

FIRE SAFETY SCIENCE

Proceedings of the First International Symposium

Editors

Cecile E. Grant

Civil Engineering Department

University of California, Berkeley, USA

Patrick J. Pagni

Mechanical Engineering Department

University of California, Berkeley, USA

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FIRE SAFETY SCIENCE—Proceedings of the First International Symposium

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Preface

This symposium evolved from discussions initiated by Dr. P. H. Thomas, Prof. K. Kawagoe, Prof. K. Akita, Dr. J. G. Quintiere, Dr. R. Friedman, and many others throughout the world. Symposium committees and technical areas were established at an informal meeting in May 1984 at Borehamwood, England. As stated in the Fall 1984 Call for Papers, the purpose of these symposia will be "to provide a forum dedicated to all aspects of fire research and their application to solving problems presented by destructive fire." Due to the enthusiastic response to that call, the original plan for a three-day meeting was expanded to a full week of simultaneous sessions, October 7-11, 1985.

The chapters that follow are arranged in ten technical sessions, as in the symposium program. The session chairs, listed on each session's title page were responsible for coordinating a rigorous peer review that resulted in acceptance of approximately two-thirds of the submitted papers. We are particularly grateful to these ten scholars who gave so generously of their time and expertise, and who are primarily responsible for the quality of these proceedings.

Prof. T. Kubota presented the 1985 Howard W. Emmons Invited Lecture due to Prof. E. E. Zukoski's, hopefully short, illness. Invited papers were also given by Prof. H. W. Emmons, Prof. O. Pettersson, Dr. R. Friedman, Dr. E. Kendik, Dr. J. Unoki, Prof. W. Johnson, and Prof. D. J. Rasbash. The authors represented Australia, Austria, Belgium, Canada, Denmark, Federal Republic of Germany, France, Hong Kong, Japan, Luxembourg, Netherlands, Norway, Spain, Sweden, Union of Soviet Socialist Republics, United Kingdom, and United States of America.

The Arrangements Committee is to be congratulated for its faultless organization, which led to an enjoyable as well as a technically valuable symposium. We are particularly grateful to our host, the United States Department of Commerce-National Bureau of Standards. Dr. J. E. Snell, Director of the Center for Fire Research, and Dr. J. W. Lyons, Director of the National Engineering Laboratory, focused our efforts with their stirring remarks. Ms. S. Cherry, Ms. D. Cramer, and other members of the excellent staff at the Center for Fire Research provided invaluable support. The National Research Council of Canada kindly prepared a book of abstracts for each attendee. The Publications Committee furnished the editors with expert advice for over a year. Mr. W. Begell and Ms. F. Padgett at Hemisphere Publishing Corporation have been most cooperative. We especially appreciate assistance from Prof. R. B. Williamson and support from the College of Engineering at the University of California-Berkeley.

It was not possible at this first symposium to follow each chapter with printed comments. All the fire research related journals have invited submission of discussions related to these presentations. At the second symposium the session areas will be redefined. The chairs of the committees for the second symposium, planned for Tokyo, Japan in June 1988, have been appointed: Arrangements—Prof. T. Hirano; Publications—T. Wakamatsu; and Program—Dr. P. H. Thomas. It is intended that the proceedings of these symposia provide compendia of current progress in fire research.

Berkeley, California

November 1985

Cecile E. Grant

Patrick J. Pagni

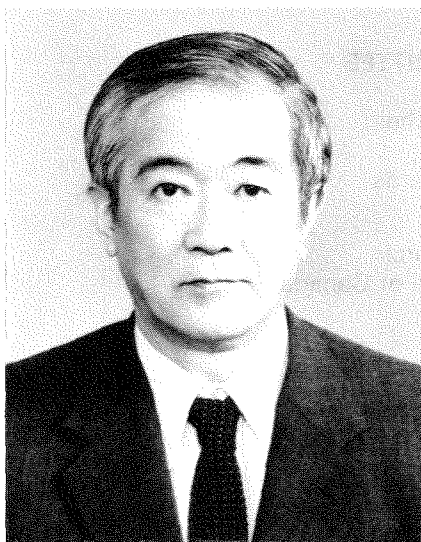
International Association for Fire Safety Science

At this symposium, a new international association was founded. The study of fire and the solutions to the problems it presents are multidisciplinary involving many professions and sciences. Physicists, chemists, statisticians, architects, actuaries, and many kinds of engineers and practitioners are all to be found working in the various fire research laboratories and organizations concerned with fire safety matters. Until this First International Symposium on Fire Safety Science, there did not exist any organization that provided a forum for them to regularly assemble on an international basis. Multinational work is a major feature of fire safety because similar problems arise internationally from comparisons between old and modern materials, configurations, and energy sources. In addition, the fire science personnel in most countries are few and, to achieve progress, we must collaborate with our peers in other countries.

Fire presents us with several unsolved problems. Some, like turbulence, are problems in basic physics; some, like the flammability of nonhomogeneous building materials, present engineering problems of considerable complexity. And most present questions of priority, societal responsibility, and cost. Fire problems are not solved only by applications of science. We are still relying heavily on law and regulations. Fire engineering is becoming established as a professional discipline; fire science is entering into higher education. The International Association for Fire Safety Science perceives its role to lie at the scientific bases for these developments. It will seek to cooperate with existing bodies, both they concerned with application or with the sciences that are fundamental to our interests in fire. It will seek to raise standards, to encourage and stimulate scientists to address fire problems, to provide the necessary scientific foundation and to encourage applications aimed at reducing life and property loss.

The registrants at this first symposium are the charter members of the International Association for Fire Safety Science. An organizing committee was established at a business meeting on October 9, 1985. The members of this committee are: Dr. P. H. Thomas, UK, chair; Prof. R. W. Fitzgerald, USA; Dr. F. Friedman, USA; Dr. T. Z. Harmathy, Canada; Prof. T. Hirano, Japan; Prof. S. Horiuchi, Japan; Prof. K. Kawagoe, Japan; Dr. M. Kersken-Bradley, FRG; Mr. H. E. Nelson, USA; Prof. P. J. Pagni, USA; Prof. O. Pettersson, Sweden; Dr. J. C. Quintiere, USA; Prof. D. J. Rasbash, UK; Dr. P. G. Seeger, FRG; Dr. J. E. Snel, USA; Prof. Y. Uehara, Japan; Dr. J. Unoki, Japan; and Prof. R. B. Williams, USA. The committee met on October 11, 1985 and elected the following association officers: Dr. P. H. Thomas, UK, chair; Dr. R. Friedman, USA, vice-chair; Prof. K. Kawagoe, Japan, vice-chair; Prof. O. Pettersson, Sweden, vice-chair; Prof. T. Hirano, Japan, secretary; and Dr. J. G. Quintiere, USA, treasurer. Finance and constitution subcommittees were also formed. The organizing committee will add to its membership as needed. The Japanese Association for Fire Science and Engineering will host the Second International Symposium on Fire Safety Science which will be held at Tokyo, Japan in June 1988. Please address inquiries about the association or the second symposium to the association officers: Dr. Philip H. Thomas, Fire Research Station, Borehamwood, Herts. WD2 2BL, UK; Prof. Toshisuke Hirano, University of Tokyo, 7-3-1 Hongo, Bunkyo-ku, Tokyo 113, Japan; Dr. James G. Quintiere, Center for Fire Research, National Bureau of Standards, Gaithersburg, MD 20899, USA.

In Memoriam



Professor Takashi Handa

October 10, 1923–September 14, 1985

The fire research community is greatly saddened by the recent passing of Professor Takashi Handa of the Science University of Tokyo. He was a founder and dedicated supporter of fire research. He actively pursued international scientific exchange and collaboration. Many of us fondly recall his gracious hospitality to scientists visiting Japan.

He began his illustrious research career in the Applied Chemistry Department of Tokyo University in 1945. In 1962, he became Associate Professor of Physical Chemistry at Wayne State University in Detroit, Michigan. His long association with the Science University of Tokyo began in 1964. In 1966, he was appointed Professor there in the Department of Science. His many honors include the Mainichi Newspaper Company Award in 1974. He became the first Director of the Center for Fire Science and Technology of the Science University of Tokyo in 1981.

Professor Handa encouraged international progress in fire research by initiating a visiting lectureship in Fire Science at the University, by his leadership role in the United States–Japan Natural Resources Panel on Fire Research and Safety and by founding the new English-language Japanese journal, *Fire Science and Technology*. His innovative use of computer modeling for fire design and fire investigation is an example to us all on the benefits of these powerful new tools which he helped to develop.

We were looking forward to his chairing the Detection Session at this symposium. We deeply regret that he was not able to do so. He is missed.

Symposium Committees

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