## «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



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 155th 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. GIORGI-ROSSI – M.L. TORNESELLO 30 June – 4 July 2018
- INTERNATIONAL SCHOOL OF WATER AND WATER SYSTEMS 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. GIANNESSI – M. THÉRA
   69th 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. GIANNESSI – 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.S. 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
   20th 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>th</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
- 9<sup>th</sup> CONFERENCE ON CENTRO FERMI PROJECTS THE EEE PROJECT SCIENCE IN THE HEART OF THE YOUNG Directors: L. CIFARELLI – A. ZICHICHI 6 – 8 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 10 – 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