LOCATION:

- The workshop will take place at the E.T.S.I. Telecomunicación of the University of Vigo. Campus Marcosende. Vigo (Spain)
- TV-transmission. Web: http://www.uvigo.tv

SHORT CONTRIBUTIONS:

Authors are invited to submit an abstract of short contribution (15-20 minutes) to the Scientific Committee (durany@dma.uvigo.es) before October 12.

ROUND TABLE:

The round table will join researchers and representatives of Public and Private Organisms on environmental management. The Consellería de Medio Rural, Consellería de Medioambiente of the Galician Autonomous Government, and the Spanish-CIEMAT are some examples of the latter ones.

PROCEEDINGS:

A CD or DVD with the presentations of the plenary lectures and short communications will be edited.

REGISTRATION:

Free of charge before October 31.
On line registration at **http://www.dma.uvigo.es/fire**

SCIENTIFIC COMMITTEE:

Bermúdez, A. (Univ. Santiago de Compostela, Spain)

Durany, J. (Univ. Vigo, Spain)

Liñán, A. (Univ. Politécnica de Madrid, Spain)

Varas, F. (Univ. Vigo, Spain)

Vázquez, C. (Univ. A Coruña, Spain)

LOCAL ORGANIZING COMMITTEE:

José Durany and Fernando Varas
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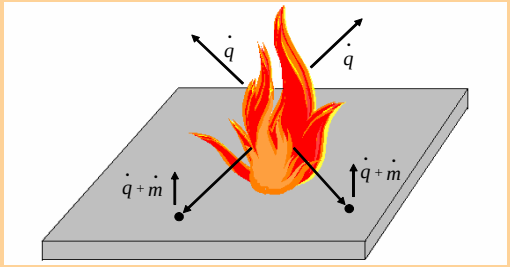

WORKSHOP
MATHEMATICAL MODELING AND NUMERICAL SIMULATION OF FOREST FIRE PROPAGATION

NOVEMBER 29-30, 2007

http://www.dma.uvigo.es/fire

Dep. Matemática Aplicada II

OBJECTIVES:

Forest fires are responsible of the devastation of big forest masses and the emission of CO_2 to the environment, producing serious material and human losses. Therefore, it is very important to know the evolution of a forest fire under different conditions. The mathematical models and their numerical solutions can be used as supports for operational strategic decisions, that help in the extinction processes, and contribute to decrease the economic and ecological negative effects. In this sense, many efforts are developed to explain and understand the complex mechanisms involved in the spread of fires. The main objectives of this Workshop are resumed in the following points:

- ✓ To know the background of experts in this topic, inviting them to explain their contributions during plenary conferences.
- ✓ To promote the participation of other investigation groups which have had or have interest in this subject, presenting their contributions in short communications.
- ✓ To extend the use of the mathematical models, computational skills, and numerical simulations to the organisms responsible of environmental management.
- ✓ To open new lines of investigation on these topics, and to focus them on the suitable groups of investigation.
- ✓ To allow young postgraduate investigators, in applied mathematics, to acquire the knowledge of these problems that can be of their interest for future projects of master or doctorate.
- ✓ To study in detail the following scientific topics:
  - Physical and mathematical models for forest fires propagation.
  - Forest fires and turbulent flows in the environment.
  - Chemical reactions and turbulences caused by forest fires.
  - Numerical methods and software focused on forest fire simulations.
  - Databases and experimental methods for the validation of the models.

PROGRAM:

November 29 :

10:00 Opening

10:15 *Empirical Approach to Fire Spread Prediction in Shrublands.*
Vega, J.A. (Centro Forestal Lourizán, Spain)

11:00 *Bushfires and Some Modelling of Bushfires*.
Dold, J.W. (University of Manchester, UK)

11:45 Coffee-break.

12:15 *Simulation of Fire Spread Uncertainty and Particle Spotting Distances*
Pereira, J.C.F. (Inst. Superior Técnico de Lisboa, Portugal)

13:00 *Flame propagation over solid fluids.*
Liñán, A. (Universidad Politécnica de Madrid, Spain)

13:45 Lunch-time

15:30 *Development of Theoretical and Experimental Tools to Create Simplified Models of Forest Fire Spread.*
Simeoni, A. (Université de Corse, France)

16:15 Short Contributions

18:15 End of the first day

November 30 :

10:00 *Prediction of Eruptive Fire Behaviour*
Viegas, D.X. (Universidade de Coimbra, Portugal)

10:45 *Contributions to Forest Fire Simulation: Mathematical Models, Numerical Methods and GIS Integration.*
Ferragut, L. (Universidad de Salamanca, Spain)

11:30 Coffee-break.

12:00 *Bushfires in Rugged Terrain*
Weber, R. (University of Canberra, Australia)

12:45 *Physical Modelling of Wildfire Behaviour .*
Morvan, D. (Université Aix – Marseille II, France)

13:30 Lunch-time

15:30 *Preliminary Study of the Ignition of a Vegetation Bed by a Firebrand.*
Statistical Approach to Wildland Fire Propagation.
Fernández-Pello, C. (University of Berkeley, USA)
Porterie, B. (Tech. Marseille Provence, France)

16:45 Round Discussion

18:00 End