INTERNATIONAL SCHOOL OF MATHEMATICS

«GUIDO STAMPACCHIA»
47th Workshop

VARIATIONAL ANALYSIS AND AEROSPACE ENGINEERING

Dedicated to Angelo Miele for his 85th Birthday

ERIC E SICILY: 8 - 16 SEPTEMBER 2007

Sponsored by the: • Italian Ministry of Education, University and Scientific Research • Sicilian Regional Government • Agusta Helicopters • Departments of Mathematics and Aerospace Engineering of the University of Pisa • Istituto Nazionale di Alta Matematica (GNAMPA) • IDS SpA • Delft University • Consorzio Etruria S.C.A.R.L.

PURPOSE AND LECTURERS

Commercial aircraft design
New aircraft configurations
Reduced order and impact aircraft design
Optimal shape aircraft design
Mathematical tools for shape generation
Optimization of aerodynamic configurations
Composite fuselage–optimum stress distributions around cutouts
Interactions between aircraft manoeuvres and Aerelasticity
Optimization of space missions
Global Optimization problems

Overview on Variational analysis
Modern methods in fracture mechanics
Optimum shape design and CFD

• P. ALLI, Agusta Helicopters, Varese, I
• M. ACKERMANN, Università di Santa Clara, CA, USA
• M. BELLONI, Università di Parma, I
• A. BEUKERS, Delft University of Technology, NL
• G. BUTTAZZO, Università di Pisa I
• F. CHERNOVSKOGO, Russian Academy of Sciences, Moscow, RU
• G. DAL MASO, SISSA, Trieste, I
• C. DEISSENBERG, Les Université à Aix en Provence, Marseille, F
• A. FREDIANI, Università di Pisa, I
• D. GALETTI, Università di Ferrara, I
• R. DILAO, Instituto Superior Tecnico, Lisbon, PT
• J. FIELDING, Cranfield University, UK
• L. FORMAGGIA, Politecnico di Milano, I
• A. FREDIANI, Università di Pisa I
• G. LEITMANN, University of California, Berkeley, CA, USA
• F. JOHNSON, The Boeing Company, Seattle, WA, USA
• E. Junior, Universidad de los Andes, Bogota, CO
• R. KALMAN, ETH, Zurich, CH
• N.N. KRAVOSKII, Russian Academy of Science, Moscow, RU
• M. LUCCHESINI, Aermacchi Varese, I
• L. MODICA, Università di Pisa, I
• L. MORINO, Università di Roma Tre, I
• G. NOVEMBRINI, IDS, S.Piero a Grado, I
• J. OLSEN, University of Dayton, OH, USA
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• H.J. PESCH, Universität Bayreuth, D
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APPLICATIONS

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They should specify:
i) Date and place of birth, together with present nationality;
ii) Affiliation;
iii) Address, e-mail address.

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

METRICS

• PLEASE NOTE
Participants must arrive on September 8, 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 (~550 B.C.), writing about events connected with the conquest of Troy (1185 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 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.), and Horace (~20 B.C.) have celebrated this magnificent spot in Sicily in their poems. During seven centuries (XI-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 neighborhood: 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 palaeolithic vestiges are still visible: the grottoes of Favigliana, 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.

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