



ETTORE MAJORANA FOUNDATION AND CENTRE FOR SCIENTIFIC CULTURE

1963–2023

60th ANNIVERSARY OF ACTIVITIES



INTERNATIONAL SCHOOL OF SOLID-STATE PHYSICS

85th Workshop: NONEQUILIBRIUM PHENOMENA IN STRONGLY CORRELATED ULTRACOLD MATTER

ERICE-SICILY: 9 – 15 MAY 2024

Sponsored by the: • Italian Ministry of Education, University and Scientific Research • Sicilian Regional Government

PROGRAMME AND LECTURERS

Collective and topological excitations in degenerate gases

Quantum transport and quantum turbulence

Long range interactions and supersolidity

Strongly-correlated superfluids

Quantum gases in reduced dimensionality

Quantum simulation in optical lattices and quantum gas microscope

Exotic states of ultracold matter

- V. BAGNATO, Universidade de São Paulo, BR
- I. BLOCH, Max Plank Institute, Munich, DE

- R. CITRO, University of Salerno, IT
- N. COOPER, University of Cambridge, UK
- L. FALLANI, University of Florence, IT
- F. FERLAINO, University of Innsbruck, AT
- T. GIAMARCHI, University of Geneva, CH
- R. GRIMM, University of Innsbruck, AT
- A. MINGUZZI, CNRS Grenoble, FR
- G. MODUGNO, University of Florence, IT
- S. STRINGARI, University of Trento, IT
- M. ZWIERLEIN, MIT, Cambridge, MA, US

PURPOSE OF THE WORKSHOP

The aim of the Workshop is to explore the recent advancements on out-of-equilibrium phenomena and quantum transport in strongly-correlated ultracold matter. These topics represent a cutting-edge research area in modern physics, as measuring transport effects provides fundamental information on the microscopic properties of any physical systems. Furthermore, the exploration of nonequilibrium phenomena has significantly contributed to the developments of novel quantum devices that are projecting us towards the second quantum revolution.

The aim of this Workshop is to bring together leading scientists and young researcher in different areas ranging from ultracold atoms in optical lattices and low dimensionality, passing through chaotic and disordered systems, up to new exotic states of matter

APPLICATIONS

Persons wishing to attend the Workshop should send an application, by electronic mail, to:

Professor Massimo Inguscio
email: ultracolderice@gmail.com

Specifying:

- Date and place of birth together with present nationality
- Present position and place of work
- An abstract, if they wish to give a contribution (oral or poster)

PLEASE NOTE

Participants must arrive in Erice no later than 12 a.m. on 9th May 2024.

POETIC TOUCH

According to legend, Erice, son of Venus and Neptune, founded a small town on top of a mountain (750 metres above sea level) more than three thousand years ago. The founder of modern history — i.e. the recording of events in a methodic and chronological sequence as they really happened without reference to mythical causes — the great Thucydides (~500 B.C.), writing about events connected with the conquest of Troy (1183 B.C.) said: «*After the fall of Troy some Trojans on their escape from the Achaei arrived in Sicily by boat and as they settled near the border with the Sicanians all together they were named Elymi: their towns were Segesta and Erice.*»

This inspired Virgil to describe the arrival of the Trojan royal family in Erice and the burial of Anchises, by his son Aeneas, on the coast below Erice. Homer (~1000 B.C.), Theocritus (~300 B.C.), Polybius (~200 B.C.), Virgil (~50 B.C.), Horace (~20 B.C.), and others have celebrated this magnificent spot in Sicily in their poems. During seven centuries (XIII-XIX) the town of Erice was under the leadership of a local oligarchy, whose wisdom assured a long period of cultural development and economic prosperity which in turn gave rise to the many churches, monasteries and private palaces which you see today.

In Erice you can admire the Castle of Venus, the Cyclopean Walls (~800 B.C.) and the Gothic Cathedral (~1300 A.D.). Erice is at present a mixture of ancient and medieval architecture. Other masterpieces of ancient civilization are to be found in the neighbourhood: at Motya (Phoenician), Segesta (Elymian), and Selinunte (Greek). On the Aegadian Islands — theatre of the decisive naval battle of the first Punic War (264-241 B.C.) — suggestive neolithic and paleolithic vestiges are still visible: the grottoes of Favignana, the carvings and murals of Levanzo.

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