## «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»

# 60th Workshop: STOCHASTIC METHODS IN GAME THEORY

ERICE-SICILY: 6 – 15 SEPTEMBER 2013

Sponsored by the: • Italian Ministry of Education, University, and Research • Sicilian Regional Government • University of Venice Ca' Foscari

#### PROGRAMME AND LECTURERS

Optimal use of information: strategic information acquisition and strategic information exchange

Optimal stopping problems

Networks and congestion games

Equilibria and optima in transport models

Algorithmic and computational aspects of equilibrium

Aspects of bounded rationality in strategic behaviour

Mean field games

Learning and bounded rationality

Large population and mean field games

Algorithmic game theory

Stochastic games

Dynamic games

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- Y. BABICHENKO, Hebrew University of Jerusalem, IL
- M. BARDI, Università di Padova, IT
- P. BARELLI, University of Rochester, NY, US
- P. BATTIGALLI, Università Bocconi, Milano, IT
- D. BAUSO, Università di Palermo, IT
- J. BLOCK, Washington University in St. Louis, MO, US
- P. CARDALIAGUET, Université Paris-Dauphine, Paris, FR
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- O. GOSSNER, Paris School of Economics, Paris, FR
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- P. MERTIKOPOULOS, CNRS, Montbonnot Saint-Martin, FR
- I. MILCHTAICH, Bar-Ilan University, Tel Aviv, IL
- V. PERCHET, Université Paris Diderot, Paris, FR
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- J. THIJSSEN, The University of York, UK
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- A. URBANO, Universidad de Valencia, SP
- X. VENEL, Université Toulouse 1, Toulouse, FR
- N. VIEILLE, HEC Paris, FR
- G. VIGERAL, Université Paris 6, FR
- B. VON STENGEL, London School of Economics, UK

## PURPOSE OF THE WORKSHOP

In the last few decades mathematical game theory has made rapid progress and has been extended to new areas of research, such as stochastic games, bandit problems, complexity, mean field games etc.

This is related to the fact that, besides the classic (mainly economic) applications, new issues have arisen in various fields, such as engineering, computer science, biology, social networks etc. This, in its turn, has given rise to new theoretical problems in

The Workshop aims at establishing the state of the art and focusing on the most important and advanced questions in the field. Special attention will be devoted to topics on the frontier of game theory, stochastics, computer science, operation research, control and optimization etc. The speakers will be scholars in different fields of mathematics and its applications, who work on the frontier of research in game theory

### **APPLICATIONS**

Persons wishing to attend the Workshop should apply by sending an e-mail to:

 Professor Dario BAUSO Dipartimento di Ingegneria Chimica, Gestionale, Informatica, Meccanica Università di Palermo Viale delle Scienze, 90128 PALERMO, Italy e-mail: erice2013gametheory@gmail.com

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

More information about the Workshop can be found at the following address: https://sites.google.com/site/erice2013gametheory/home

Closing Date for Applications: 15 April 2013

### 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.), Theoritus (~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.ccsem.infn.it

PLEASE NOTE: Participants must arrive on 6 September, not later than 6 p.m.