

Report on EUROMECH 268

Dynamics and Control of Flexible Structures

1 Scientific Contents

In the first instance it should be noted that more applications were received than could be included in the Symposium in a sensible manner. Thus presentations which were far from the theme were not accepted. The appended program gives an overview of the presentations that were held. In essence there are three domains into which most contributions may be placed.

The first domain concerns the modelling of solid body problems in continuum mechanics, especially regarding problems of wave propagation and of elastic or visco-elastic structures. In second domain concerns the modelling of multibody systems with applications in robotics and the field of vibrations. Finally the third domain encompasses contributions which in some form deal with control problems. A certain preference for robotics applications could be noted here. There was, however, a variety of other applications.

As a conclusion about the Symposium one may state that the present level of modelling of moving flexible structures is very advanced and offers a broad spectrum of physical and mathematical variations. This spans from finite element models to multibody algorithms and from the solution of specific ordinary differential equations to complex cases of nonlinear partial differential equations. Although the combination of control and dynamical modelling was represented in good amount, it could be seen that the achieved level of this interdisciplinary field is not as advanced as that of the modelling of dynamical systems. Among other things the reason for this may be found in the fact that control of mechanical systems is often institutionally separate, so that the quality of solutions obtainable in one establishment cannot be reached. There may be potential for future EUROMECH events concerning this point.

2 Participants

EUROMECH 268, final list of participants

Belgium	1
F R G	21
Bulgaria	2
CSFR	2
Denmark	3
Finland	3
France	6
Greece	2
Iran	1
Italy	5
Korea	1
Poland	1
Portugal	1
Rumania	1
Spain	4
USSR	3
Juogoslavia	1
Total	59

3 Financial Arrangements

See copy of financial accountancy.

4 Suggestions for the future

It is suggested that Symposia on the control of mechanical systems be held on a regular basis, were the themes may change according to the focus (elastic systems, solid systems, fluid systems, etc.). At such Colloquia much emphasis should be given to the interdisciplinary combination of control and dynamics. Realisation aspects are also of great interest, especially in conjunction with sensors and actuators.

5 Appendix

Appendix 1: correspondence with participants
(Invitation, registration, abstracts, etc.)

Appendix 2: program with abstracts and list
of participants

Appendix 3: financing

F I N A N Z I E R U N G

1. Gesamtfinanzen

1.1 Einnahmen

•	DFG	DM	18.000,--
•	DAAD		4.200,--
•	Tagungsbeiträge (59 x DM 90,--)		5.310,--
•	Spende DM 50,--		50,--
•	63 Mensa-Marken		441,--

Gesamt

DM 28.001,--

1.2 Ausgaben

•	Unterstützung Teilnehmer (Reisekosten, Aufenthaltskosten)	DM	16.200,--
•	Busfahrt		2.236,--
•	Dinner		2.400,--
•	Empfang Präsident Kaffee-Dienst Mensa-Marken		2.384,--
•	Post- und Fernmeldegebühren		2.300,--
•	Flipchart		467,92
•	Blumen		350,--
•	Klosterführung		150,--
•	Verschiedenes (Filme, Trinkgeld)		70,--
•	Raummiete HS 606		512,--

Gesamt

DM 27.069,92

2. DFG - Abrechnung

2.1 Einnahmen

DM 18.000,--

2.2 Ausgaben

- Zuschüsse an Teilnehmer
(Reisekosten, Aufenthalts-
kosten, Tagungsgebühren) 12.600,--
- Raummiete 512,--
- Post- und Fernmeldegebühren 2.300,--
- Geräte (Flipchart) 467,92
- Sonstige Sachkosten 570,--

DM 16.449,92

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2.3 Voraussichtliche DFG-Rückzahlung

- Einnahmen/Ausgaben-Differenz DM 1.550,08

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3. DAAD-Abrechnung

- 3.1 Einnahmen DM 4.200,--
- 3.2 Ausgaben DM 3.600,--
- 3.3 Rückgabe an DAAD DM 600,--