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PROCEEDINGS OF THE INTERNATIONAL CONFERENCE ON EXPERIMENTAL MECHANICS

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前　言

近年来，为借助飞速进步的激光、超声等近代测试技术以及计算机、图象处理和其他信息处理技术以适应断裂力学和其他强度评价问题的需求，实验力学在多种学科和工程领域中得到了日益广泛的运用。在其推广应用于各学科和工程领域（如设计、检测、安全度和可靠性、能源和资源开发、医学、历史、地质和土建工程等）的进程中，实验力学现已构成了一个具有通用性的基础领域，并已成为一个新的科学分支。看来它是可以与使用软件的某些新兴力学分支相辅相成的。

不少国家都曾召开过不同形式的实验力学国际会议。为了增进中日两国及其他国家专家学者间的学术交流和友好往来，1982年夏季即已着手研究在中国举行一次实验力学国际学术会议的可能性。经过贾有权教授和北川英夫教授的接触和双方有关人员的多次磋商，最后商定，这次会议由中国力学学会和日本无损检查学会共同主办，于1985年10月7日至10日在北京召开。

征文通知发出后，中国、日本、加拿大、美国、英国、意大利、联邦德国、法国、瑞士、印度和埃及等国学者纷纷响应，寄来了大量的论文。这表明，各国的专家学者们对这一学科具有浓厚的兴趣。

在会议执行委员会的领导下，经过论文编辑委员会的努力，选出了约170篇论文编入本论文集中。这些论文涉及到实验力学的各个方面，从而也反映了本次会议内容的深度和广度。

我们衷心地期望，这本文集能促进各国学者在会议期间和会后的学术交流和友好往来，为会议的圆满成功做出贡献。

中国力学学会和日本无损检查学会热烈欢迎中日两国及其他各国学者来参加这次令人愉快的学术会议。

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中国执行委员会主席

北　川　英　夫
日本执行委员会主席

FOREWORD

Reflecting the rapid progress of laser, supersonics, and other recent measurement technology and developments of computer, graphics and other information technology, and combining with fracture mechanics and other strength evaluation technology, the use of EXPERIMENTAL MECHANICS has been developed extensively in science and engineering. On the way of extension of its application to various fields of science and technology, –design, inspection and testings, safety and reliability, energy and source developments, medicine, history, geology, civil engineering and others–, EXPERIMENTAL MECHANICS is now composing a common basic field and becoming a new branch of science,which can possibly cooperate with some new soft-ware-relating branches in mechanics.

A number of international conferences on EXPERIMENTAL MECHANICS in different countries have been held. In order to promote the academic exchange and friendship of the Chinese and Japanese scholars and researchers and those of other countries, in the summer of 1982, investigation of the possibility of an international conference held in the People's Republic of China was started. Through the contact of Professor Jia and Professor Kitagawa, the Problems have been discussed many times between Chinese and Japanese persons, and finally it was agreed that the conference should be organized jointly by the Chinese Society of Theoretical and Applied Mechanics and the Japanese Society for Non-Destructive Inspection and be held in Beijing on the seventh to tenth of October, 1985.

In response to "Call for Papers", numerous contributions came from many countries, including China, Japan, Canada, U.S.A., England, Italy, FRG, France, Switzerland, India, Egypt and other countries, reflecting the keen interest of engineers and researchers in this particular field.

Under the leadership of the executive committee of the conference,the Editorial Committee payed the efforts to decide the contribution papers for presentation at the conference. About 176 selected papers are included in this publication. These papers cover all the fields of experimental mechanics and show the broadness and depth of the scope representative of this conference.

We expect that this publication can contribute to success of the conference by expediting scientific exchanges both during and after the conference.

The Chinese Society of Theoretical and Applied Mechanics and the Japanese Society for Non-Destructive Inspection look forward to welcoming all participants from these two countries and from other countries in the world to an enjoyable meeting in Beijing.

Jia Youquan
Chairman of Chinese Executive Committee

Hideo Kitagawa
Chairman of Japanese Executive Committee

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