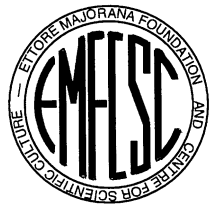


# «ETTORE MAJORANA» FOUNDATION AND CENTRE FOR SCIENTIFIC CULTURE

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 2019 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 QUANTUM ELECTRONICS  
Directors: A.N. CHESTER – D.S. WIERSMA  
62nd Course: *The Frontiers of Attosecond and Ultrafast X-ray Science*  
Directors: L. DIMAURO – M. NISOLI  
10 – 16 March 2019
- INTERNATIONAL SCHOOL OF SCIENCE EDUCATION  
Director: P. LÉNA  
2nd Workshop: *Climate education: Climate, ocean and land use*  
Directors: L. LESCARMONTIER – D. WILGENBUS  
11 – 16 March 2019
- INTERNATIONAL SCHOOL ON BIOELECTROMAGNETISM «ALESSANDRO CHIABRERA»  
Directors: F. BERSANI – M.R. SCARFI  
9th Course: *Possible biomedical applications of EMFs to cancer: from Biology and in silico to clinical perspectives*  
Directors: T. SAMARAS – G. SERSA  
24 – 30 March 2019
- INFN ELOISATRON PROJECT  
Director: A. ZICHICHI  
61st Workshop: *Industrialization of Critical Technical Sub-systems of a 100 TeV Collider*  
Directors: W.A. BARLETTA – B. STRAUSS  
1 – 5 April 2019
- INTERNATIONAL SCHOOL OF SCIENTIFIC JOURNALISM AND COMMUNICATION  
Director: E. IAROCCI  
10th Course: *Big Projects for Science and Knowledge*  
Directors: P. CAMPANA – C. DI GIORGIO  
6 – 11 April 2019
- ZERO ROBOTICS - ITALY  
Directors: E. MICELI – M.P. LUCENTINI  
11 April 2019
- INTERNATIONAL SCHOOL OF NEUTRON SCIENCE AND INSTRUMENTATION  
Directors: C. ANDREANI – R.M.G. CACIUFFO – R. MCGREEVY  
6th Course: *49èmes Journées des Actinides*  
Directors: R.M.G. CACIUFFO – E. COLINEAU  
14 – 18 April 2019
- INTERNATIONAL CONFERENCE ON MEDICIS PROMED H2020  
Directors: J.O. PRIOR – T. STORA  
29 April – 4 May 2019

- INTERNATIONAL SCHOOL OF ETHOLOGY «DANILO MAINARDI»  
 Director: S. PARMIGIANI  
 44th Course: *Social Stress: Psychological and psychosomatic implications*  
 Directors: S. DE BOER – A. ŠGOIFO – J. THAYER – V. VACCARINO  
 6 – 11 May 2019
  
- INTERNATIONAL SCHOOL OF ETHOLOGY «DANILO MAINARDI»  
 Director: S. PARMIGIANI  
 45th Course: *Sex differences, dimorphisms, divergences: Impact on brain and behaviour in health and disease*  
 Directors: M. McCARTHY – P. PALANZA – S. PARMIGIANI  
 20 – 25 May 2019
  
- INTERNATIONAL SCHOOL OF EPIDEMIOLOGY AND PREVENTIVE MEDICINE «GIUSEPPE D’ALESSANDRO»  
 Directors: G.M. FARA – G. GIAMMANCO – C. SIGNORELLI – M SZKLO – F. VITALE  
 55th Course: *ASPHER: Deans’ and Directors’ retreat*  
 Directors: G. PRIVITERA – C. SIGNORELLI  
 26 – 29 May 2019
  
- INTERNATIONAL SCHOOL OF CRYSTALLOGRAPHY  
 Director: T.L. BLUNDELL  
 53rd Course: *Magnetic Crystallography*  
 Directors: B.J. CAMPBELL – M.T. FERNANDEZ DIAZ – J.M. PEREZ-MATO  
 31 May – 9 June 2019
  
- INTERNATIONAL SCHOOL OF CRYSTALLOGRAPHY  
 Director: T.L. BLUNDELL  
 54th Course: *Cryo 3D Electron Microscopy*  
 Directors: D. HANEIN – S. LUDTKE – S. RAUNSER  
 31 May – 9 June 2019
  
- ASSEMBLEA ORGANIZZATIVA FILCA-CISL  
 Chairman: P. D’ANCA  
 11 – 13 June 2019
  
- FROM SAFETY OF NAVIGATION TO SAFEGUARDING THE SEA A PATH THAT JOINS THE FUTURE,  
 SCIENCE, ART AND PROFESSIONALISM  
 Chairman: V. BELLOMO  
 14 – 15 June 2019
  
- INTERNATIONAL SCHOOL OF CARDIOLOGY  
 Directors: A. BRANZI – F. FEDELE  
 21st Workshop: *Advances in Cardiovascular Imaging and Therapy*  
 Directors: A.R. GALASSI – G. NOVO – S. NOVO  
 16 – 19 June 2019
  
- INTERNATIONAL SCHOOL OF SUBNUCLEAR PHYSICS  
 Director Emeritus: A. ZICHICHI – Director: G. 't HOOFT  
 57th Course: *In Search for the Unexpected*  
 Director: G. 't HOOFT  
 21 – 30 June 2019
  
- INTERNATIONAL SCHOOL OF MATHEMATICS «GUIDO STAMPACCHIA»  
 Directors: G. BUTTAZZO – F. GIANNESI – M. THÉRA  
 71st Workshop: *Advances in Nonsmooth Analysis and Optimization*  
 Directors: A. BARBAGALLO – R.I. BOT – C. SAGASTIZABAL  
 24 June – 1 July 2019
  
- INTERNATIONAL SCHOOL OF COMPLEXITY  
 Director: A. ZICHICHI – Co-Directors: G. BENEDEK – M. GELL-MANN – A. RAPISARDA – C. TSALLIS  
 16th Course: *Nonextensive statistical mechanics, superstatistics and beyond: Theory and applications in astrophysical and other complex systems*  
 Directors: C. BECK – G. BENEDEK – G. LIVADIOTIS – A. RAPISARDA – U. TIRNAKLI – C. TSALLIS  
 2 – 8 July 2019
  
- INTERNATIONAL SCHOOL OF NANOMEDICINE  
 Directors: M. FERRARI – M. MASSERINI  
 4th Course: *Precision nanomedicine*  
 Directors: M. MOGHINI – F. RE  
 2 – 8 July 2019

- INTERNATIONAL SCHOOL OF WATER AND WATER SYSTEM  
Directors: R. CAR – F. MALLAMACE – L.G.M. PETTERSON  
2nd Course: *Polymers and soft materials: Glasses, gels and networks*  
Directors: F. GRECO – G. MENSITIERI  
9 – 16 July 2019
- INTERNATIONAL SCHOOL OF ATOMIC AND MOLECULAR SPECTROSCOPY  
Director: B. DI BARTOLO  
37th Course: *Light-Matter Interactions Towards the Nanoscale*  
Directors: J. COLLINS – S. GAPONENKO  
20 July – 4 August 2019
- INTERNATIONAL SCHOOL OF STATISTICAL PHYSICS  
Directors: P. HÄNGGI – F. MARCHESONI  
17th Course: *Frontiers in Water Biophysics*  
Directors: A. CESÀRO – L. COMEZ – G. FRANZESE  
21 – 26 July 2019
- INTERNATIONAL SCHOOL OF BIOLOGICAL MAGNETIC RESONANCE  
Director: J.D. PUGLISI  
17th Course: *Frontiers in Biophysics*  
Directors: J.D. PUGLISI – E. VIANI PUGLISI  
28 July – 4 August 2019
- INTERNATIONAL SEMINARS ON PLANETARY EMERGENCIES  
Chairman: A. ZICHICHI  
52nd Session – Co-Chairman: T.D. LEE  
18 – 25 August 2019
- INTERNATIONAL SCHOOL OF BRAIN CELLS AND CIRCUITS «CAMILLO GOLGI»  
Directors: E. D'ANGELO – C. GANDINI WHEELER-KINGSHOTT  
5th Course: *Modeling the brain and its pathologies*  
Directors: E. D'ANGELO – C. GANDINI WHEELER-KINGSHOTT – V. JIRSA  
27 August – 1 September 2019
- INTERNATIONAL SCHOOL OF STATISTICAL PHYSICS  
Directors: P. HÄNGGI – F. MARCHESONI  
18th Course: *Transport phenomena in complex environments*  
Directors: E. FOULAADVAND – H. LOWEN – A. SCHADSCHNEIDER  
2 – 6 September 2019
- INTERNATIONAL SCHOOL OF MATHEMATICS «GUIDO STAMPACCHIA»  
Directors: G. BUTTAZZO – F. GIANNESI – M. THÉRA  
72nd Course: *New trends in propagation of Linear and Nonlinear Wave Phenomena*  
Directors: N. BURQ – F. COLOMBINI – N. VISCIGLIA – C. ZUILY  
2 – 7 September 2019
- INTERNATIONAL SCHOOL OF PHARMACOLOGY «GIAMPAOLO VELO»  
Director: P. MINUZ  
87th Course: *New strategies in the prevention of non-communicable diseases: Focus on cardiovascular and metabolic disorders*  
Directors: R. LEONE – P. MINUZ – C. PATRONO  
8 – 12 September 2019
- INTERNATIONAL SCHOOL OF QUANTUM ELECTRONICS  
Directors: A.N. CHESTER – D.S. WIERSMA  
63rd Course: *Cold plasmas: Fundamentals and applications*  
Directors: M. CAPITELLI – G. COLONNA – A. LARICCHIUTA  
8 – 14 September 2019
- INTERNATIONAL SCHOOL OF PHARMACOLOGY «GIAMPAOLO VELO»  
Director: P. MINUZ  
88th Workshop: *Causes and effects of therapeutic interventions: A propensity-based approach*  
Directors: R.L. ANJUM – R. EDWARDS – M. LINDQUIST – U. MORETTI  
12 – 15 September 2019
- INTERNATIONAL SCHOOL OF NUCLEAR PHYSICS  
Directors: M. BUBALLA – A. FAESSLER – J. WAMBACH  
41st Course: *Star mergers, dark matter, neutrinos in nuclear, particle and astro physics and in cosmology*  
Directors: M. BUBALLA – A. FAESSLER – J. WAMBACH  
16 – 24 September 2019

- INTERNATIONAL SCHOOL OF NEUROSCIENCES «SIR JOHN ECCLES»  
Directors: P.F. FERRARI – G. RIZZOLATTI  
10th Course: *Brain and Behavioral Evolution in Primates*  
Directors: C. CROCKFORD – P.F. FERRARI – R. WITTIG  
25 – 29 September 2019
- INTERNATIONAL SCHOOL OF MOLECULAR ONCOLOGY  
Director: F.M. BUONAGURO  
2nd Course: *Infectious Agents-related Malignancies*  
Directors: F.M. BUONAGURO – G. FRANCHINI – M.L. TOMASELLO  
25 – 29 September 2019
- INTERNATIONAL SCHOOL OF STATISTICAL PHYSICS  
Directors: P. HÄNGGI – F. MARCHESONI  
19th Course: *Quantum devices for non-classical light generation and manipulation*  
Directors: D. BAJONI – S.L. PORTALUPI – R. TROTTA  
30 September – 5 October 2019
- INTERNATIONAL SCHOOL ON MIND, BRAIN AND EDUCATION  
Directors: A.M. BATTRO – K.W. FISCHER  
14th Course: *The science of learning and teaching*  
Directors: G.D. COSTANZO – D.A. GOLOMBEK – S.J. LIPINA  
30 September – 5 October 2019
- INTERNATIONAL SCHOOL OF MEDICAL SCIENCES  
Directors: A. ZICHICHI – I. CARRECA  
157th Course: *Nutrition, Health and Aging: From Sustainability to Disease Prevention*  
Director: G. CARRUBA  
5 – 7 October 2019
- INTERNATIONAL SCHOOL OF PHARMACOLOGY «GIAMPAOLO VELO»  
Director: P. MINUZ  
89th Course: *Improving the detection, analysis and reporting of harms in medicines*  
Directors: R. CHANDLER – C. HENEGHAN – R. LEONE – M. LINDQUIST  
6 – 10 October 2019
- INTERNATIONAL SCHOOL OF IUS COMMUNE  
Directors: M. BELLOMO – O. CONDORELLI – K. PENNINGTON  
39th Course: *The city, the country, lordship and power: Jurisprudence and Law from the Middle Ages*  
Directors: O. CONDORELLI – A. PADOVANI  
7 – 11 October 2019
- INTERNATIONAL SCHOOL OF CARDIOLOGY  
Directors: A. BRANZI – F. FEDELE  
22nd Workshop  
Directors: F. FEDELE  
18 – 21 October 2019
- INTERNATIONAL SCHOOL OF STATISTICAL PHYSICS  
Directors: P. HÄNGGI – F. MARCHESONI  
20th Course: *New Trends in Nonequilibrium Stochastic Multistable Systems and Memristors*  
Directors: O.L. GORSHKOV – B. SPAGNOLO – D. VALENTI  
18 – 21 October 2019
- INTERNATIONAL SCHOOL OF ETHOLOGY «DANILO MAINARDI»  
Director: S. PARMIGIANI  
46th Workshop: *Ethology, psychology, psychiatry: An evolutionary approach*  
Directors: M. BRÛNE – P. PALANZA – S. PARMIGIANI – A. TROISI  
22 – 27 October 2019
- INTERNATIONAL SEMINARS ON PLANETARY EMERGENCIES  
Chairman: A. ZICHICHI – Co-Chairman: T.D. LEE  
53rd Session: *Catastrophic Risk*  
Chair: S. LEIVESLEY – Co-Chairs: A. NILSSON – R.N. SCHOCK  
28 October – 1 November 2019

- INFN ELOISATRON PROJECT  
Director: A. ZICHICHI  
62nd Workshop: *High Power Cyclotrons for frontier Particle Physics*  
Directors: W.A. BARLETTA – M. SHAEVITZ  
28 October – 2 November 2019
  
- INTERNATIONAL SCHOOL OF MEDICAL SCIENCES  
Directors: A. ZICHICHI – I. CARRECA  
158th Course: *Advances in Nutrigenomics and Epigenetics*  
Director: D. GALIMBERTI  
29 – 31 October 2019
  
- INTERNATIONAL SCHOOL OF EPIDEMIOLOGY AND PREVENTIVE MEDICINE «GIUSEPPE D’ALESSANDRO»  
Directors: G.M. FARA – G. GIAMMANCO – C. SIGNORELLI – M SZKLO – F. VITALE  
56th Course: *Environment’s impact assessment on health: from theory to practice*  
Directors: A. CARLUCCI – M. FERRANTE  
3 – 7 November 2019
  
- INTERNATIONAL SCHOOL OF MEDICAL SCIENCES  
Directors: A. ZICHICHI – I. CARRECA  
159th Course: *Laboratory medicine*  
Directors: M. CIACCIO – F. SALVATORE  
7 – 9 November 2019
  
- INTERNATIONAL SYMPOSIUM ON CONTRAST MEDIA RESEARCH  
Chairmen: S. AIME – C.C. QUATTROCCHI  
10 – 15 November 2019
  
- INTERNATIONAL MEETING ON THE GENETICS, PATHOGENESIS, PREVENTION, AND THERAPY OF TYPE 1 DIABETES  
Directors: C. MATHIEU – L. OVERBERGH – A. PUGLIESE  
17 – 22 November 2019
  
- INTERNATIONAL SCHOOL OF BIOPHYSICS «ANTONIO BORSELLINO»  
45th Course: *Neuroepidemiology: Methods and clinical applications*  
Directors: M. D’AMELIO – A. ELBAZ – T. KURTH – G. LOGROSCINO – P.M. PREUX – P. RAGONESE – W.A. ROCCA – G. SAVETTIERI  
24 – 30 November 2019
  
- INTERNATIONAL SCHOOL OF MEDICAL SCIENCES  
Directors: A. ZICHICHI – I. CARRECA  
160th Course: *Management of solid tumors in aged people: An update*  
Director: S. MONFARDINI  
5 – 7 December 2019
  
- INTERNATIONAL SCHOOL OF THORACIC MEDICINE  
11st Course: *Interstitial lung diseases*  
Director: C. VANCHERI  
9 – 12 December 2019

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