EUROMECH COLLOQUIUM 270

NONLINEAR WAVES GOVERNED BY HYPERBOLIC DISSIPATIVE MODELS

Reggio Calabria, Italy, 25 - 28 September 1990

REPORT

The Colloquium has been devoted mainly to the discussion of the following topics:

1) Mathematical procedures for studying the wave amplitude evolution and the shock wave behaviour either in uniform or in nonuniform states;

2) Mathematical models arising from dissipative theories with special attention paid to irreversible thermodynamics and active media;

3) Numerical methods for hyperbolic models;

5) Experimental studies for waves in dissipative media.

The programme has included several morning and afternoon sessions chaired by experts in the topics there concerned.

A great deal of attention has been paid to the development of analytical procedures for the treatment of the wave amplitude evolution equations arising from different physical contexts such as heat conduction with finite wave speed, nervous pulse transmission, particle transport theory, fluid-filled tubes, viscoelasticity, magnetohydrodynamics.

On account of the discussions and presentations held during the Colloquium, of special relevance for future colloquiua on wave propagation there are the topics concerning the topics of extended thermodynamics as well as the development of a well established theory for the so called active media.

There have been invited number 50 participants to attend the Colloquium and number 49 of them were present at the meeting as shown by the following table:

Brazil	No. 1
Canada	No. 1
France	No. 1
Ireland	No. 1

Italy	No. 28
United Kingdom	No. 7
East Germany	No. 1
West Germany	No. 5
USSR	No. 4

The main sponsor of the meeting has been the National Council of Research of Italy through the National Committee for Mathematics and through the National group for the Mathematical Physics. The hosting Institution has been the University of Reggio Calabria, which in addition to the possibility of using the local structures gave also a financial support to meet the cost of reception of participants.

Several local Institutions accepted to sponsor the Colloquium through different ways, with the scope of making confortable as much as possible the staying of the participants during the meeting period by offering them daily social events.

It is likely that there will be published the proceedings of the colloquium.

The participants expressed their wish to repeat a colloquium on nonlinear waves in two or three years choosing the key problem afterwords (for example, multidimensional nonlinear waves).

<div align="center">The Chairmen</div>

Prof.Alan Jeffrey

Prof. Domenico Fusco

Domenico Fusco

12 October, 1990