON
43rd Course: *Common good and common goods in the tradition of the ius commune*
Directors: O. CONDORELLI – W. DECOCK – F. TREGGIARI
23 – 27 September 2024
- INTERNATIONAL SCHOOL ON TREASURES OF ART AND SCIENCE
Director: L. ZICHICHI
19th Seminar: *Dagli Elimi a Federico II. Fondazione e rinascita della città di Erice*
Director: L. ZICHICHI
24 September 2024
- INTERNATIONAL SCHOOL OF SCIENCE AND DIPLOMACY
Directors: D. BURIGANA – V. CODA NUNZIANTE – P. GRISET – G. OTTAVIANI – U. VATTANI
1st Workshop: *Science diplomacy in XXI century. Foundations, players and dynamics for a future practice*
Director: D. BURIGANA
2 – 8 October 2024

- INFN ELOISATRON PROJECT
Director: A. ZICHICHI
67th Workshop: *High energy collider*
Director: W.A. BARLETTA
3 – 8 October 2024
- INTERNATIONAL SCHOOL OF NEUROSCIENCES «SIR JOHN ECCLES»
Directors: P.F. FERRARI – G. RIZZOLATTI
15th Course: *Emotions in the body and brain. Biological and psychological new perspectives*
Directors: F. CARUANA – P.F. FERRARI – P. SESSA
9 – 14 October 2024
- INTERNATIONAL SCHOOL OF NONEQUILIBRIUM PHENOMENA
Directors: A. LANZARA – M.G. PALMA – B. SPAGNOLO
7th Course: *Working party on quantum reservoir computing*
Directors: S. LORENZO – M.G. PALMA – M. PATERNOSTRO
15 – 18 October 2024
- INTERNATIONAL SCHOOL OF SCIENTIFIC JOURNALISM AND COMMUNICATION
Director: P. CAMPANA
12nd Course: *Underground Science. Observing the Universe from below*
Director: P. CAMPANA
15 – 19 October 2024
- INTERNATIONAL SCHOOL OF ETHOLOGY «DANILO MAINARDI»
Directors: P. PALANZA – S. PARMIGIANI
56th Course: *Beyond words: Ethology of nonverbal interactions in therapeutic setting and psychiatric disorder*
Directors: M. BRUNE – P. PALANZA – S. PARMIGIANI – M. TONNA
19 – 23 October 2024
- INTERNATIONAL SCHOOL OF SCIENCE EDUCATION
Directors: P. LÉNA – A. PASCUCCI
3rd Workshop: *Molecular biology education*
Director: A. PASCUCCI
19 – 23 October 2024
- INTERNATIONAL SCHOOL OF PHARMACOLOGY «GIAMPAOLO VELO»
Directors: M. LINDQUIST – P. MINUZ – U. MORETTI
95th Workshop
Directors: M. LINDQUIST – U. MORETTI
24 – 29 October 2024
- NATIONAL SEMINAR OF LABOUR ADVISERS
Director: N. MALTESE
28 – 30 October 2024
- INTERNATIONAL SCHOOL OF NONEQUILIBRIUM PHENOMENA
Directors: A. LANZARA – M.G. PALMA – B. SPAGNOLO
8th Course: *Mathematical aspects in non equilibrium systems: From micro to macro*
Directors: F. BAGARELLO – F. OLIVERI – V. ROMANO
30 October – 4 November 2024
- INTERNATIONAL SCHOOL OF MATHEMATICS «GUIDO STAMPACCHIA»
Directors: F. GIANNESSI – now G. BUTTAZZO – M. THÉRA
78th Course: *Models and optimization methods for challenging energy problems*
Directors: M.F. ANJO – D. AUSSEL – L. BROTCORNE – D. VIGO
5 – 10 November 2024
- INTERNATIONAL SCHOOL OF ETHOLOGY «DANILO MAINARDI»
Directors: P. PALANZA – S. PARMIGIANI
57th Course: *Recentring neuroscience on behavior: The key role of ethology for understanding the brain*
Directors: I. BRANCHI – F. CIRULLI
9 – 14 November 2024
- INTERNATIONAL SCHOOL OF NONEQUILIBRIUM PHENOMENA
Directors: A. LANZARA – M.G. PALMA – B. SPAGNOLO
9th Course: *Quantum Fluids of Light and Matter (QFLM)*
Directors: A. BRAMATI – I. CARUSOTTO – C. CIUTI
15 – 19 November 2024

- INTERNATIONAL SCHOOL OF BIOPHYSICS «A. BORSELLINO»
49th Course: *Neuroepidemiology: Methods and clinical applications*
Directors: M. D'AMELIO – A. ELBAZ – T. KURTH – G. LOGROSCINO – P.M. PREUX – M. PUGLIATTI – P. RAGONESE – W. ROCCA – G. SAVETTIERI
19 – 24 November 2024

- INTERNATIONAL SCHOOL OF EPIDEMIOLOGY AND PREVENTIVE MEDICINE «GIUSEPPE D'ALESSANDRO»
Directors: G.M. FARA – G. GIAMMANCO – C. SIGNORELLI – M. SZKLO – F. VITALE
62nd Course: *Acqua e alimenti alla luce dei cambiamenti climatici: aspetti di resilienza ed interventi di sanità pubblica*
Directors: E. ALONZO – M. FERRANTE – M. VINCETI
25 – 30 November 2024

- INTERNATIONAL SCHOOL OF COMPLEXITY
Director: A. ZICHICHI – Co-Directors: G. BENEDEK – A. RAPISARDA – C. TSALLIS
19th Workshop: *Complexity in high-energy and statistical physics*
Directors: E. CURANDO – I. DE BEDIAGA-HICKMAN – A. DEPPMAN
1 – 7 December 2024

- INTERNATIONAL SCHOOL OF ATOMIC AND MOLECULAR SPECTROSCOPY
Directors: B. DI BARTOLO – M. CESARIA
38th Workshop: *Advances and future directions in photonic materials and devices*
Director: M. CESARIA
9 – 15 December 2024

- INTERNATIONAL SCHOOL OF BRAIN CELLS AND CIRCUITS «CAMILLO GOLGI»
Directors: E. D'ANGELO – C. GANDINI WHEELER-KINGSHOTT
9th Course: *Modeling the brain in health and disease: Towards digital twins*
Directors: E. D'ANGELO – C. GANDINI WHEELER-KINGSHOTT – V. JIRSA
9 – 15 December 2024

- INTERNATIONAL SCHOOL OF PRECISION MEDICINE AND LABORATORY
Directors: M. CIACCIO – F. SALVATORE
2nd Course: *Clinical laboratory medicine in the Third Millennium: Challenges and opportunities*
Directors: M. CIACCIO – M. PLEBANI – F. SALVATORE
16 – 17 December 2024

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