

Please send this report to the Secretary of the European Mechanics Council, Professor Bengt Lundberg, School of Engineering, Uppsala University, Box 534, S-751 21 Uppsala, Sweden, within one month after the Colloquium.

General

Euromech Colloquium No: 326

Title: Experiment and Macroscopic Theory in Crack Propagation

Co-Chairmen: Prof. J.F.Kalthoff, Ruhr University Bochum, Germany
Prof. A.Neimitz, Kielce Univ. of Technology, Poland

Place and country: Kielce, POLAND

Dates: September 25-28, 1994

Finance

The conference fee ----- included

Funding: 30,000,000 zł from Polish Ministry of Education; 8,000,000 zł from Polish Soc. of Theor. and Appl. Mech.; 18,000,000 zł from

Accommodation (type and cost): Kielce Univ. of Technology

single room - 15 US dollars per night; double room - 24 US dollars per night

Meals: 15 US dollars per day

Participation

Total number of participants: 37

Distribution of participants by country:

Code	Country	Number
A	Austria	_____
B	Belgium	_____
BG	Bulgaria	_____
CH	Switzerland	_____
CS	Czechoslovakia	<u>1</u>
D	Germany	<u>4</u>
DK	Denmark	_____
E	Spain	_____
EE	Estonia	_____
F	France	_____
GB	Great Britain	<u>2</u>
GR	Greece	<u>2</u>
H	Hungary	<u>1</u>
I	Italy	_____

Code	Country	Number
IRL	Ireland	<u>1</u>
LT	Latvia	_____
LV	Lithuania	_____
N	Norway	_____
NL	Netherlands	_____
P	Portugal	_____
PL	Poland	<u>10</u>
R	Rumania	_____
S	Sweden	<u>1</u>
SF	Finland	_____
YU	Yugoslavia	_____
CIS	CIS	<u>6</u>
-	Others	<u>9</u>

Is there need of another colloquium on the same subject? Which year? Yes. In 1997 or 1998.

Scientific Report

According to objectives of EUROMECH Colloquia the topic of EUROMECH 326 has been made sufficiently narrow to concentrate discussion and to stimulate the exchange of ideas. Therefore, within the wide field of fracture mechanics only the subject of fast crack growth has been considered. The intention of Organizers was to invite to the Colloquium scientists who represented different approaches of studying this problem. Fortunately, we succeeded.

The mathematical aspects of the fast crack growth problems were reported by Prof. K.B.Broberg, Prof. K.P.Herrmann, Prof. E.M.Morozov, Prof. J.R.Walton. The physical aspects of crack growth were considered in presentations of Dr. A.Bulbich, Dr. J.Fineberg, Dr. S.Gross and Dr. N.I.Lebovka. New experimental results and techniques were discussed by Prof. J.F.Kalthoff, Prof. K.Ravi-Chander, Dr. Gy.Lenkey and Dr. M.Drzik. Numerical simulations of fast crack growth were presented by Prof. T.Nishioka and Dr. E.Johnson. New criteria of fast crack initiation and growth were presented by Prof. A.Neimitz, Prof. N.F.Morozov, Prof. M.Watanabe, Dr. Yu.Utkin. All participants appreciated the mixture of approaches and considered the meeting as a very successful.

Organizers tried to keep costs of the Colloquium as low as possible. The total Colloquium fee was 102-150 \$ depending on accommodation standard. We have obtained a support from Polish Ministry of Education, from International Scientific Foundation (a travel grant for Prof.E.M.Morozov), from Polish Society of Theoretical and Applied Mechanics and from Kielce University of Technology. The last covered all costs of participation in the Colloquium (with exception of travel) for Prof.N.F.Morozov, Prof. L.N.Nikitin, Dr. A.Bulbich, Dr. N.I.Lebovka and Dr. Yu.Petrov. Kielce University of Technology also delivered for Colloquium participants two-way transportation by bus and cars between Warsaw Okiecie Airport and the Colloquium site.

As the EUROMECH 326 special cultural event the concert of French and Polish classical music for cello and piano was organized. The concert was held in Renaissance palace built in the 17th century by the bishops of Cracow.

A. Neimitz