

EUROMECH

EUROPEAN MECHANICS SOCIETY

Final Report

Please send this report to the Secretary-General of EUROMECH, within one month after the Colloquium.

EUROMECH Colloquium No: 378
Title: *Nonlocal Aspects in Solid Mechanics*
Dates and location: 20th-22nd April
Chairman: *Dr GANGHOFFER Jean-François*
Co-Chairman: *Pr BRILLARD Alain*

Is there need of another Colloquium on the same or a related subject? Which year?

Full registration fee: 1500 FF (reduced fee: 1300 FF; co-author/young scientist: 1000 FF)
What other funding was obtained? 5.000 F from General Council of Alsace
2.500 F from Credit Mutuel (Bank)
What were the participants offered? Excursion in the wine road of Alsace (Riquewihr; Kaysersberg) with wine degustation. Visit of the Car Museum in Mulhouse - Banquet at the Car Museum - Bag with information about Alsace.

Number of members of EUROMECH (reduced registration fee): 31

Number of non-members of EUROMECH (full registration fee): 7

Number of participants from each country:

Austria	_____	Germany	<u>4</u>	Romania	<u>1</u>
Belgium	_____	Great Britain	<u>1</u>	Russia	<u>1</u>
Byelorussia	_____	Greece	_____	Slovakia	_____
Bosnia	_____	Hungary	_____	Slovenia	_____
Bulgaria	_____	Ireland	_____	Spain	<u>2</u>
Croatia	_____	Italy	<u>9</u>	Sweden	<u>2</u>
Czech Republic	_____	Latvia	_____	Switzerland	_____
Denmark	_____	Lithuania	_____	Ukraine	<u>1</u>
Estonia	_____	Netherlands	<u>4</u>	Yugoslavia	_____
Finland	_____	Norway	_____	Others	<u>1</u>
France	<u>11</u>	Poland	<u>1</u>	Total	<u>38</u>
Georgia	_____	Portugal	_____		

Please turn

EUROMECH Colloquium 378

Nonlocal Aspects in Solid Mechanics

**Chairmen : J.F. Ganghoffer, Mulhouse, France
and A. Brillard, Mulhouse, France**

The Colloquium took place on April 20th-22nd at the Regional Sport Centre in Mulhouse, located on the Campus. There were about 40 participants from 11 countries, with a large representation from Italy and France. Almost each participant had a communication, either orally (30) or as a poster (10). The contributors were mechanics and applied mathematicians, with a major representation from the first group.

Two months after the EUROMECH-MECAMAT Colloquium in Magdeburg, this Colloquium was intentionally oriented towards fundamental aspects in nonlocal mechanics. It is noticeable that most of the participants were not present at the Colloquium in Magdeburg. The contributions were grouped into five sessions, including one poster session. All posters were presented shortly in an oral pre-session. The first session of the meeting was devoted to the formulation of higher order gradient models and models for nonlocal continua, the thermodynamics appeared to play an important role. A second session was organised around the mathematical and numerical aspects, including the very recent Arbitrary-Lagrangian Eulerian remeshing technique. The session micromechanics provided the necessary articulation between the formal and the physical aspects of nonlocality, and made clear to everybody that physical motivation of the setting up higher order theories at the macroscopic scale is a crucial issue. The sessions Fracture mechanics and Dynamic Aspects showed important and fertile fields of applications in nonlocal mechanics.

The general feeling was that the aims of the Colloquium had been successfully accomplished, due to the relatively small number of participants, and the pleasant environment. The participation of more than 20 young researchers (below 35) favoured informal discussions and promoted interesting questions.

May 11th, 1998

J.F. Ganghoffer



A. Brillard

