



«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



INTERNATIONAL SCHOOL OF MATHEMATICS «GUIDO STAMPACCHIA»

55th Workshop: OPTIMIZATION MACHINE LEARNING AND BIOINFORMATICS

ERICE-SICILY: 8 – 16 SEPTEMBER 2010

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

PROGRAMME AND LECTURERS

Chemoinformatics

Systems Biology

Proteomics

Genomics

Pattern Analysis

- P. BALDI, University of California, CA, US
- E. BIGANZOLI, University of Milan, IT
- S. BRUNAK, University of Denmark, Lyngby, DK
- P. FARISELLI, University of Bologna, IT

- A. FERRO, University of Catania, IT
- S. GAGLIO, CNR, Cosenza, IT
- I. KOUSKOUMVEKAKI, Technical University, Lyngby, DK
- P. FRASCONI, University of Florence, IT
- A. McLYSAGHT, University of Florida, Gainesville, FL, US
- P. PARDALOS, University of Florida, Gainesville, FL, US
- G. RAETSCH, Max Planck Society, Tübingen, DE
- M. ROZEN ZVI, University of Jerusalem, IL
- J-P. VERT, Institute Curie, Paris, FR
- C. VERCELLIS, Polytechnics of Milan, IT

PURPOSE OF THE WORKSHOP

High-throughput technologies in the life sciences, from sequencing to microarrays, continue to produce exponentially increasing amounts of data and drive for new methods in mathematics and the computational sciences to efficiently manage these data. Bioinformatics, computational and system biology, and the new-omics sciences, from genomics to metabolomics, all attempt to address these needs. Their success is intimately related to progress in mathematics and computer science, in particular in the areas of artificial intelligence, statistical machine learning, and optimization, in order to deal with very complex, high-dimensional, and noisy data.

The Workshop aims at introduce the students to some of the contemporary problems and state-of-the-art solutions obtained from the intersection of the life science, optimization and computational sciences.

APPLICATIONS

Persons wishing to attend the Workshop should apply by e-mail to the Co-Director of the Workshop:

- Professor Raffaele CERULLI
D.M.I. - Università degli Studi di Salerno
Via Ponte don Melillo – 84084 FISCIANO (SA), Italy
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They should specify:

- date and place of birth, together with current nationality;
- affiliation;
- address, e-mail address.

PLEASE NOTE

Participants must arrive on 8 September, not later than 7 pm.

Closing Date for Applications: 15 April 2010

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 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.

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.cesem.infn.it>

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