



«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 ON COMPLEXITY

7th Course: STATISTICAL PHYSICS OF SOCIAL DYNAMICS: OPINIONS, SEMIOTIC DYNAMICS, AND LANGUAGE

ERICE-SICILY: 13 - 20 JULY 2007

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

TOPICS AND LECTURERS

STREAM I: Opinion Dynamics

- D. STAUFFER, Cologne University, D
- S. REDNER, Boston University, MA, USA
- M. SAN MIGUEL, IMEDEA/UIB, Mallorca, ES
- G. WEISBUCH, ENS, Paris, F
- S. FORTUNATO, ISI, Torino, I
- C. CASTELLANO, "Sapienza" University, Rome, I
- D.H. ZANETTE, CNEA, Buenos Aires, A
- S. GALAM, Ecole Polytechnique, Paris, F
- K. SZNAJD-WERON, University of Wroclaw, P
- H. BRANDT, University of Wien, A

STREAM II: Dynamics in Human Language and Communication

- J.-M. HOMBERT, CNRS, Paris, F
- F. D'ERRICO, Université' Bordeaux 1, Talence, F
- B. GALANTUCCI, Haskins Laboratories, New Haven, CT, USA
- S. GOLDIN-MEADOW, University of Chicago, IL, USA
- B. BERGEN, University of Hawaii System, HI, USA
- B. CROFT, University of New Mexico, Albuquerque, NM, USA

- L. MICHAELIS, University of Colorado, Boulder, CO, USA
- S. MUFWENE, University of Chicago, IL, USA
- W.S.-Y. WANG, CUHK, Hong Kong, C
- J. HURFORD, University of Edinburgh, UK
- L. STEELS, Sony CSL, Paris, F

STREAM III: Statistical Physics Models of Language Dynamics and Role of the Interaction Networks

- C. CATTUTO, Centro Enrico Fermi, Rome, I
- A. BARRAT, Université' Paris-Sud, Orsay, F
- N. KOMAROVA, University of California, Irvine, CA, USA
- A. BARONCHELLI, UPC, Barcelona, S
- J. MENDES, Universidade de Aveiro, P
- T. IKEGAMI, University of Tokyo, J
- V. LORETO, "Sapienza" University, Rome, I
- M. E. FISHER, University of Maryland, MD, USA
- M. MARSILI, ICTP, Trieste, I

PURPOSE OF THE COURSE

Statistical mechanics has proven to be a very fruitful framework to describe phenomena outside the realm of traditional physics. The last years have witnessed the attempt by physicists to study phenomena which heavily rely on human behavior, like the dynamics of financial markets and the emergence of collective organization in social systems.

Social interactions are usually local: every individual interacts with a limited number of its peers, which is negligible as compared with the total number of people inside a community. In spite of that, human societies are characterized by a number of stunning global regularities. There are remarkable transitions from disorder to order, like the emergence of a common language/culture or the creation of a consensus about a specific topic. The conference will specifically focus on three major research lines, i.e. opinion dynamics, dynamics in human language and the statistical physics of language dynamics. The school will also feature an atelier on "Modeling Language Emergence with Construction Grammar".

APPLICATIONS

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

- Professor Vittorio LORETO
"Sapienza" Università di Roma
Dipartimento di Fisica
P.le A. Moro 5 - 00185 ROMA, Italy
Tel: +39 06 4991 3437 – Fax: +39 06 44 63 158
e-mail : vittorio.loreto@roma1.infn.it
web: <http://pil.phys.uniroma1.it/~loreto/>

specifying:

- full name(s), address, age, nationality;
- academic qualifications, present position and affiliation and/or a short CV;
- title and abstract of the contribution.

- **PLEASE NOTE**
Participants must arrive on July 13, 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>