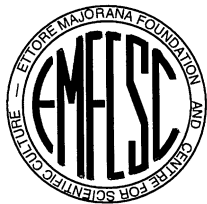


# «ETTORE MAJORANA» FOUNDATION AND CENTRE FOR SCIENTIFIC CULTURE

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 2018 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 NANOMEDICINE  
Directors: M. FERRARI – M. MASSERINI  
3<sup>rd</sup> Course: *Nanofluidics, nanoimaging and nanomanipulation*  
Directors: G. CHIRICO – F. MANTEGAZZA  
5 – 11 April 2018
- INTERNATIONAL SCHOOL ON MAGNETIC RESONANCE AND BRAIN FUNCTION  
Director: B. MARAVIGLIA  
13<sup>th</sup> Workshop: *Investigating brain function and structure by magnetic resonance and compatible approaches*  
Directors: F. GIOVE – B. MARAVIGLIA  
22 – 29 April 2018
- INFN ELOISATRON PROJECT  
Director: A. ZICHICHI  
60<sup>th</sup> Workshop: *High power cyclotrons for neutrino physics*  
Director: W.A. BARLETTA  
30 April – 4 May 2018
- INTERNATIONAL SCHOOL OF EPIDEMIOLOGY AND PREVENTIVE MEDICINE «GIUSEPPE D'ALESSANDRO»  
Directors: G.M. FARA – G. GIAMMANCO  
52<sup>nd</sup> Course: *Civil and criminal liability in the exercise of the profession of hygienist and of related health professions*  
Directors: F. VITALE – I. MURA  
2 – 6 May 2018
- INTERNATIONAL SCHOOL OF ETHOLOGY «DANILO MAINARDI»  
Director: S. PARMIGIANI  
41<sup>st</sup> Course: *Evolution and future of rituals, beliefs and religious minds*  
Directors: J. HENRICH – A. NORENZAYAN – S. PARMIGIANI – E. SLINGERLAN  
9 – 14 May 2018
- INTERNATIONAL SCHOOL OF EPIDEMIOLOGY AND PREVENTIVE MEDICINE «GIUSEPPE D'ALESSANDRO»  
Directors: G.M. FARA – G. GIAMMANCO  
53<sup>rd</sup> Course: *Adapted physical activity in sport, wellness and fitness: The role of Departments of Health and of the National Health Service in doping prevention and health promotion*  
Directors: E. DI ROSA – V. ROMANO SPICA  
15 – 19 May 2018
- INTERNATIONAL SCHOOL OF STATISTICAL PHYSICS  
Directors: P. HÄNGGI – F. MARCHESONI  
14<sup>th</sup> Course: *Exploring and quantifying rough free energy landscapes*  
Directors: M. PARRINELLO – G.A. VOTH  
15 – 20 May 2018

- INTERNATIONAL SCHOOL OF NEUROSCIENCES «SIR JOHN ECCLES»  
Directors: P.F. FERRARI – G. RIZZOLATTI  
8<sup>th</sup> Course: *Understanding the neuroregulatory actions of oxytocin and its potential clinical applications*  
Directors: J.-R. DUHAMEL – P.F. FERRARI – A. SIRIGU – L. YOUNG  
22 – 27 May 2018
  
- INTERNATIONAL SCHOOL OF MEDICAL SCIENCES  
Directors: A. ZICHICHI – I. CARRECA  
155<sup>th</sup> Course: *The new era of laboratory medicine: From diagnosis to clinical management*  
Director: M. CIACCIO  
28 – 31 May 2018
  
- INTERNATIONAL SCHOOL OF CRYSTALLOGRAPHY  
Director: T.L. BLUNDELL  
51<sup>st</sup> Course: *Electron crystallography*  
Directors: J. HADERMANN – L. PALATINUS – A. STEWART  
1 – 10 June 2018
  
- INTERNATIONAL SCHOOL OF CRYSTALLOGRAPHY  
Director: T.L. BLUNDELL  
52<sup>nd</sup> Course: *Quantum crystallography*  
Directors: P. MACCHI – D. JAYATILAKA  
1 – 10 June 2018
  
- INTERNATIONAL SCHOOL OF SUBNUCLEAR PHYSICS  
Director: A. ZICHICHI  
56<sup>th</sup> Course: *From gravitational waves to QED, QFD and QCD*  
Directors: G. 't HOOFT – A. ZICHICHI  
14 – 23 June 2018
  
- INTERNATIONAL SCHOOL OF SCIENTIFIC JOURNALISM AND COMMUNICATION  
Director: E. IAROCCI  
9<sup>th</sup> Course: *What's next: Challenges and opportunities for tomorrow's fundamental physics*  
Directors: P. CAMPANA – C. DI GIORGIO  
24 – 29 June 2018
  
- INTERNATIONAL SCHOOL OF MOLECULAR ONCOLOGY  
Director: F.M. BUONAGURO  
1<sup>st</sup> Course: *Human papillomavirus/HPV – related malignancies*  
Directors: F.M. BUONAGURO – P.G. ROSSI – M.L. TORNESELLO  
30 June – 4 July 2018
  
- INTERNATIONAL SCHOOL OF WATER AND WATER SYSTEM  
Directors: R. CAR – F. MALLAMACE – L.G.M. PETTERSON  
1<sup>st</sup> Course: *Water and the water systems – The hydrophobic effect*  
Directors: R. CAR – F. MALLAMACE – L.G.M. PETTERSON  
4 – 11 July 2018
  
- INTERNATIONAL SCHOOL OF NEUTRON SCIENCE AND INSTRUMENTATION  
Directors: C. ANDREANI – R.M.G. CACIUFFO – R. MCGREEVY  
5<sup>th</sup> Course: *Neutrons for chemistry and materials science applications*  
Directors: P.F. HENRY – T. RAMIREZ CUESTA  
4 – 13 July 2018
  
- INTERNATIONAL SCHOOL OF MATERIALS FOR SUSTAINABLE DEVELOPMENT AND ENERGY  
Director: A. TERRASI  
1<sup>st</sup> Course: *Materials for renewable energy and sustainability*  
Directors: D. CAHEN – D. GINLEY – A. SLAUOI – A. TERRASI – A. WEIDENKAFF  
6 – 13 July 2018
  
- INTERNATIONAL SCHOOL OF SOLID STATE PHYSICS  
Director: G. BENEDEK  
73<sup>rd</sup> Course: *Frontiers of photonics, plasmonics and electronics with 2D nanosystems*  
Directors: F. CAPASSO – G. SCAMARCIO – M.S. VITIELLO  
14 – 20 July 2018

- INTERNATIONAL SCHOOL OF SOLID STATE PHYSICS  
 Director: G. BENEDEK  
 74<sup>th</sup> Workshop: *Epioptics and silicene*  
 Directors: A. CRICENTI – D. NARDUCCI  
 14 – 20 July 2018
  
- INTERNATIONAL SCHOOL OF SOLID STATE PHYSICS  
 Director: G. BENEDEK  
 75<sup>th</sup> Workshop: *Majorana fermions and topological materials science*  
 Directors: A. BIANCONI – Y. MAENO  
 21 – 27 July 2018
  
- INTERNATIONAL SCHOOL OF ATOMIC AND MOLECULAR SPECTROSCOPY  
 Director: B. DI BARTOLO  
 36<sup>th</sup> Workshop: *New developments in advanced luminescence materials*  
 Directors: M. BETTINELLI – J. COLLINS  
 25 – 31 July 2018
  
- INTERNATIONAL SCHOOL OF STATISTICAL PHYSICS  
 Directors: P. HÄNGGI – F. MARCHESONI  
 15<sup>th</sup> Course: *New trends in nonequilibrium statistical mechanics: Classical and quantum systems*  
 Directors: A.A. DUBKOV – B. SPAGNOLO – D. VALENTI  
 25 – 31 July 2018
  
- INTERNATIONAL SCHOOL OF COSMIC RAY ASTROPHYSICS «MAURICE M. SHAPIRO»  
 21<sup>st</sup> Course: *Astroparticle physics: Yesterday, today, and tomorrow*  
 Directors: J.R. HÖRANDEL – T.S. STANEV – J.P. WEFEL  
 1 – 7 August 2018
  
- INTERNATIONAL SCHOOL OF BIOLOGICAL MAGNETIC RESONANCE  
 Director: J.D. PUGLISI  
 16<sup>th</sup> Course: *Frontiers in biophysics and structural biology*  
 Directors: J.D. PUGLISI – E. VIANI PUGLISI  
 1 – 8 August 2018
  
- INTERNATIONAL SEMINARS ON PLANETARY EMERGENCIES  
 Chairman: A. ZICHICHI  
 51<sup>st</sup> Session – Co-Chairman: T.D. LEE  
 18 – 26 August 2018
  
- INTERNATIONAL SCHOOL OF MATHEMATICS «GUIDO STAMPACCHIA»  
 Directors: F. GIANNESSE – M. THÉRA  
 69<sup>th</sup> Workshop: *Variational analysis and applications*  
 Directors: H. ATTOUCH – G. BUTTAZZO – P. DANIELE – A. MAUGERI  
 28 August – 5 September 2018
  
- INTERNATIONAL SCHOOL OF MATHEMATICS «GUIDO STAMPACCHIA»  
 Directors: F. GIANNESSE – M. THÉRA  
 70<sup>th</sup> Workshop: *Mathematical and computational epidemiology of infectious diseases – Mathematically shaping global and local public health policies*  
 Directors: P. CERRAI – N. CHITNIS – A. D'ONOFRIO – P. MANFREDI  
 28 August – 5 September 2018
  
- INTERNATIONAL SCHOOL OF QUANTUM ELECTRONICS  
 Directors: A.N. CHESTER – D. WIERSMA  
 62<sup>nd</sup> Course: *Progress in photoacoustic and photothermal phenomena: Focus on biomedical and nanoscale imaging and NDE*  
 Directors: R. LI VOTI – A. MANDELIS  
 6 – 12 September 2018
  
- INTERNATIONAL SCHOOL OF PHARMACOLOGY «GIAMPAOLO VELO»  
 Director: P. MINUZ  
 86<sup>th</sup> Workshop: *The Italian pharmacovigilance system in the international context: Critical issues and perspectives*  
 Directors: A. CAPUANO – R. LEONE – M. LINDQVIST – A. MARRA – U. MORETTI – G. TRIFIRÒ  
 9 – 12 September 2018

- INTERNATIONAL SCHOOL OF CARDIOLOGY  
Directors: A. BRANZI – F. FEDELE  
20<sup>th</sup> Workshop: *Heart failure: From bench to bedside and beyond*  
Directors: F. FEDELE – S. NOVO  
13 – 15 September 2018
- INTERNATIONAL SCHOOL OF NUCLEAR PHYSICS  
Directors: M. BUBALLA – A. FAESSLER – J. WAMBACH  
40<sup>th</sup> Course: *Strong interactions: From quarks and gluons to nuclei and stars*  
Directors: M. BUBALLA – A. FAESSLER – J. WAMBACH  
16 – 24 September 2018
- INTERNATIONAL SCHOOL OF NEUROSCIENCES «SIR JOHN ECCLES» AND INTERNATIONAL SCHOOL OF ETHOLOGY «DANILO MAINARDI»  
Directors: P.F. FERRARI – G. RIZZOLATTI and S. PARMIGIANI  
9<sup>th</sup> Course and 42<sup>nd</sup> Course: *Epigenetics in cognition, developmental and evolutionary perspectives*  
Directors: P.F. FERRARI – A. IRIKI – S. PARMIGIANI – S.J. SUOMI – A. TRAMACERE  
25 – 30 September 2018
- INTERNATIONAL SCHOOL OF STATISTICAL PHYSICS  
Directors: P. HÄNGGI – F. MARCHESONI  
16<sup>th</sup> Course: *The statistical physics of active matter*  
Directors: M.C. MARCHETTI – H. CHATÉ – G. GOMPPER  
1 – 6 October 2018
- INTERNATIONAL SCHOOL OF LIQUID CRYSTALS  
Director: C. ZANNONI  
24<sup>th</sup> Course: *Extended model of organic semiconductors*  
Directors: P. PASINI – A. WALKER – C. ZANNONI  
1 – 7 October 2018
- INTERNATIONAL SCHOOL OF LIQUID CRYSTALS  
Director: C. ZANNONI  
25<sup>th</sup> Workshop: *A scientific journey in the world of liquid crystals and beyond*  
Directors: A. ARCIONI – C. CHICCOLI – P. PASINI  
7 – 10 October 2018
- INTERNATIONAL SCHOOL OF IUS COMMUNE  
Directors: M. BELLOMO – O. CONDORELLI – K. PENNINGTON  
38<sup>th</sup> Course: *Ius, lex, and law: The foundations and definitions of a distinction in the medieval and modern world*  
Directors: O. CONDORELLI – A. WIJFFELS  
12 – 16 October 2018
- INTERNATIONAL SCHOOL ON MIND, BRAIN AND EDUCATION  
Directors: A.M. BATTRO – K.W. FISCHER  
13<sup>rd</sup> Course: *Immigration, refugees and education*  
Directors: A.M. BATTRO – S. LIPINA – M. SUÁREZ OROZCO  
15 – 21 October 2018
- ADVANCED WORKSHOP OF SPORTS MEDICINE «VINCENZO BAIAMONTE»  
11<sup>st</sup> Workshop: *Sport and lifestyle for a healthy body*  
Director: F.P. SIELI  
18 – 21 October 2018
- INTERNATIONAL SCHOOL ON ENVIRONMENT, CONFLICTS AND MIGRATION  
Directors: S. ATRAN – A. CONTIN – M. DIOP – G. MASTROJENI – S. PARMIGIANI – F.S. VOM SAAL  
1<sup>st</sup> Course: *Environment, conflicts and migration*  
Directors: S. ATRAN – A. CONTIN – M. DIOP – G. MASTROJENI – F.S. VOM SAAL  
21 – 26 October 2018
- INTERNATIONAL SCHOOL OF MEDICAL SCIENCES  
Directors: A. ZICHICHI – I. CARRECA  
156<sup>th</sup> Course: *Adults and geriatrics cancer people: New tools for safe and efficient management*  
Directors: A. GIORDANO – J. ROLFO – A. RUSSO  
27 – 30 October 2018

- INTERNATIONAL SCHOOL OF EPIDEMIOLOGY AND PREVENTIVE MEDICINE «GIUSEPPE D'ALESSANDRO»  
Directors: G.M. FARA – G. GIAMMANCO  
54<sup>th</sup> Course: *The impact of evaluation on health services organization and on their outcomes*  
Directors: C. CISLAGHI – F. DI STANISLAO  
18 – 23 November 2018
- INTERNATIONAL SCHOOL OF DERMATOLOGY  
Directors: G. BURG – B. GIANNOTTI  
11<sup>th</sup> Course: *Topographic dermatology*  
Directors: N. PIMPINELLI – L. ZICHICHI  
22 – 24 November 2018
- INTERNATIONAL SCHOOL OF ETHOLOGY «DANILO MAINARDI»  
Director: S. PARMIGIANI  
43<sup>rd</sup> Course: *Where science meets society: Citizen science as an emerging tool to expand research horizons*  
Directors: C. CASTRACANI – A. SFORZI – D. SLAWSON  
26 November – 1 December 2018
- INTERNATIONAL SCHOOL OF BRAIN CELLS AND CIRCUITS «CAMILLO GOLGI»  
Directors: E. D'ANGELO – C. GANDINI WHEELER-KINGSHOTT  
4<sup>th</sup> Course: *The sensorymotor system from cellular microcircuits to large-scale networks*  
Directors: E. D'ANGELO – C. GANDINI WHEELER-KINGSHOTT – S. GRILLNER  
3 – 15 December 2018

**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>**