



«ETTORE MAJORANA» FOUNDATION AND CENTRE FOR SCIENTIFIC CULTURE
TO PAY A PERMANENT TRIBUTE TO GALILEO GALILEI, FOUNDER OF MODERN SCIENCE
AND TO ENRICO FERMI, THE "ITALIAN NAVIGATOR", FATHER OF THE WEAK FORCES

ETTORE MAJORANA CENTENARY



INTERNATIONAL SCHOOL ON COMPLEXITY

5th Course BIOLOGICAL NETWORKS

ERICE-SICILY: 7 - 11 OCTOBER 2006

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

TOPICS AND LECTURERS

Protein-protein interaction

Protein folding

Gene regulation

Metabolic pathways

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- S. BORNHOLDT, Bremen University, D
- A. CAFLISCH, University of Zurich, CH
- A. EMILI, Toronto University, CDN
- T. FINK, Institute Marie Curie, Paris, F
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- P. LIÒ, Cambridge University, UK
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- L. LUISI, University of Rome 3, I
- D. MUELLER, ETH Zurich, CH
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- G. ROSSINI, University of Modena, I
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- E. SHAKHNOVICH, Harvard University, Boston, MA, USA
- G. STOLOVITZKY, IBM Research TJ Watson Center, USA
- P. UETZ, Karlsruhe University, D
- M. VENDRUSCOLO, Cambridge University, UK
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- M. VIDAL, Harvard University, Boston, MA, USA
- A. VESPIGNANI, Indiana University, Bloomington, IN, USA

PURPOSE OF THE COURSE

Biological systems show emergent properties that are not immediately explainable by the study of their constituent parts. Patterns of interaction are irregular and have shown to be intractable with the classical reductionist approach widely used in physics and chemistry. New mathematical formalisms, based on graph theory, are emerging in order to represent and study the underlying interaction networks present in the cell. The understanding of the evolution and organization of these networks is changing the way scientists look at biology and will provide new insight on the organization of living organisms.

APPLICATIONS

Persons wishing to attend to the School should write to the Co-Director of the Course:

- Dr Guido CALDARELLI
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specifying:

- full name(s), address, age, nationality;
- academic qualifications, present position and affiliation and/or a short CV;
- the atelier(s) they wish to attend;
- their specific interest in the meeting.

- **PLEASE NOTE**
Participants must arrive on October 7, not later than 7 pm.

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 Sicilians 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 Anchise, by his son Enea, 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.

Splendid beaches are to be found at San Vito Lo Capo, Scopello, and Cornino, and a wild and rocky coast around Monte Cofano: all at less than one hour's drive from Erice.

More information about the «Ettore Majorana» Foundation and Centre for Scientific Culture can be found on the WWW at the following address:
<http://www.csem.infn.it>